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Bridging Care in Nursing Science

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SCOPE

The Nurse Educators and Practitioners Journal (NEPJ) is a triannual publication of the Nurse Educators and Practitioners Guild, Inc. (NEPraGuild, Inc.), based in Baguio City. It strives to bridge the gap between nursing education and practice by publishing relevant studies and evidence-based practices and procedures. The journal covers a broad scope of the nursing field that include program and course development, teaching and learning approaches, educational and training needs assessment, simulation education, student evaluation, evidence based management, quality improvement, patient safety, interprofessional collaboration, role transformation, nursing administration, policy formulation, technological innovation, quantitative and qualitative research implementation and control, dignity safeguarding research, legal practice boundaries, nursing accountability, transcultural nursing, and health equity.

MISSION

To advance nursing excellence by fostering knowledge sharing, innovation, and policy influence, ultimately improving the quality of nursing education and patient care.

TARGET AUDIENCE

The primary target audience for the NEPJ includes educators (academe or in the clinical setting), clinical nurse specialists, advanced practice nurses, nursing students, researchers, healthcare administrators, and policymakers.

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Bridging Care, Context, and Change: Emerging Directions in Nursing Science

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EDITORIAL

Contemporary nursing scholarship continues to expand beyond traditional clinical boundaries, engaging deeply with lived experiences, social structures, and evolving health systems. The collection of studies presented in this issue reflects a multidimensional landscape of care—one that is shaped by transitions, contextual realities, and the broader determinants of health. Together, these works underscore the profession's commitment to holistic, patient-centered, and socially responsive care.

A prominent thread across several studies is the centrality of lived experience, particularly among vulnerable and transitioning populations. The narratives of carers of children with cerebral palsy illuminate caregiving. Similarly, the hermeneutic phenomenological exploration of nurses' duty and fear in armed conflict captures the resilience required in extreme practice environments. These studies reinforce the value of phenomenology in uncovering nuanced human experiences that quantitative metrics often fail to capture. Equally compelling is the focus on transitions as critical junctures in health and professional life. The examination of nurses transitioning from bedside roles to BPO-related careers in Metro Manila reveals shifts. These works emphasize that transitions whether personal, professional, or clinical require structured support systems to ensure positive outcomes.

Two pressing yet often underexamined public health concerns in the Philippines, end-of-life literacy and advance care planning among older adults, and adolescent suicide in relation to knowledge, attitudes, and risk underscore a shared imperative for culturally grounded, life-course-sensitive interventions. In Baguio City, where aging populations navigate complex intersections of familial expectations, spirituality, and healthcare access, limited end-of-life literacy constraints meaningful engagement in advance care planning, leaving many older adults without agency in decisions that define dignity at life's end. Parallel to this, the rising vulnerability of adolescents to suicide reflects critical gaps not only in mental health knowledge but also in the attitudinal and socio-environmental frameworks that shape risk perception and help-seeking behavior. Both domains reveal a systemic need for integrative health education strategies that move beyond awareness toward empowerment-equipping individuals with the competencies necessary to engage with deeply personal yet socially mediated health decisions. Addressing these issues demands a coordinated response across healthcare, education, and community systems, recognizing that informed decision-making at both ends of the lifespan is foundational to holistic well-being and social resilience.

The issue also foregrounds the intersection of social context and health. The proposed gender minority-family relations wellness model offers a culturally grounded framework for understanding wellness among youth, situating family dynamics as both potential sources of support and stress. Meanwhile, the investigation into parenting styles and feeding practices among caregivers of malnourished children demonstrates how socio-demographic factors directly influence health behaviors and outcomes. The comparative analysis of nursing care quality in rural and urban communities further highlights systemic inequities, calling attention to disparities in access, resources, and care delivery. At a conceptual level, the inclusion of a concept analysis on social determinants of health provides a critical foundation for interpreting these empirical findings. It reinforces the understanding that health outcomes are linked to socioeconomic, environmental, and cultural conditions. This perspective is echoed in the study on environmental literacy among nursing students, which situates nurses as key actors in advancing sustainable development and climate-responsive health practices. The role of education and professional formation is another vital dimension explored in this collection. High-fidelity simulation emerges as a powerful pedagogical tool. Concurrently, the relationship between social media attitudes and ethical sensitivity raises important questions about professionalism in the digital age. The study on patient safety incidents during clinical placements further underscores the need for robust supervision, reflective practice, and system-based approaches to error prevention. Collectively, these studies highlight the evolving competencies required of nurses—from clinical expertise and ethical discernment to cultural sensitivity and environmental awareness. They also reaffirm the importance of integrating theory, research, and practice in addressing complex health challenges. In conclusion, this body of work advances nursing knowledge by bridging individual experiences with systemic realities. It calls for a more integrative approach to care—one that acknowledges transitions, addresses social determinants, and leverages education and innovation to improve outcomes.

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Social Determinants of Health: A Concept Analysis

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ABSTRACT

Introduction: Social determinants of health are social and economic factors, often beyond a person's control, that directly impact the capacity of individuals and communities to achieve positive health outcomes. These determinants are central to the provision of healthcare that is equitable and non-biased.

Aim: This article aims to examine and provide context for the concept of social determinants of health and to demonstrate the interconnectedness and breadth of the concept for nursing education.

Methods: Walker and Avant's eight-step approach to concept analysis was utilized. Literature was retrieved from PubMed and CINAHL databases using keywords: social determinants of health, health equity, health disparity, and racial bias. Websites and reference lists used were from the World Health Organization, Centers for Disease Control and Prevention, Centers for Medicare and Medicaid Services, American Medical Association and the American Academy of Family Physicians.

Results: Social determinants of health as a concept, contributes to the delivery of healthcare, and supports public health policy, community engagement, advocacy for health equity, incorporation of social services, nursing and medical education, and epidemiology. Defining attributes include social factors, influence on health inequities, and potential impact at levels ranging from personal to societal. Factors such as slavery, segregation, economic recession, and cultural norms are antecedents.

Conclusion: This article clarifies social determinants of health as a concept and provides case examples that demonstrate how the components interconnect to create a complex web of barriers to health. This concept is central to nursing education and the implementation of interventions that improve health equity and outcomes.

Keywords: *social determinants of health, health equity, concept analysis*

I. Introduction

The concept of social determinants of health (SDOH) is central to the health and well-being of individuals, families, communities, and society. Determinants are elements or factors that influence an outcome (World Health Organization, 2024). Furthermore, SDOH are defined as social and economic factors that impact health and drive health inequities (Centers for Disease Control and Prevention, 2024b). Food insecurity, lacking access to educational opportunities, having limited income status, discrimination, lacking access to transportation, housing instability, and having limited access to healthcare are all examples of social determinants that can contribute to health disparities among diverse populations (Office of Disease Prevention and Health Promotion, n.d.). These determinants can have a direct impact on the capacity of individuals and communities to achieve optimal health and positive health outcomes, making this concept central to the provision of ethical and holistic healthcare. SDOH are key in nursing education, because nursing students must understand health care beyond biological factors. The purpose of this concept analysis is to examine the concept of SDOH and to provide context that demonstrates the interconnectedness and breadth of the concept for education purposes. SDOH impact the lives of individuals and societies around the world. By providing context and demonstrating the way SDOH combine to create complex barriers to health, the concept can be used to educate future nurses and other health care professionals in providing care that considers the whole person. Additionally, tangible interventions can be created that address the social factors impacting health for individuals, communities, and society.

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II. Background

Health is not simply biological and must be considered from a holistic perspective. Optimal health considers the physical, mental, social, and spiritual aspects of life (Svalastog et al., 2017). SDOH as a concept recognizes the multifaceted and complex factors that influence health outcomes. This concept considers the social and physical environment individuals live in and the systems in place that deliver resources to prevent and manage illness (World Health Organization, 2013). By recognizing SDOH as contributing to health inequities and disparities, it can be demonstrated that health is not completely based on genetics or personal health choices and that societal factors and health policies and systems can interconnect to create barriers to achieving or maintaining optimal health (Centers for Disease Control and Prevention, 2024b).

The concept of SDOH is the foundation for government and public health programs and goals to address health inequities and disparities. An example of this can be seen in Healthy People 2030, which is a government initiative in the United States that brings attention to SDOH in an effort to facilitate societal health and well-being (Office of Disease Prevention and Health Promotion, n.d.). Similarly, in Canada the Federal Minister of Health has made SDOH a central focus for the government (Donkin et al., 2018). Many countries have assembled groups whose priority is addressing SDOH. Examples include the National Commission on SDOH in Brazil and the SDOH team developed by the Public Health Agency of Canada (Donkin et al., 2018). By understanding and addressing the complex levels of social factors, many of which are structural and systemic, the goal of improving health equity and reducing health disparities can be better addressed in interventions that are tailored to address disparities experienced by all members of society. When factors that contribute to health disparities are addressed, each individual has a more equitable opportunity to achieve an optimal level of health (Centers for Medicare & Medicaid Services, n.d.).

III. Methods

Research Method

This concept analysis used Walker and Avant's (2019) model which is an eight-step approach. This approach includes 1) selection of a concept, 2) determining the aim or purpose, 3) identifying all uses of the concept, 4) identification of the defining attributes, 5) composing a model case, 6) composing borderline, related and contrary cases, 7) determining antecedents and consequences, and 8) outlining the empirical referents.

Data Sources

Data sources for this concept analysis included literature searches using Cumulative Index of Nursing and Allied Health, and Public Medline. Searches were conducted individually using keywords that included social determinants of health, SDOH, health equity, health disparity, and racial bias. Health equity was selected as a keyword based on the World Health Organization's identification of SDOH as being a major factor that impacts health equity (World Health Organization, 2024). Health disparity and racial bias were selected as keywords based on the Centers for Disease Control and Prevention's identification of SDOH as a major contributor to health disparities (Centers for Disease Control and Prevention, 2024b) and the identification of racial bias as an example of SDOH that drives health inequities (Centers for Disease Control and Prevention, 2024c) The selection of racial bias as a keyword was also supported by the realization that this social determinant of health has the potential to be at the root of many other SDOH, making this a key component in building understanding of SDOH as a concept. Articles selected from these database searches had a publication year of 2016 or later and demonstrated uses or context for SDOH. Reference lists from the selected articles were also used to identify additional resources on the concept. Websites for the World Health Organization, Centers for Disease Control and Prevention, American Academy of Family Physicians, Centers for Medicare and Medicaid Services, and the American Medical Association were searched, and references cited by these organizations were retrieved and reviewed. Websites from these organizations were selected due to their reliability as government agencies or as professional organizations that influence healthcare practice standards. In reviewing the literature, SDOH were present in a variety of contexts, which became the focus of the review.

Ethical Consideration

The use of Walker and Avant's (2019) framework supported the maintenance of high ethical standards throughout the development and writing of this concept analysis. Reputable databases were used, and as the concept analysis uses the secondary analysis of publicly available information, Institutional Review Board approval was not required. We have used a diverse collection of sources to develop a comprehensive and faithful representation of the concept in the concept analysis.

IV. Overview of the Concept

Concept Uses

The concept of SDOH is multidisciplinary and can be used in numerous ways to convey delivery of healthcare, public health policy, community engagement, advocacy for health equity, incorporation of social services, nursing and medical education, and epidemiology. The broad range of uses emphasizes the multifaceted and complex nature of this concept. SDOH spans multiple sectors of society and healthcare where nurses are present. Many of these sectors are connected by this concept and its impact on health outcomes. Next, we describe how the concept of SDOH is or can be used in various sectors by nurses.

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Delivery of Healthcare

The concept of SDOH can be used by nurses to understand the social and economic barriers facing their patients. Nurses can in turn use SDOH data to inform clinical decisions (Tiase et al., 2022). With an understanding of these barriers and the way patients are affected, nurses can plan and deliver care and provide resources that better meets the needs of individuals. A critical component of thorough patient care is assessing for SDOH and assisting patients to navigate these determinants on their journey to achieving positive health outcomes (Tiase et al., 2022). For example, a patient may not fill the prescription for a medication the provider has made part of the treatment plan if they do not have the financial means to do so, or if they do not have access to transportation to get to the pharmacy. If the provider and/or nurse screens for and understands the concept of SDOH, a treatment plan can be created that addresses the patient's social needs, which promotes health equity by removing barriers to successful treatment. In this case referrals to programs that reduce the cost of prescription drugs, consideration of lower cost alternative medications, and connecting the patient with low or no cost healthcare related transportation services could improve the likelihood of successful treatment.

Public Health Policy

Leaders in public health policy can use the concept of SDOH to guide and support policy changes that improve public health (Hacker et al., 2022). Nurses, as leaders in public health, can play a key role in policy development. When considering SDOH, policies impacting public health may involve education, housing, transportation, employment, and other components that address structural and social barriers to health equity (Centers for Disease Control and Prevention, 2024c). SDOH provides a foundation for countries worldwide to develop policies that will address factors that promote health to reduce disparities. For example, countries with robust tax policies that fund programs such as welfare are more likely to reduce health inequities, while countries with policies that provide tax breaks to the wealthy and cut benefits from low-income individuals will perpetuate health inequities (Flavel et al., 2024). The incorporation of SDOH into public health policy provides an opportunity to rectify imbalances in opportunities that promote health.

Community Engagement

SDOH is a concept that can be used to address barriers to healthcare on a community level, for example by engaging individuals and local organizations in the health and well-being of their communities. While the combination and experiences of social determinants are unique to the individual, they also occur at a local level (Rangachari et al., 2022). Engaging community members in areas that are highly impacted by SDOH is important in building health initiatives and responses (Hacker et al., 2022). An example of this was during the Covid-19 pandemic when the Centers for Disease Control and Prevention prioritized community engagement by hiring local, trusted neighborhood partners to deliver health-related messaging and services to communities impacted by SDOH to engage the community in their efforts (Hacker et al., 2022). The services and messaging provided by these neighborhood leaders which focused on interventions to prevent Covid-19 transmission, led to the facilitation of over 6,700 vaccination events and the ability to reach more than 20 million people with public health related education (Centers for Disease Control and Prevention, 2024a). Similar outreach to the community is seen in the United Kingdom's link worker model of social prescribing. In this model, healthcare professionals such as nurses and general practitioners can refer patients to a link worker in the community that assesses health and social needs, creates a plan of care, and connects the individual with the resources needed to achieve health and well-being (Kiely et al., 2022).

Advocacy for Health Equity

SDOH is a concept that is invaluable for nurse advocates pushing for health equity. Health equity means that all people have an equal opportunity to be in a state of optimal health (Centers for Medicare & Medicaid Services, n.d.). As health inequities have continued to increase globally, the need for advocacy has become more pressing (Flavel et al., 2024). Nurse advocates can use their knowledge of SDOH to develop and implement tangible interventions that address health inequities. Furthermore, these actions may highlight the impact of these inequities on underserved populations around the world. For example, in the United States nearly 50% of new human immunodeficiency virus (HIV) cases are among African American individuals, although there is no biological reason for this and African Americans only account for 13% of the population (World Health Organization, 2018). Advocacy that brings attention to HIV rates among African Americans, and increases community-based efforts to improve prevention, and access to testing and treatment is imperative to ending this epidemic (Murdock et al., 2018). Advocacy informed by SDOH considers contributing factors for inequities and provides an avenue for addressing these issues directly. This can also be seen in Australia, where school-based nurses play a key role in advocating for health equity (Jones et al., 2021). These school-based nurses can promote policies that focus on SDOH, which creates an opportunity to make a substantial impact on population health and improve the health of children in Australia (Jones et al., 2021), where it is estimated that one in six of the country's youth live in poverty (Parliment of Australia, 2024).

Incorporation of Social Services

Collaboration between healthcare sectors and community partners in the use and sharing of SDOH data, facilitates comprehensive healthcare (Tiase et al., 2022). The shared use of SDOH data can contribute to partnerships among systems that may otherwise be siloed (Nicholson & Morris, 2021). These collaborations can address the overall well-being and health of individuals in their communities. The concept

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of SDOH may provide an avenue for building programs and creating/maintaining positions in the healthcare team such as case management nurses and patient navigators, that can use this data to bridge the gaps between sectors. Patient navigators in health systems for example, can serve as a guide for patients and assist them in accessing social services (Andermann, 2016). Patient navigators have a positive impact on treatment adherence, disease prevention screenings and the satisfaction of healthcare consumers (Messmer et al., 2020). The concept of SDOH provides the foundation for positions such as this that can incorporate social services into healthcare in an effort to improve outcomes.

Nursing and Medical Education

The concept of SDOH can be used in nursing and medical education to teach beyond biological medicine. This concept can provide learners with a well-rounded and deeper understanding of how non-biological factors influence the health of individuals and communities in their care. Race for example is not in and of itself a biologic factor (American Medical Association, 2020). Race should instead be considered a social grouping that points to the health implications that result from disproportionate social conditions (Amutah et al., 2021). Curriculum that highlights SDOH teaches future healthcare professionals to evaluate and consider the impact that outside structures and influences have on health (Amutah et al., 2021).

Epidemiology

Study designs by nurse epidemiologists can incorporate SDOH into their work as a way of researching the external factors that influence the health of populations. Social epidemiology has gained popularity, as it facilitates a better understanding of the way economic and social structures impact health and disease (Diez Roux, 2022). Research in social epidemiology is essential to population health and is increasingly focused on SDOH related interventions and policies (Diez Roux, 2022). SDOH research and the related frameworks can be used to create directed interventions (Centers for Disease Control and Prevention, 2024b), allowing researchers to engage in improving population health and reducing health disparities. The Jackson Heart Study for instance, is an epidemiologic study that examines both genetic and social influences on cardiovascular disease among African Americans in the Jackson, Mississippi area (Jackson Heart Study, 2019). This longitudinal study incorporates SDOH into the extensive data collection by including interview questions relating to items such as socioeconomic status, racism, and access to healthcare (Jackson Heart Study, 2022). The Jackson Heart Study also takes action in communities by providing education and outreach to support health and to improve outcomes among African Americans (Jackson Heart Study, 2019).

Defining Attributes

Social Factors

Social factors, which are non-medical, may influence an individual's engagement in behaviors that impact health (Hacker et al., 2024). SDOH are the social factors that directly and indirectly impact health outcomes. SDOH fit into five categories or overarching domains which include financial stability, availability of quality education, availability of quality health care, physical environment, and social/community (Office of Disease Prevention and Health Promotion, n.d.; United States Department of Health and Human Services, 2022).

Influence on Health Inequities

SDOH are fundamental in the formation of health disparities and inequities (Office of Disease Prevention and Health Promotion, n.d.). This has an impact on access to healthcare and health outcomes among diverse populations. These inequities are evident both between countries and within them (World Health Organization, 2013). In the past 15 years there has been some progress in global health, however the improvements have been distributed in an unequal fashion (Flavel et al., 2024), highlighting health inequities and the need for SDOH focused interventions. Children in sub-Saharan Africa for instance, are 14 times more likely to die before they reach age five, when compared with children from other areas of the world (World Health Organization, 2018). This health inequity and the influence of SDOH is further illustrated as the children from families with the lowest socioeconomic status have a mortality rate twice as high as those from families with the highest socioeconomic status (World Health Organization, 2018).

Multi-Level

SDOH impact individuals on multiple levels. SDOH exist at the level of society and community, but they are also felt and experienced on a personal level (Rangachari et al., 2022). For example, food insecurity and access to healthy food are SDOH that impact society on a global scale, crossing all geographical borders. These determinants are also dependent on community factors such as proximity to grocery stores with healthy foods (Office of Disease Prevention and Health Promotion, n.d.). However, it is the individual that goes to bed hungry or is not able to keep cholesterol levels down due to only having access to fast food or stores with limited or no fruits and vegetables. SDOH includes factors that may be out of the individual's control but can be addressed at other levels such as government. Government can facilitate changes that remove barriers that are systemic and structural and impede optimal health and well-being (Green et al., 2022). One example of this is the Farmers Market Nutrition Program established by United States Congress in 1992, which provides vouchers that can be used to purchase fresh fruits and vegetables at farmers markets and roadside stands, and supplements food vouchers that are redeemable in grocery stores provided

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by the Women, Infants, and Children program (United States Department of Agriculture, 2024). This government program expands access to healthy foods for those that do not live near grocery stores with fresh produce.

Model Case

JP is a twenty-year-old pregnant African American woman. She has worked the same minimum wage job since she dropped out of high school at sixteen to help her single mom pay rent. She does not have a car and lives in a food desert. She filled out paperwork to get public insurance, such as Medicaid in the United States, but it has not gone through yet. JP made an appointment at a community-based prenatal clinic on the other side of town but missed her first appointment because her bus was running late. She was also worried about the cost of the appointment since she does not have insurance. When she arrived late to the clinic, the receptionist, a White woman, told her coworker "I could squeeze her in with another doctor this afternoon but I'm not going to because those people are always late. She needs to be taught a lesson." As a result, JP missed a half day of work and was not seen by a doctor. She realizes getting prenatal care is going to be too difficult, so she makes the decision to wait to receive any healthcare until she goes into labor and goes to the hospital.

Contrary Case

MK is a thirty-year-old pregnant White woman. She works as a pharmacist and has an excellent employer-paid insurance plan. She drives a new car that she paid cash for, and she and her husband recently bought a second home on the coast. She uses a grocery delivery service because she does not enjoy grocery shopping. MK makes her first prenatal appointment with the doctor that is known to be the best in town. She lost track of time and was late for her appointment, but the receptionist reassured her that it was not a problem. After her appointment, the nurse offers to call the hospital to arrange a private tour of the beautiful new birthing suites. MK is excited to have a baby and feels like everything is going to work out perfectly.

Borderline Case

JS is a single twenty-year-old Latina college student, studying to become a nurse. She is pregnant and receives regular prenatal care at a community based perinatal clinic. She is covered by her mother's private insurance, and her mother helped her to fill out her state's expanded Medicaid coverage paperwork for coverage of her baby that will go into effect as soon as he or she is born. JS lives in an apartment and pays her rent and car payment with student loans. She recently qualified for food stamps. JS lives on a very tight budget, but she knows her parents would help if she was not able to pay a bill or if she didn't have money to pay for gas or food.

Related Case

MT is a nurse practitioner that started a mobile clinic to facilitate health equity in her city. MT and her team take their mobile clinic van to underserved areas of the city to provide low-cost healthcare. The clinic is funded by private donations and is sponsored by a large health system that provides free medical supplies, access to an electronic medical record system, and low-cost diagnostic and laboratory testing. Patients are charged for services on a modest sliding scale based on income, and the clinic has a policy that no patient will be turned away due to an inability to pay. The team is bilingual and interdisciplinary, including registered nurses, a social worker, a family practice physician, a nurse midwife, and an administrative specialist. Together the team provides primary care and low-risk prenatal care to community members that may have barriers to accessing healthcare.

Antecedents

Historical factors such as colonization, slavery, and segregation have created a long-lasting impact that seeps into many of the SDOH we are facing today. The discriminatory practice of redlining, for example, was a lending policy reinforced by the Federal Housing Administration that prevented African Americans from securing mortgages, because neighborhoods that were predominantly African American were unjustly considered too high-risk for lending (Rothstein, 2017). Redline communities had fewer resources (Mehdipanah et al., 2023) and although it was outlawed in 1968 (Rose, 2023), many former redline communities still have higher levels of SDOH and fewer resources (Mehdipanah et al., 2023).

The policies put in place by the Federal Housing Administration in the United States explicitly prevented people of color from purchasing homes in White neighborhoods, attempting to justify the decision with the explanation that it would reduce home values in these areas (Rothstein, 2017). This prevented African American citizens from building generational wealth in the same way that White citizens could because by the time the Fair Housing Act was put in place, the home values had increased so much they were no longer affordable based on the median income (Rothstein, 2017). The economic disparities created by public policy was further perpetuated by the educational opportunities that came from the wealth White Americans had built through home ownership, as they could leverage home equity to send their children to college (Rothstein, 2017). Today, access to education is also an example of a SDOH (Office of Disease Prevention and Health Promotion, n.d.) that drives health disparities and inequities. These examples of discriminatory housing practices of the past demonstrate the long-lasting effects of racial discrimination and the ways in which it can impact multiple aspects of life including health.

Current economic conditions such as recession, increases in cost of living due to inflation, and volatile job markets serve as additional antecedents to SDOH.

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Economic inequality can be viewed from a more global standpoint as well. An example of this economic gap is highlighted by the 16-fold difference in average income between those residing in North America and those residing in sub-Saharan Africa (United Nations, 2020).

Relationship and network antecedents for SDOH may consider cultural norms and community support. Support systems have an enormous impact on health (United States Department of Health and Human Services, 2022) and can provide a sense of belonging, a sense of emotional well-being, and access to resources one may not otherwise have. When these cultural and community support systems are not in place, individuals may not seek help when needed or may be impacted by SDOH.

Consequences

Social determinants of health have major consequences for individuals, communities, and society. It is estimated that SDOH are the cause for 55% of negative health outcomes (Pardo et al., 2022). SDOH leads to health inequities that have a negative impact on the ability of individuals to live a healthy life. For instance, life expectancy is impacted by SDOH, with a 20-year difference between some countries (American Academy of Family Physicians, 2018). Higher morbidity and mortality rates are also among the many consequences of SDOH. The consequences for society, communities, families, and individuals are multifaceted and devastating, with income often being a driver. Lower income levels are linked to higher mortality rates (Chetty et al., 2016), and an increase in conditions such as diabetes, depression, and cardiovascular disease (Adler et al., 2016).

Empirical Referents

Empirical referents for SDOH could include measures of income, educational level, and employment status. Neighborhood statistics such as crime rate, number of medical clinics or hospitals, and number of grocery stores could also be included. These empirical referents allow for measurement of the defining characteristics of SDOH. When it comes to measuring the SDOH of individual patients, there are screening tools available. The American Academy of Family Physicians used the National Academy of Medicine's SDOH domains to create a screening tool to determine the SDOH experienced by individuals to help providers address related needs (Pardo et al., 2022). Another example of such a tool is the Accountable Health Communities Health-Related Social Needs Screening Tool, designed by the Centers for Medicare and Medicaid (Pardo et al., 2022).

V. Discussion

Strengths

Recent attention to SDOH from the national governments and the World Health Organization has provided a substantial platform for the recognition of SDOH. This platform highlights the demand for evidence and research in this area. The United States government has also provided examples of SDOH impacting individuals living within the United States (Office of Disease Prevention and Health Promotion, n.d.), which helped to add depth and context to this concept analysis. For more than ten years, there has been a heightened interest in SDOH (Hacker et al., 2022), and this has led to a generous amount of literature that acknowledges social determinants as factors that impact health and health equity. This was an additional strength in this concept analysis, as it offered a vast amount of research to explore the various aspects of the concept. Additionally, the model case is a strength for this concept analysis, as it demonstrates the way multiple SDOH come together to prevent an individual from receiving prenatal care. Regular prenatal care is an important preventative service that improves maternal and fetal health (American College of Obstetricians and Gynecologists, 2025). The American College of Obstetrics and Gynecology (2025) recommends addressing unmet social needs as a key component of prenatal care which could have benefited the woman in the model case if she had been able to access such services.

Limitations

SDOH is a complex and broad concept. There are five domains with multiple factors, and the impacts range from individual health consequences to detrimental societal health disparities and inequities (Office of Disease Prevention and Health Promotion, n.d.). The five domains of SDOH provide a framework for explaining SDOH, but the way the determinants within these domains complicate and perpetuate each other is difficult to conceptualize. The complexities and deeply rooted antecedents make it challenging to explore SDOH on a deep enough level to grasp the true scope of this multifaceted concept, creating a limitation for this concept analysis. Another limitation for this concept analysis is that sources were limited to those presented in the English language. Since SDOH is a concept impacting health on a global scale, there are likely additional sources from countries with primary languages other than English that could provide further insight and contribute to a comprehensive analysis.

Next Steps

Efforts have been made to define SDOH and to begin to understand the far-reaching impacts. However, there is work yet to be done when it comes to recognizing and moving forward with tangible actions that will address SDOH and therefore improve health (American Academy of Family Physicians Board of Directors, 2019). Nurses need to be at the forefront in developing, implementing and evaluating these actions. SDOH interconnect and often compound each other, creating a complex web of barriers to health as detailed in the model case. Research surrounding focused and substantial interventions for healthcare teams and the government is an important next step in overcoming SDOH. Healthcare providers are now thinking about

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the ways in which their patients are impacted by SDOH, but they need support to be able to address them in meaningful ways: for instance, guidelines, resources, and predictor tools. These need to be incorporated into nursing education.

The incorporation of SDOH into all areas of nursing and medical education curriculum exposes learners to the breadth of this concept and reinforces that it is essential to providing patient-centered care that considers the unique needs of individual patients. This prepares and positions learners for a future of providing comprehensive and high-quality healthcare that improves patient outcomes. Nursing education has begun the process of incorporating SDOH into curricula. The American Association of Colleges of Nursing (2021) Essentials provides guidance for content and core competencies in professional nursing education. The 2021 Essentials guidelines include SDOH as a part of the 10 domains that undergird nursing education. The Essentials state that entry level professional nursing students must be taught the impact of SDOH on healthcare outcomes, while advanced practice students must be taught to design practices that reduce the impact of SDOH and therefore enhance patient outcomes. Successful integration of SDOH into nursing education must carry institutional support and include training for faculty (Cerio, 2025), that will provide the necessary resources and knowledge to ensure this concept is applied in and out of the classroom. Nursing programs must continue to work toward fully incorporating these guidelines and SDOH into curricula through various activities including didactic education, hands-on care, care-plan design, and the use of healthcare simulation, as well as the development of grading rubrics that evaluate competency in this important domain. Clinical placement in community settings is crucial, as it provides learners with an opportunity to gain experience in settings where SDOH can be visualized in authentic context (Cerio, 2025).

Several SDOH have been identified but the need for research that explores the depth to which these determinants impact individuals, communities and society persists. Racism for instance has been identified as a social determinant of health (Centers for Disease Control and Prevention, 2024b) but further research is needed to fully conceptualize the extent to which this determinant impacts health and well-being, and increases the impact of other SDOH. Racial disparities in health outcomes are well documented such as the maternal mortality rate in the United States. In 2022 the rate of maternal deaths in the United States for White women was 19 per 100,000 live births, while in the same year the rate of maternal deaths for Black and African American women was 49.5 per 100,000 live births (Hoyert, 2024). Research supports the identification of race as a social factor, not a biological factor in health outcomes (Amutah et al., 2021; James & Okoye, 2023). This highlights the need to take next steps in the exploration and dissection of racism and the way in which this can inhibit equitable healthcare and health outcomes. Research that evaluates the impact and interconnectedness of racism with other social factors throughout the five domains of SDOH is a crucial next step in using this concept to build the tangible interventions that can improve outcomes and reduce health disparities.

VI. Conclusion

Social determinants of health are social and economic factors that influence health inequities and greatly impact the health and well-being (Centers for Disease Control and Prevention, 2024b) of individuals, families, communities, and society. The concept of SDOH crosses multiple sectors of healthcare and can be used in the delivery of healthcare, public health policy, community engagement, advocacy for health equity, incorporation of social services, and epidemiology. The factors of this concept are profoundly interconnected and result in immense challenges. This concept analysis examines, details, and provides context for the concept of SDOH and demonstrates the breadth of the concept. Additionally, this concept analysis makes recommendations for the incorporation of SDOH in nursing and medical education and highlights the importance of future research that focuses on tangible actions to remove barriers to optimal health.

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High-Fidelity Simulation in Nursing Education: A Narrative Review of Students' Learning Outcomes

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ABSTRACT

Introduction: High-Fidelity Simulation (HFS) is a key pedagogical approach in nursing education, offering immersive and realistic clinical scenarios that help bridge the gap between theory and practice. Despite a growing body of research, evidence on nursing students' learning outcomes with HFS remains fragmented across diverse study designs, educational contexts, and theoretical perspectives. Many studies emphasize isolated outcomes, such as knowledge acquisition or self-confidence, limiting integrative understanding across learning domains and constraining quantitative synthesis.

Aim: This narrative review synthesizes existing literature on nursing students' learning outcomes with HFS, identifying recurring themes, perceptions, and educational outcomes across cognitive, affective, and psychomotor learning domains.

Methods: A narrative review was conducted of 23 peer-reviewed studies published between 2019 and 2024. Literature was retrieved from Google Scholar, PubMed, JSTOR, and ScienceDirect using the keywords "high fidelity," "high-fidelity," "nursing," "teaching," and "simulation." Included studies employed qualitative, quantitative, or mixed-methods designs and involved nursing students. Studies focusing exclusively on educators, no available full-text, review articles, or non-English publications were excluded.

Results: The findings demonstrate that nursing students' learning outcomes with HFS are multidimensional and consistently positive across varied educational and cultural contexts in three interrelated domains: (1) congnitive, (2) affective, and (3) psychomotor learning. Structured debriefing, experiential learning cycles, and effective faculty facilitation emerged as critical factors in optimizing learning outcomes. HFS consistently supported students' development of knowledge, clinical reasoning, emotional readiness, and practical competence, reinforcing its value as a comprehensive pedagogical strategy in undergraduate nursing education.

Conclusion: HFS is a transformative educational strategy that integrates cognitive, affective, and psychomotor learning that leads to enhancements of students' competencies, confidence, and readiness for professional practice. Its curricular integration is a strategic educational approach that sets quality and standards, aligning to the complex demands of the contemporary nursing education with the aim to maximize positive impact to patient safety.

Keywords: *debriefing; experiential learning; high-fidelity simulation; learning outcomes*

I. INTRODUCTION

The delivery of nursing education has continually evolved in response to technological advancements and increasing healthcare complexity. Globally, simulation-based learning has become an integral pedagogical approach in nursing curricula, providing structured opportunities for experiential learning. Among available modalities, high-fidelity simulation (HFS) has gained prominence due to its capacity to closely replicate real clinical environments. In nursing education, HFS refers to a level of simulation fidelity characterized by realistic clinical settings in which learners interact dynamically with simulated patients and facilitators, followed by guided reflective debriefing (Hanshaw & Dickerson, 2020). Typically employing advanced computerized manikins that mimic human physiological responses, HFS allows nursing students to engage in complex, interactive clinical scenarios with a high degree of realism and learner engagement (Meakim et al., 2013).

The integration of HFS into nursing education has been widely associated with the development of core clinical competencies, including psychomotor skills, critical thinking, clinical judgment, decision-making, teamwork, and self-confidence. As nursing education increasingly emphasizes competency-based outcomes and patient safety, educators continue to seek instructional strategies that effectively bridge the gap between theoretical knowledge and clinical practice. Within this context, understanding nursing students' learning outcomes with HFS is essential for informing curricular design and instructional implementation.

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High-fidelity simulation has emerged as a transformative educational strategy that addresses several limitations of traditional teaching methods. Unlike conventional classroom instruction or restricted clinical exposure, HFS provides immersive, hands-on learning experiences that allow students to manage realistic patient care situations without risk to actual patients. This approach supports integrated learning across the cognitive, psychomotor, and affective domains, contributing to students' confidence, professional socialization, and readiness for clinical practice (Lei et al., 2022).

A growing body of empirical evidence demonstrates the educational benefits of HFS. Quantitative studies and meta-analyses report significant improvements in nursing students' knowledge acquisition, clinical performance, technical competence, and self-confidence following exposure to high-fidelity simulation (Tonapa et al., 2023). Complementing these findings, qualitative studies highlight the experiential and multidimensional nature of learning in HFS, emphasizing the roles of emotional engagement, stress management, teamwork, and reflective thinking in knowledge construction and skill development (Najjar et al., 2015). Furthermore, structured feedback and debriefing sessions have been shown to enhance clinical reasoning, learner satisfaction, and preparedness for real-world practice through iterative cycles of action and reflection (Daneshfar & Moonaghi, 2025).

Despite the expanding literature on HFS, evidence related to nursing students' learning outcomes remains fragmented across diverse study designs, educational contexts, and theoretical perspectives. Many studies focus on isolated outcomes, such as knowledge gain or self-confidence, without integrating findings across learning domains, ethical implications and technical skills (Sedgwick, et al., 2021; Filomeno & Minciullo, 2021). Consequently, quantitative synthesis through systematic review or meta-analysis is often limited by methodological heterogeneity, lead to findings such as curriculum integration, delivery design and resources, and simulation prebreifing (Astbury et al., 2021; Tong et al., 2022), A narrative review is therefore warranted to enable integrative interpretation across quantitative, qualitative, and mixed-methods studies, capturing the complexity of learning experiences that extend beyond measurable outcomes.

Guided by this need, the present narrative review aims to synthesize existing literature on nursing students' learning outcomes with high-fidelity simulation. Specifically, it seeks to identify recurring themes, perceptions, and learning outcomes across cognitive, affective, and psychomotor domains, thereby providing a holistic understanding of the educational value of HFS and informing future teaching practices, curriculum development, and research directions.

II. Methods

Research Design

A narrative review design was employed to collect, examine, and synthesize existing literature on the use of High-Fidelity Simulation (HFS) in nursing education. This approach provides definitive findings for explicit contextualization, comprehensible, and applicable summary of information (Sarkar & Bhatia, 2021). Hence, it was selected to allow for a comprehensive and interpretive synthesis of diverse empirical evidence, including qualitative, quantitative, and mixed-methods studies, with a particular focus on nursing students' learning outcomes.

Conduct of Study

This study was subjected to iterative auditing and inspecting by research experts related to the field. To ensure trustworthiness, there were two (2) reviewers who assessed the discussion of findings for objectivity and free from bias. A qualified research assistant aided and facilitated the retrieval of literatures using reference manager tools.

Literature Search Strategy

A systematic yet flexible literature search was conducted from July to December 2024 to identify relevant studies examining HFS in nursing education. A combination of keywords and Boolean operators was used to ensure both breadth and relevance of the retrieved literature. The primary search terms included "high fidelity," "high-fidelity," "nursing," "teaching," and "simulation." Boolean operators "AND" and "NOT" were applied to refine search results and exclude irrelevant studies.

Data Sources

The literature search was performed across multiple electronic databases to capture a wide range of peer-reviewed publications. These databases included Google Scholar, PubMed, JSTOR, and ScienceDirect, which are commonly used repositories for nursing, health sciences, and education research. These sources were selected to ensure comprehensive coverage of interdisciplinary studies relevant to high-fidelity simulation in nursing education.

Inclusion and Exclusion Criteria

To further refine the selection of relevant studies, explicit inclusion and exclusion criteria were applied during the screening process. Studies were included if they: (a) involved nursing students, either exclusively or alongside other allied health students; (b) were published between 2019 and 2024; (c) were peer-reviewed; (d) employed qualitative, quantitative, or mixed-methods research designs; and (e) were written in English.

Studies were excluded if they: (a) focused exclusively on nurse educators; (b) were not available

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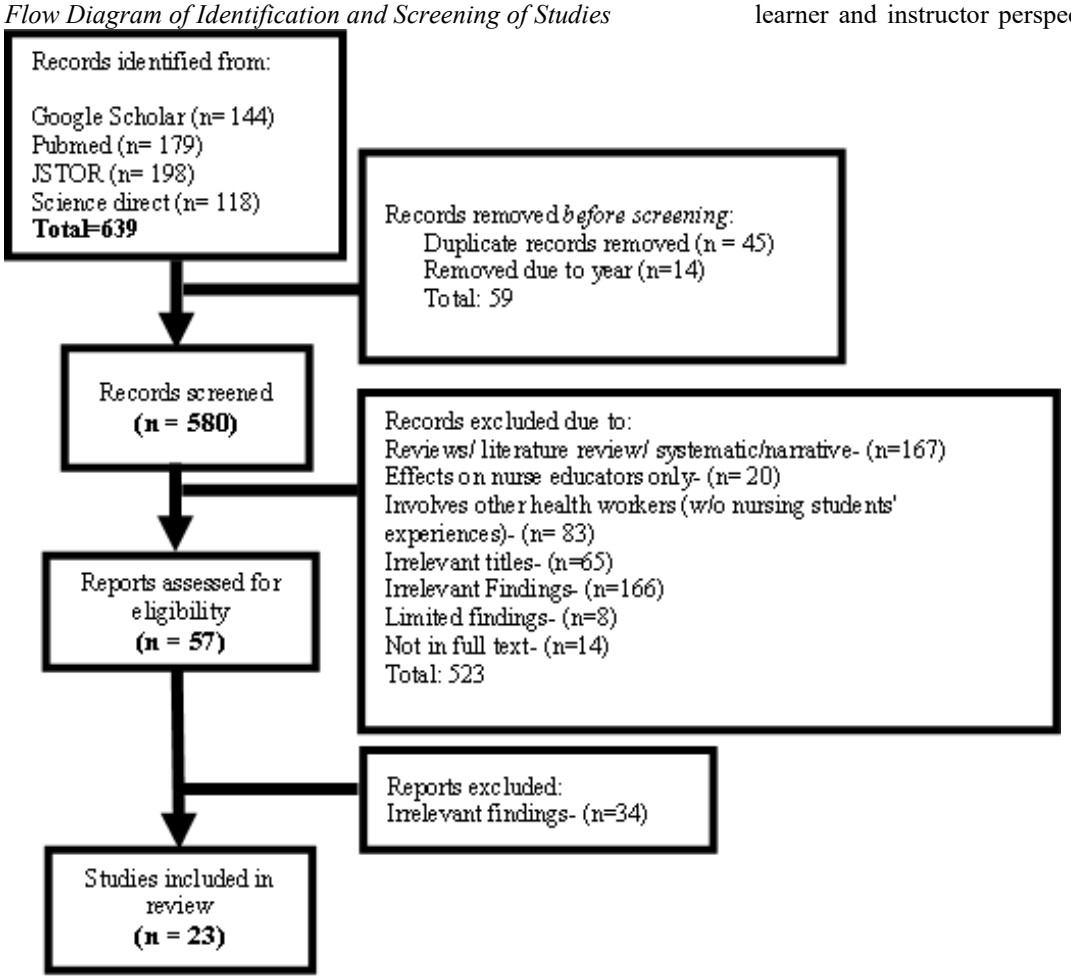
in full-text form; or (c) consisted of review articles, including systematic, scoping, or narrative reviews.

Figure 1
Flow Diagram of Identification and Screening of Studies



Ethical Consideration

As this study is a narrative review of published literature, it did not involve human participants or the collection of primary data. Nevertheless, ethical principles were upheld through accurate citation of sources, faithful representation of study findings, and adherence to standards of academic integrity throughout the review process.

III. Results

Overview of Study Characteristics

Across the twenty-three reviewed studies, publication years ranged from 2019 to 2024, indicating sustained and growing interest in high-fidelity simulation in nursing education, with a noticeable increase in studies published from 2021 onward, reflecting post-pandemic educational innovations.

In terms of participants, the studies predominantly involved undergraduate or pre-licensure nursing students, with sample sizes ranging from 16 to 389 students. Most samples included second- to fourth-year nursing students, while a few studies incorporated final-year students, first-year students, or mixed groups of health professions students. One study also included nurse educators alongside students, highlighting both learner and instructor perspectives. The concentration of studies among upper-year nursing students suggests that high-fidelity simulation is most frequently used to support the development of advanced clinical competencies, clinical judgment, and professional readiness prior to entry into practice.

Regarding country of origin, the research was conducted across a diverse international context, demonstrating the global adoption of simulation in nursing education. The most frequently represented country was Spain, followed by Turkey, Palestine, and the United States. Other countries included the Philippines, Saudi Arabia, Hong Kong, United Kingdom, Singapore, Sweden, Oman, and Malaysia. This wide geographic distribution suggests that high-fidelity simulation is a universally relevant educational strategy, adaptable to different cultural, educational, and healthcare settings.

Students' Learning Outcomes with High-Fidelity Simulation

Analysis of the included studies indicates that nursing students' learning outcomes with high-fidelity simulation (HFS) can be meaningfully organized into three interrelated domains: cognitive, affective, and psychomotor learning. Across diverse educational contexts and methodological approaches, HFS consistently supported students' development of knowledge, clinical reasoning, emotional readiness, and practical competence, reinforcing its value as a comprehensive pedagogical strategy in undergraduate nursing education.

Cognitive Learning Outcomes – Enhanced Knowledge Integration, Critical Thinking, Clinical Reasoning, and Decision-Making

Cognitive learning outcomes associated with high-fidelity simulation (HFS) were consistently reflected in students' enhanced knowledge integration, critical

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thinking, clinical reasoning, and judgment, particularly in complex and high-risk clinical situations. Experimental and mixed-methods studies indicate that HFS promotes higher-order cognitive processes by immersing students in realistic clinical problem-solving scenarios. Akalin and Sahin (2020) reported increases in "knowledge, critical thinking, and clinical decision-making scores" following simulation, concluding that HFS effectively improved nursing students' management of pre-eclampsia. Similarly, Salameh et al. (2021) found "significant differences…in knowledge and total clinical judgment scores" after integrating a complex mechanical ventilation case with HFS, demonstrating enhanced clinical knowledge and decision-making.

Comparable cognitive gains were observed across varied clinical contexts. Ka Ling et al. (2021) demonstrated significant improvements in nursing students' knowledge and critical thinking during code blue management, particularly in the truth-seeking dimension. Sterner et al. (2023) likewise concluded that blended simulation-based education—combining high-fidelity manikins with web-based interactive simulations—effectively enhanced students' critical thinking, highlighting the added value of multimodal simulation strategies.

Qualitative and mixed-methods evidence further elucidated the mechanisms underlying clinical reasoning development. Abdulmohdi and McVicar (2022) identified a "significant moderate increase in deduction and analysis," with students demonstrating forward reasoning during patient deterioration and backward reasoning during debriefing, underscoring the role of simulation in strengthening cue recognition and interpretation. In maternal and pediatric nursing education, Reid et al. (2020) reported "no statistical difference" between high-fidelity simulation–based and hospital-based clinical experiences in clinical judgment, suggesting that HFS may serve as an effective alternative to traditional placements. In contrast, Ayed et al. (2022) found that "mean clinical judgment differed significantly at post-test" in favor of the simulation group, indicating superior cognitive outcomes in pediatric nursing contexts.

Notably, findings were not uniformly conclusive. Blakeslee (2020) reported no significant advantage of HFS over written case studies in improving critical thinking, suggesting that cognitive outcomes may depend on instructional design and comparator methods. Nonetheless, broader evidence supports the cognitive value of HFS, as demonstrated by Arrogante et al. (2023), who reported improvements in students' geriatric knowledge that enabled the provision of higher-quality care for older adults.

Affective Learning Outcomes - Increased Self-Confidence, Reduced Anxiety, Learner Satisfaction, Empathy, Emotional Regulation, and Professional Identity Formation

Affective learning outcomes emerged as the most consistently positive domain across the reviewed studies. Students frequently reported increased self-confidence, satisfaction, reduced anxiety, positive attitudes, and strengthened professional identity following participation in HFS. Akalin and Sahin (2020) identified themes of "confident decision-making," "self-confidence," and "professional preparation," while Toqan et al. (2023) similarly confirmed that HFS "increased students' satisfaction and confidence," describing it as a "safe learning method."

Moreover, HFS contributed to improved emotional regulation. Saritaş et al. (2024) found that "self-confidence levels increased, while anxiety levels decreased" following simulation-based auscultation practice. This finding was echoed by Chow et al. (2023), who reported significant improvements in self-confidence and reductions in anxiety during emergency nursing simulations. Students' overall perceptions of HFS were overwhelmingly positive. Raman et al. (2024) noted that learners "strongly perceived HFS as the best active learning method" and highly valued its role in collaboration and diverse learning approaches. In the Philippine context, Gaspar and Banayat (2024) similarly reported high levels of student satisfaction, with confidence and satisfaction closely linked to simulation design and educational practices. These findings are consistent with those of Alconero-Camarero et al. (2020), who reported that students "highly satisfied" with high-fidelity clinical simulation, confirming its usefulness in the learning process.

Beyond confidence and satisfaction, HFS promoted empathy, self-awareness, and patient-centered care. Ayed et al. (2021) demonstrated significant improvements in "self-awareness, empathy, and patient-centered care" among pediatric nursing students following simulation-based instruction. Similarly, Plaza del Pino et al. (2022) found that HFS enhanced students' comfort in caring for culturally diverse patients and fostered empathy and interpersonal sensitivity. Qualitative findings further illustrated affective engagement and professional identity development. Watson et al. (2021) described students "acting like a nurse instead of being a student," which enhanced preparedness for clinical placements. Zhang et al. (2019) characterized video-assisted debriefing as an "emotional roller coaster" that positively influenced students' attitudes and behaviors; participants reported that this approach complemented verbal debriefing by providing objective evidence while deepening emotional engagement. Additionally, Rossler (2024) highlighted increased "readiness to learn" and enhanced collaboration in interprofessional simulation settings.

Psychomotor Learning Outcomes - Enhanced Technical Skills, Procedural Accuracy, Communication, and Interprofessional Collaboration

Psychomotor learning outcomes were strongly supported by evidence demonstrating improvements in technical skills, procedural accuracy, and communication performance through HFS-based learning. Randomized controlled trials indicated that HFS is particularly effective for practicing complex hands-on skills in a safe and repetitive environment. Doğru and Aydın (2020) reported that simulation was

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"more effective than traditional method" in improving cardiac auscultation skills, while Saritaş et al. (2024) similarly demonstrated enhanced auscultation performance alongside increased confidence and reduced anxiety.

In addition to technical proficiency, HFS facilitated the development of communication and teaching skills, which are integral components of psychomotor competence in nursing practice. Coleman and McLaughlin (2019) found that simulated patients enabled "authentic verbal and practical interactions" that students were able to "transfer to clinical practice." Rossler (2024) further emphasized the role of HFS in promoting the "acquisition of interactional relationships" within interprofessional teams, highlighting the importance of collaborative skill development. Similarly, Arrogante et al. (2023) reported improvements in nursing students' communication skills when caring for older adults. Collectively, these findings suggest that HFS supports not only individual technical performance but also the coordinated psychomotor and communicative behaviors required in real-world clinical settings.

Alshahrani (2024) further emphasized that psychomotor learning through HFS is strongly influenced by interactions among educators, students, and peers, underscoring the importance of supportive instructional relationships in facilitating skill acquisition. The study also highlighted the need to adequately prepare both students and educators to mitigate potential adverse effects of HFS, particularly in socio-cultural contexts that may influence participation, confidence, or performance. Beyond individual skill development, HFS also supported interprofessional psychomotor competencies. Rossler (2019) found statistically significant improvements in collaboration and readiness to learn among pre-licensure health professions students engaged in high-fidelity human patient simulations, reinforcing the value of HFS in preparing students for team-based clinical practice.

Synthesis

Overall, the reviewed evidence demonstrates that high-fidelity simulation supports integrated cognitive, affective, and psychomotor learning outcomes, enabling nursing students to think critically, regulate emotional responses, and perform clinical skills with confidence and accuracy. Furthermore, the findings underscore the importance of contextual factors—including socio-cultural influences and educator–student interactions—in optimizing learning outcomes. Taken together, HFS emerges as a holistic pedagogical approach that effectively bridges theory and practice, preparing students for the complex cognitive, emotional, and technical demands of contemporary healthcare environments.

Categorically, the nature of HFS that positively impact the students' learning domains include patient-care clinical simulations through the use of high-fidelity mannequins, scenario-based nursing care interactive media simulators, patient-care devices supporting nursing care simulators like mechanical ventilator and cardiac monitors, nursing procedure skills simulators such as auscultating devices and patient monitors, and complex scenario-based laboratory simulators for emergency and critical care nursing.

IV. Discussion

Learning Outcomes of High-Fidelity Simulation Through a Theoretical Lens

This narrative review synthesized evidence on nursing students' learning outcomes with high-fidelity simulation (HFS) and demonstrated that learning outcomes are best understood across the cognitive, affective, and psychomotor domains, consistent with Bloom's taxonomy of learning (Stapleton-Corcoran, 2023). Across diverse educational contexts and research methodologies, the findings consistently indicate that HFS supports holistic learning, enabling nursing students to integrate knowledge, skills, attitudes, and professional behaviors essential for safe and competent practice. Rather than addressing isolated competencies.

Experiential and Reflective Learning in High-Fidelity Simulation

The effectiveness of HFS aligns closely with Kolb's Experiential Learning Theory, which conceptualizes learning as a cyclical process involving concrete experience, reflective observation, abstract conceptualization, and active experimentation (Kolb, 1984). In this context, HFS provides learners with authentic clinical experiences that closely approximate real-world practice. These experiences are subsequently reinforced through structured debriefing, enabling students to reflect on their performance, integrate theoretical concepts, and apply insights to future clinical situations.

Complementing Kolb's framework, the central role of debriefing observed across studies strongly supports Schön's Reflective Practice Theory, which emphasizes reflection in action and on action as mechanisms for professional learning (Schön, 1992). Through guided debriefing, students critically examine their clinical reasoning and emotional responses (Abdulmohdi & McVicar, 2022; Zhang et al., 2019), thereby transforming experience into meaningful knowledge. Conversely, inadequately facilitated debriefing may help explain inconsistent cognitive outcomes reported in some studies (e.g., Blakeslee, 2020), highlighting that simulation alone is insufficient without skilled reflective facilitation. This integration of experiential and reflective learning provides a theoretical explanation for why HFS is particularly effective in promoting higher-order thinking, emotional regulation, and professional judgment.

Interprofessional Collaboration and Social Learning

Importantly, findings related to enhanced interprofessional collaboration and communication (Rossler, 2024) highlight the role of HFS in preparing students for team-based healthcare delivery, a core

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competency emphasized by the World Health Organization (n.d.) and contemporary nursing and medical standards (Mitchell et al., 2012). From a social learning perspective, interprofessional simulation promotes learning through observation, interaction, and shared problem-solving. By clarifying professional roles and fostering mutual respect, HFS prepares students for collaborative clinical environments where teamwork is critical to patient safety and care quality.

Faculty Involvement and Educational Implications

Faculty involvement plays an important role in optimizing learning outcomes in HFS. Educators function not only as facilitators but also as designers of psychologically safe and pedagogically sound learning environments. Evidence indicates that faculty preparedness, feedback quality, and sensitivity to socio-cultural contexts significantly influence students' engagement, confidence, and learning outcomes (Alshahrani, 2024). Therefore, ongoing faculty development in simulation pedagogy, debriefing methodologies, and interprofessional facilitation is essential to maximize the educational impact of HFS and ensure equitable and effective learning experiences.

Significance to Nursing and Healthcare

Nursing education plays a significant position in addressing the global healthcare issues. Producing globally competitive nurse professionals reinforces the optimum goal of patient safety across levels of care. Oermann et al. (2022) underscores that incorporating digital tools and technological innovations in pedagogy sets standards and quality nursing education, thereby generates competent healthcare professionals. Correspondingly, integrating HFS in nursing education pedagogy is considered as enhancement of formal academic training, conforming to the present demands and concerns in the fields of nursing and healthcare.

V. Conclusion

Overall, high-fidelity simulation (HFS) serves as a transformative pedagogical approach that enhances cognitive, psychomotor, and affective learning domains of learners. When thoughtfully designed and implemented, HFS strengthens nursing competence, confidence, and readiness for professional practice, complementing rather than replacing traditional clinical experiences.

HFS has significant implications for nursing practice, education, and research. In practice, it enhances clinical competence, thereby improving patient safety. In education, it fosters integrated curricular learning design. For research, the findings highlight the need for theory-driven, longitudinal, and mixed-methods studies to explore long-term learning transfer, contextual influences, and optimal simulation designs. Collectively, these implications position HFS as a strategic educational approach that strengthens nursing workforce preparation and supports evidence-based teaching and clinical decision-making.

VI. Recommendation

Based on the findings of this narrative review, the following recommendations are proposed to guide nursing educators, curriculum planners, and academic institutions in optimizing the use of High-Fidelity Simulation (HFS) to enhance nursing students' cognitive, psychomotor, and affective learning outcomes and overall readiness for clinical practice.

First, Nursing Program should integrate HFS as a core instructional strategy across all levels of the curriculum, ensuring that simulation scenarios are deliberately aligned with course- and program-level learning outcomes to support the progressive development of cognitive, psychomotor, and affective competencies.

Second, structured debriefing and reflective practices should be incorporated as essential component of HFS teaching-learning strategy. Specifically, guided and video-assisted debriefing to reinforce critical thinking, clinical reasoning, emotional regulation, and professional identity formation.

Finally, Nursing education institutions should invest in faculty development and sustain simulation resources. This includes relevant faculty trainings and investment in simulation laboratories.

Declaration of Authorship

The authors confirm that they meet the international criteria for authorship. Each author has made substantial contributions to the conception or design of the work; the acquisition, analysis, or interpretation of data; and the drafting or critical revision of the manuscript. All authors have approved the final version for publication and agree to be accountable for all aspects of the work.

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Conflict of Interest

The author declares no conflicts of interest, financial or otherwise.

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Adolescent Suicide: Degree of Knowledge, Attitudes, and Level of Risk

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ABSTRACT

Introduction: Suicide prevention hinges on mental health literacy, yet empirical research examining the intersection of knowledge, attitudes, and suicide risk in the Philippine context remains scarce. There is a lack of evidence-based data on how these variables correlate in the adolescent population of Baguio City.

Aim: This study investigated the levels of knowledge (K), attitudes (A), and suicide risk (SR) among adolescents in Baguio City and examined differences based on sex, family structure, and socioeconomic status.

Methods: A quantitative descriptive-correlational design was employed among 389 adolescents (ages 18–21). Due to COVID-19 restrictions, snowball sampling was utilized for online data collection between March and October 2021. Participants were screened to exclude those with active psychiatric disorders or those undergoing psychotherapy. Data were collected via Google Forms and analyzed to determine relationships among K, A, and SR.

Results: Participants demonstrated a "fair" level of knowledge ($\bar{x} = 11.39$) but a poor understanding of high-risk warning signs (32.65%). Notably, 48% were classified as high-risk for suicide, with 26% reporting suicidal thoughts. A weak but significant relationship was found between attitudes and suicide risk ($p \leq 0.05$). Furthermore, sex, family structure, and socioeconomic status were found to significantly influence both knowledge and risk levels.

Conclusion: The high prevalence of suicide risk despite fair theoretical knowledge underscores the need for targeted educational initiatives. These findings suggest that holistic prevention strategies must address specific gender disparities and family dynamics to effectively support at-risk adolescents.

Keywords: *adolescent suicide, knowledge, attitudes, suicide risk*

I. Introduction

Adolescence is a critical developmental transition marked by self-discovery and a quest for independence. While this period offers growth, it introduces significant psychological pressures and a temporary sense of diminished control. For the purposes of this research, "adolescents" are operationally defined as individuals aged 18 to 21 years. This specific age range was selected to capture the transition into emerging adulthood while adhering to legal age-of-consent requirements for independent participation in research. Globally, suicide is a leading cause of youth mortality, accounting for 8.5% of deaths in the 15-to-29 age group (Sidhartha and Jena, 2006). In the Philippines, the Global School-based Student Health Survey (GSHS) indicated that 11.6% of youth aged 13 to 17 contemplated suicide within a single year (Quintos, 2017). Locally, the Cordillera Administrative Region has seen alarming trends, with 23% of surveyed adolescents reporting suicidal ideation and 4.2% having attempted suicide (Quintos, 2017; Estrada et al., 2019).

The risk of suicide is multifaceted, shaped by a complex interplay of genetic predisposition, mental health disorders, and social isolation. The COVID-19 pandemic further intensified these vulnerabilities by exacerbating feelings of helplessness and reducing access to school-based coping resources. Despite this prevalence, mental health stigma remains a formidable barrier to help-seeking. There is a critical lack of comprehensive nationwide data in the Philippines, necessitating localized research in communities like Baguio City. Proactive measures are urgent, as this study is founded on the premise that increasing mental health literacy—specifically factual knowledge and supportive attitudes—is essential for early intervention.

Understanding these risks requires a multi-dimensional perspective. Biologically, Steinberg (2014) posits a "maturation gap" in the adolescent brain, where the early-maturing socioemotional system outpaces the prefrontal cortex, leading to heightened impulsivity. This vulnerability is complemented by Erikson (1968), who describes the "Identity versus Role Confusion" stage as a period of significant psychological strain. Such instability is further conceptualized by the Crisis Theory of Aguilera and Messick (1974), which posits that stressors escalate into crises when "balancing factors"—such as realistic

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perceptions and situational supports—are absent. Bridging these vulnerabilities is Jorm's (2012) Mental Health Literacy Theory, which suggests that factual knowledge and non-stigmatizing attitudes are essential facilitators of proactive help-seeking.

This study investigated the levels of knowledge, attitudes, and suicide risk among adolescents in Baguio City to address the existing gap in localized evidence. Specifically, the research sought to determine the degree of knowledge adolescents possess regarding suicide and their attitudes across subscales of unpredictability, loneliness, incomprehensibility, avoidance, permissiveness, and preventability. It further aimed to identify the level of suicide risk, specific risk factors, and prevalent symptoms. Finally, the study examined whether significant relationships exist between knowledge, attitudes, and risk, and if these variables differ when grouped by sex, family structure, and socioeconomic status.

The findings offer critical implications for diverse stakeholders. For nursing practice and education, these insights guide psychiatric and school nurses in planning trauma-informed interventions and integrating neurodevelopmental breakthroughs into curricula. By identifying specific risk profiles, the study provides a foundation for expedited assessments and timely referrals. Furthermore, the research supports public health advocacy by providing the Baguio Mental Health Council and similar organizations with an evidence base to design Information-Education Campaign (IEC) materials. Ultimately, these results provide a localized framework for policymakers to adopt suicide prevention programs tailored to the unique socio-cultural and economic context of the Cordillera Administrative Region.

II. Methods

Research Design

This study employed a quantitative descriptive-correlational research design. This approach was selected to investigate the status of and the relationships between adolescents' knowledge of suicide, their attitudes toward the behavior, and their individual suicide risk levels during the COVID-19 pandemic.

Participants and Sampling

The study population comprised 389 adolescents residing in Baguio City, Philippines. The final sample included 292 females and 89 males, with 8 participants not disclosing their sex. Participants were recruited via snowball sampling, a non-probability technique chosen for its efficacy in reaching the target demographic under pandemic-related mobility restrictions. Eligibility criteria included Baguio City residency, adherence to the operational age range of 18 to 21 years, and fluency in English or Filipino. Individuals were excluded if they reported significant psychiatric disorders, current use of psychotropic medications, or active engagement in psychotherapy. From an initial 405 responses, 16 were excluded based on these criteria.

Data Gathering Tools

Data collection was facilitated through a four-part online instrument administered via Google Forms. The first component elicited demographic information, including sex, family structure, and socioeconomic status. The second part utilized an adapted 16-point Knowledge Scale to evaluate participants' identification of suicide risk factors, protective factors, and help-seeking resources, with scores stratified into levels of Poor (0–8.99), Fair (9.00–11.70), Good (11.71–14.40), and High (14.41–16). Attitudinal factors were assessed using the 37-item Attitudes Towards Suicide Scale (ATTS) developed by Salander and Jacobsson (2003), which employs a 5-point Likert scale to measure factors such as preventability, incomprehensibility, and avoidance of discussion. For this study population, the ATTS demonstrated reliability coefficients ranging from 0.38 to 0.66. Finally, suicide risk was measured using the 15-item, dichotomous Tool for Assessment of Suicide Risk: Adolescent Version (TASR-A) by Kutcher and Chehil (2007). This instrument, which achieved a Content Validity Index (CVI) of 0.93, evaluates symptom risk profiles and includes critical items that automatically designate a participant as "high risk" upon an affirmative response regarding current suicidal ideation

Data Gathering Procedure

Data collection was conducted asynchronously via Google Forms between March and October 2021. The researcher coordinated with Sangguniang Kabataan (SK) Chairpersons in Baguio City, who acted as gatekeepers to identify the initial participant pool. Subsequent recruitment followed a chain-referral (snowball) method facilitated through Facebook Messenger and email to ensure a contactless process in compliance with national Inter-Agency Task Force (IATF) protocols. Although the 40-minute sessions were self-administered, the researcher remained virtually accessible via digital platforms to clarify items or address technical issues.

Data Collection and Analysis

Statistical analysis was performed using SPSS. Due to the dataset's non-normal distribution, nonparametric tests were used. Descriptive statistics (frequency counts and means) characterized demographic profiles and levels of knowledge, attitudes, and risk; cases with missing demographic data were excluded listwise from specific bivariate analyses. Spearman's Rank Correlation Coefficient (r_s) was employed to investigate associations between variables. Comparative analyses were conducted using the Mann-Whitney U Test for sex differences and the Kruskal-Wallis H Test for differences across family structures and socioeconomic statuses.

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Ethical Consideration

The protocol was approved by the Saint Louis University Research Ethics Committee (SLU-REC-2021-015). Beneficence was ensured through a safety framework where the researcher—a credentialed psychiatric nurse—provided all participants with mental health support resources. A proactive referral system was implemented for individuals identified as "high risk" via the TASR-A. Digital informed consent was obtained via a mandatory electronic acknowledgment prior to data entry. To safeguard confidentiality, data were gathered anonymously and stored in a secure, password-protected digital environment accessible only to the primary investigator. All procedures strictly adhered to COVID-19 health and safety mandates.

III. Results

Demographic Profile of Respondents

The demographic characteristics of the participants (*N = 389*) are summarized in Table 1. The majority of the respondents were female (75.06%), with a smaller representation of males (22.88%). In terms of family structure, over half of the participants belonged to nuclear families (50.90%), followed by extended (27.25%) and unconventional (21.59%) arrangements. Socioeconomic data revealed that a significant portion of the sample belonged to the lower-middle-income bracket (32.13%) and the low-income bracket (28.53%), while the high-income and wealthy categories combined accounted for only 2.06% of the population.

TABLE 1: *Profile of the Respondents (n=389)*

Variable	*f*	*%*
Gender		
Male	89	22.88
Female	292	75.06
No Response	8	2.06
Family Structure		
Nuclear	198	50.90
Extended	106	27.25
Unconventional	84	21.59
No Response	1	0.26
Socioeconomic Status		
Poor	33	8.48
Low Income	111	28.53
Lower Middle Income	125	32.13
Middle Income	61	15.68
Upped Middle Income	38	9.77
High Income	5	1.29
Rich	3	0.77
No Response	13	3.34

Degree of Knowledge of Suicide

The overall knowledge level of the respondents regarding suicide is presented in Table 2. While half of the participants (50.39%) demonstrated a "Good" level of knowledge, the aggregate mean score ($\bar{X} = 11.39$) falls within the "Fair" category. Only a small fraction (4.11%) achieved "High Knowledge," while nearly 10% remained in the "Poor" category.

Table 2. *Degree of Knowledge of Suicide*

Knowledge on Suicide	*f*	*%*
Poor Knowledge	35	9.00
Fair Knowledge	142	36.50
Good Knowledge	196	50.39
High Knowledge	16	4.11
Total	**389**	**100**

$\bar{X} = 11.39$ (Fair)

Legend:
Poor Knowledge: 0 to 8.99 = <50%
Fair Knowledge: 9.00 to 11.70 = 50.01- 66.67%
Good Knowledge: 11.71 to 14.40 = 66.68-83.33%
High Knowledge: 14.41 to 16 = 83.34-100%

The "Fair" level of knowledge indicates that, while adolescents possess basic awareness, significant gaps remain in their understanding of specific risk factors and intervention strategies. This limited understanding can be attributed to the pervasive stigma and shame associated with mental health in the Philippines, which often discourages active information-seeking (Rüsch et al., 2014). Furthermore, the absence of standardized mental health education in local high school curricula limits adolescents' opportunities to develop foundational literacy (Olyani et al., 2021). The complexity of cultural factors in Baguio City, where traditional beliefs may intersect with modern psychological perspectives, further complicates the comprehension of multifaceted suicidal behaviors (Liu et al., 2005).

These findings align with Liu et al. (2005), who noted that despite awareness of the issue, many adolescents lack the depth of knowledge required to identify depressive symptoms or family discord as critical precursors to a crisis. This deficit is particularly concerning during adolescence, as Dahl (2004) posits that neurodevelopmental changes in the prefrontal cortex can impair emotion regulation and risk assessment. Without adequate mental health literacy (Jorm, 2012), adolescents are less likely to recognize warning signs in themselves or their peers, hindering early intervention. Consequently, integrating factual mental health education is imperative to foster a proactive help-seeking culture and dispel misconceptions (Thornicroft et al., 2010).

Adolescents' Attitudes Toward Suicide

The participants' attitudes toward suicide were measured across six factors, as shown in Table 3. The highest weighted mean was observed for the "Preventability" factor ($\bar{X} = 4.28$), which falls under the "High" verbal interpretation. All other attitudinal factors, including unpredictability, loneliness and appeal, and incomprehensibility, were rated as "Moderate".

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Table 3. *Attitude Summary*

Attitude on Suicide	Weighted $\bar{X}$	Verbal Interpretation
Preventability	4.28	High
Unpredictability	3.50	Moderate
Loneliness and Appeal	3.48	Moderate
Incomprehensibility	3.11	Moderate
Avoidance of Discussion	3.11	Moderate
Permissibility	2.99	Moderate

Legend of the Verbal Interpretation of the Weighted Mean:
1.00 to 2.33 Low
2.34 to 3.66 Moderate
3.67 to 5.00 High

The high agreement with the preventability of suicide is consistent with findings by Estrada et al. (2019) and Arnautovska and Grad (2010), suggesting that adolescents in Baguio City are receptive to prevention strategies. This belief, coupled with a moderate (bordering on low) permissive attitude ($\bar{X} = 2.99$), indicates a strong societal rejection of suicide as an acceptable option. However, the moderate scores across factors like incomprehensibility and avoidance of discussion highlight that while adolescents believe suicide can be stopped, they still find the act difficult to understand or discuss openly.

Historically, societal norms and religious values have heavily influenced these perspectives (Ramirez, 2016). The shift toward viewing suicide as a preventable public health phenomenon rather than a moral failing reflects advancements in mental healthcare. Nevertheless, the recognition of suicide's complexity—acknowledging its ties to neurobiology and sociocultural environments (De Berardis et al., 2018)—underscores the need for comprehensive support systems that move beyond simple awareness to facilitate deep, non-stigmatizing communication.

Level of Suicide Risk Among Adolescents

The participants' attitudes toward suicide were measured across six factors, as shown in Table 3. The highest weighted mean was observed for the "Preventability" factor ($\bar{X} = 4.28$), which falls under the "High" verbal interpretation. All other attitudinal factors, including unpredictability, loneliness and appeal, and incomprehensibility, were rated as "Moderate".

Table 4. *Level of Suicide Risk*

Suicide Risk	f	%
High	126	32.39
Moderate	107	27.51
Low	156	40.10
Total	389	100.00

$\bar{X}$ = 7.25 (Moderate)

Legend: High: 9 to 15 Moderate: 5 to 8 Low: 1 to 4

This elevated risk profile is particularly concerning given the study's timing during the COVID-19 pandemic. The upheaval of daily routines and the shift to distance learning disrupted crucial social interactions necessary for healthy emotional development (Loades et al., 2020). These environmental stressors exacerbate the biological "maturation gap" in the adolescent brain, where heightened impulsivity meets increased feelings of hopelessness and despair (Dahl, 2004; Beck et al., 1974).

The cultural context of Baguio City may further intensify this risk. High social expectations and the fear of "shame" within the community can lead to an overwhelming sense of hopelessness when adolescents perceive themselves as having failed to meet these standards (Goyal et al., 2012). This is reflected in national trends; the 2021 *Young Adult Fertility and Sexuality Study* (University of the Philippines Population Institute [UPPI], 2021) noted that suicidal ideation among Filipino youth more than doubled since 2013, with a staggering 60% of at-risk youth failing to seek help. These findings hold significant implications for nursing practice, suggesting that interventions must prioritize alleviating persistent sadness and perceived burdensomeness to decrease the incidence of self-harm in this high-risk demographic.

Relationships Among Knowledge, Attitudes, and Suicide Risk

To investigate the associations between the primary variables, Spearman's Rank Correlation was utilized. The results, summarized in Table 5, illustrate the complex interplay between mental health literacy and actual risk profiles.

The analysis revealed no significant relationship between overall knowledge and suicide risk ($r_s = .06$, $p = .230$). This suggests that a high level of theoretical knowledge does not directly translate to a reduction in individual risk levels. While knowledge is a fundamental component of mental health literacy, enabling adolescents to identify warning signs in others (Thomas et al., 2018), it may be insufficient to mitigate personal risk factors such as social support deficits or psychological distress (Elias et al., 2015).

Similarly, knowledge showed minimal correlation with most attitudinal subscales, except for incomprehensibility ($r_s = -.12$, $p = .021$). This negative correlation indicates that adolescents with higher knowledge scores tend to find suicide less "incomprehensible." However, the lack of broader significance across other subscales reinforces the findings of Kim et al. (2022), which suggest that interventions should target deep-seated emotional and cognitive factors rather than focusing exclusively on factual information.

In contrast, Table 5 shows that suicide risk (SR) is significantly correlated with all six attitudinal factors (all $p < .05$). Notably, "Loneliness and Appeal" ($r_s = .23$, $p < .001$) and "Permissibility" ($r_s = .29$, $p = .001$) showed the strongest associations. This suggests that adolescents' internal perceptions of suicide are closely linked to their actual vulnerability. A bidirectional relationship may exist; adolescents already experiencing high distress may develop permissive attitudes as a maladaptive coping mechanism, while those with more accepting views of suicide may be

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TABLE 5: *Profile of the Respondents (n=389)*

	Variable Tested	*Spearman's rho Correlation Coefficient*	*Interpretation*	*p-value*	*Interpretation*
K	Permissibility	0.017	weak positive	0.735	Not significant
	Preventability	0.021	weak positive	0.677	Not significant
	Incomprehensibility	-0.117	weak negative	0.021	Significant
	Avoidance of Discussion	-0.035	weak negative	0.495	Not significant
	Unpredictability	0.056	weak positive	0.270	Not significant
	Loneliness and Appeal	-0.006	weak negative	0.899	Not significant
SR	Permissibility	0.291	weak positive	0.001	Significant
	Preventability	-0.157	weak negative	0.002	Significant
	Incomprehensibility	-0.101	weak negative	0.047	Significant
	Avoidance of Discussion	0.145	weak positive	0.004	Significant
	Unpredictability	0.135	weak positive	0.008	Significant
	Loneliness and Appeal	0.226	weak positive	0.000	Significant
K	Suicidal Risk	0.061	weak positive	0.230	Not significant

more susceptible to suicidal ideation when faced with stressors (Kim et al., 2022). These results underscore that while knowledge is important for awareness, changing attitudes and emotional perceptions is more critical for direct risk reduction.

Differences in Knowledge, Attitudes, and Suicide Risk by Sex

The study examined potential gender disparities across the primary variables using the Mann-Whitney *U* test. As illustrated in Table 6, a statistically significant difference was observed only in the degree of knowledge regarding suicide ($p = .005$), with female adolescents exhibiting a higher mean rank (199.72) compared to their male counterparts (162.38).

The significant disparity in knowledge suggests that female adolescents in Baguio City may have greater exposure to mental health information or a higher proclivity for emotional communication. The literature suggests that females often demonstrate greater openness in discussing psychological distress and a greater tendency to seek help (Canetto and Sakinofsky, 1998; Nolen-Hoeksema and Girgus, 1994). Conversely, traditional cultural norms associated with masculinity often discourage males from engaging in self-disclosure or discussing mental health, which may contribute to their lower levels of suicide-related knowledge (Courtenay, 2000; Mackenzie et al., 2006).

Despite the knowledge gap, the data did not indicate a substantial divergence in suicide risk or attitudinal subscales between sexes. This contrasts with earlier research (Kann et al., 2014; Hamilton & Klimes-Dougan, 2015), which typically identifies higher suicidal ideation and different attitudinal patterns among females. However, the lack of statistical significance in risk ($p = .864$) and attitudes suggests that in this specific Baguio City cohort, both genders perceive the complexity and preventability of suicide similarly. This may be influenced by the shared sociocultural environment of the Cordillera region, where collectivistic values and localized awareness efforts might unify perceptions (Stack, 2021).

The findings emphasize that while both genders face comparable risks and hold similar attitudes, prevention strategies must be gender-sensitive. Efforts to elevate suicide awareness should particularly target male adolescents to bridge the knowledge gap, while interventions for females should capitalize on their existing literacy to encourage proactive help-seeking behavior. It is important to note, however, that the gender skew in the current sample (75% female) may limit the generalizability of these differences; thus, future research should aim for a more balanced representation.

TABLE 6: *Differences in the Degree of Knowledge, Attitude toward suicide, and Suicide Risk according to Sex*

Category	*Sex*	*$\bar{X}$ Rank*	*p-value*	*Interpretation*
Knowledge	Male	162.38	0.005	Significant
	Female	199.72		
Permissibility	Male	194.00	0.731	Not Significant
	Female	189.43		
Preventability	Male	194.17	0.717	Not Significant
	Female	189.38		
Incomprehensibility	Male	199.56	0.372	Not Significant
	Female	187.73		
Avoidance of Discussion	Male	195.37	0.630	Not Significant
	Female	189.01		
Unpredictability	Male	192.86	0.816	Not Significant
	Female	189.78		
Loneliness and Appeal	Male	188.52	0.844	Not Significant
	Female	191.11		
Suicidal Risk	Male	189.26	0.864	Not Significant
	Female	191.53		

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TABLE 7: Differences *in the Degree of Knowledge, Attitude, and Level of Suicide Risk according to Family Structure*

Category	*Family Structure*	*X̄ Rank*	*p-value*	*Interpretation*
Knowledge	Nuclear	181.38		
	Extended	204.04	0.050	Significant
	Unconventional	213.28		
Permissibility	Nuclear	191.65		
	Extended	196.75	0.914	Not Significant
	Unconventional	196.05		
Preventability	Nuclear	189.16		
	Extended	205.33	0.465	Not Significant
	Unconventional	191.06		
Incomprehensibility	Nuclear	193.57		
	Extended	188.52	0.711	Not Significant
	Unconventional	201.92		
Avoidance of Discussion	Nuclear	185.72		
	Extended	200.43	0.312	Not Significant
	Unconventional	205.30		
Unpredictability	Nuclear	181.05		
	Extended	214.95	0.037	Significant
	Unconventional	198.03		
Loneliness and Appeal	Nuclear	189.95		
	Extended	200.88	0.714	Not Significant
	Unconventional	194.82		
Suicidal Risk	Nuclear	197.40		
	Extended	183.75	0.487	Not Significant
	Unconventional	201.23		

Differences in Knowledge, Attitudes, and Suicide Risk by Family Structure

The study further explored whether family structure—categorized as nuclear, extended, or unconventional (single-parent or blended)—influenced the primary variables. As shown in Table 7, the Kruskal-Wallis H test revealed statistically significant differences in the degree of knowledge ($p = .050$) and the attitudinal factor of unpredictability ($p = .037$) across the three groups.

Adolescents from unconventional family structures exhibited the highest mean rank for suicide-related knowledge (213.38). This may suggest that non-traditional households foster more open communication regarding sensitive topics or provide adolescents with diverse experiences that encourage mental health literacy. Such environments may allow adolescents to feel more comfortable seeking information or utilizing wider support networks, such as community organizations and counselors. However, post hoc considerations suggest that these levels remain somewhat comparable to those of extended families, aligning with Farberow (1987), who noted that external influences often outweigh family structure in determining factual knowledge.

Regarding attitudes, a significant difference was found in the "Unpredictability" subscale, where those in extended families held the strongest belief that suicide occurs without warning ($\bar{x}$ *Rank = 214.95*). This specific perception may stem from varied media exposure or unique family dynamics within multi-generational households. While overall suicide risk did not vary significantly ($p = .487$), the higher mean rank for risk among those in unconventional setups (201.23) warrants clinical attention. The literature suggests that adolescents in non-intact families may experience greater psychological strain when essential developmental tasks are disrupted (Neumark-Sztainer et al., 2010; Zainum and Cohen, 2017).

These findings underscore the importance of parent-child relationships and effective communication as protective factors (Van Dijk et al., 2020). Suicide prevention initiatives in Baguio City should, therefore, be tailored to family dynamics, focusing on enhancing situational support within unconventional and extended households to mitigate susceptibility to despair during crises.

Differences in Knowledge, Attitudes, and Suicide Risk by Socioeconomic Status

The final inferential analysis examined the impact of socioeconomic status (SES) on the study variables using the Kruskal-Wallis H test. As detailed in Table 8, significant differences were identified in the degree of knowledge ($p = .004$) and the attitudinal factor of incomprehensibility ($p = .006$) across SES categories.

The results indicate that adolescents from higher-income groups possess significantly greater knowledge about suicide, with the "Rich" category achieving the highest mean rank (318.50). This trend aligns with the Mental Health Literacy Theory, which suggests that higher levels of knowledge are often facilitated by better access to educational resources and healthcare information (Uddin et al., 2019). Conversely, adolescents in the "Poor" and "Low Income" brackets exhibited the lowest mean ranks for knowledge, likely due to a lack of specialized mental health literacy programs targeted at lower-income communities.

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Socioeconomic status also significantly influenced the perception of "Incomprehensibility," where adolescents from lower-income backgrounds (Poor $\bar{x}$ *Rank = 208.03*; Low Income $\bar{x}$ *Rank = 210.95*) found the act of suicide harder to comprehend than those in high-income groups *(*$\bar{x}$ *Rank = 130.20*). This suggests that economic stability may be linked to broader exposure to psychological concepts, whereas those in lower SES groups may lack the conceptual framework to demystify suicidal behavior.

Notably, SES did not significantly influence overall suicide risk (*p = .927*) or the other attitudinal subscales. This indicates that while financial resources provide better access to information (knowledge), the emotional and cognitive drivers of suicide risk—such as hopelessness or psychological pain—transcend economic boundaries within this cohort. However, previous literature emphasizes that lower SES remains a distal risk factor, as it may trigger stressful life events that eventually lead to self-harm (Evans et al., 2004;

TABLE 8: Differences *in the Degree of Knowledge, Attitude, and Level of Suicide Risk according to Socioeconomic Status*

Category	*Socioeconomic Status*	$\bar{x}$ *Rank*	*p-value*	*Interpretation*
Knowledge	Poor	157.29	0.004	Significant
	Low Income	165.75		
	Lower Middle Income	210.58		
	Middle Income	191.75		
	Upper Middle Income	185.92		
	High Income	249.70		
	Rich	318.50		
Permissibility	Poor	163.91	0.520	Not Significant
	Low Income	200.14		
	Lower Middle Income	193.75		
	Middle Income	172.96		
	Upper Middle Income	184.84		
	High Income	151.90		
	Rich	174.50		
Preventability	Poor	175.73	0.858	Not Significant
	Low Income	183.63		
	Lower Middle Income	190.77		
	Middle Income	190.47		
	Upper Middle Income	197.57		
	High Income	228.10		
	Rich	129.50		
Incomprehensibility	Poor	208.03	0.006	Significant
	Low Income	210.95		
	Lower Middle Income	188.92		
	Middle Income	144.34		
	Upper Middle Income	177.75		
	High Income	130.20		
	Rich	201.67		
Avoidance of Discussion	Poor	200.67	0.542	Not Significant
	Low Income	192.91		
	Lower Middle Income	184.85		
	Middle Income	193.74		
	Upper Middle Income	171.64		
	High Income	107.40		
	Rich	224.67		
Unpredictability	Poor	158.33	0.428	Not Significant
	Low Income	193.91		
	Lower Middle Income	191.12		
	Middle Income	194.80		
	Upper Middle Income	170.80		
	High Income	174.50		
	Rich	269.50		
Loneliness and Appeal	Poor	174.70	0.980	Not Significant
	Low Income	191.56		
	Lower Middle Income	191.56		
	Middle Income	179.98		
	Upper Middle Income	189.61		
	High Income	192.40		
	Rich	183.67		
Suicidal Risk	Poor	206.70	0.927	Not Significant
	Low Income	191.76		
	Lower Middle Income	186.64		
	Middle Income	183.10		
	Upper Middle Income	175.75		
	High Income	206.50		
	Rich	186.33		

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Gould et al., 2003). Therefore, suicide prevention initiatives must prioritize equity, ensuring that mental health education and intervention resources are culturally and economically accessible to all adolescents, regardless of their family's income level.

IV. Conclusion

The findings of this study offer a critical assessment of the psychological landscape surrounding adolescent suicide in Baguio City, providing a vital empirical basis for nursing interventions and public health strategies. This research contributes a nuanced understanding of the "knowledge-attitude-risk" triad, revealing that while adolescents maintain a foundational belief in the preventability of suicide, significant literacy gaps and stigmatized perceptions—specifically viewing the act as incomprehensible or unpredictable—persist. These cognitive barriers, coupled with the identified moderate-to-high risk levels during the COVID-19 pandemic, underscore an urgent need for systemic shifts in how mental health is addressed within the community.

For nursing practice and policy, the results emphasize the need for psychiatric nurses and school health practitioners to move beyond traditional, passive screening methods toward proactive, longitudinal risk assessments. Because vulnerability profiles vary across demographics, clinical practitioners must employ gender-sensitive and family-centered approaches that account for the unique stressors faced by those in unconventional households. Furthermore, the study advocates the institutionalization of mental health protocols within local youth leadership frameworks, such as the Sangguniang Kabataan (SK), to transform community leaders into trained first responders. In education, there is a clear imperative to integrate comprehensive mental health literacy into high school and undergraduate curricula. This educational shift must address deep-seated attitudinal barriers to foster a culture of help-seeking rather than avoidance. Ultimately, this study serves as a call for a transdisciplinary approach that integrates clinical rigor with culturally sensitive community engagement to safeguard the mental well-being of the youth in Baguio City.

V. Recommendation

Based on the study's findings regarding knowledge gaps, attitudinal barriers, and demographic disparities, the following evidence-based recommendations are proposed.

First, school health practitioners and guidance counselors should implement routine, standardized suicide risk screenings using validated tools like the TASR-A. Given that nearly 60% of the sample fell into moderate-to-high risk categories, a proactive referral system to psychiatric specialists is essential for immediate clinical management. Second, nurse educators and local health authorities should develop and institutionalize comprehensive mental health programs that move beyond basic awareness. These programs must specifically target the "fair" level of knowledge identified in this study by equipping adolescents with technical skills to recognize acute warning signs and reducing the "incomprehensibility" of the act through evidence-based psychoeducation.

Furthermore, suicide prevention initiatives must be gender-sensitive and culturally tailored to the Baguio City context. Targeted outreach should be designed for male adolescents to bridge the significant knowledge gap identified between the sexes. Concurrently, information, education, and communication (IEC) materials should be developed in collaboration with local experts to challenge cultural stigmas and promote help-seeking behaviors through relatable imagery and language. These materials should be disseminated through existing community channels, such as the Sangguniang Kabataan (SK) and local social media platforms, to ensure that resources reach adolescents from all socioeconomic backgrounds.

Finally, it is recommended that family-centered interventions be prioritized to strengthen the parent-adolescent bond, particularly for those in unconventional or extended family structures who demonstrate unique attitudinal patterns. Organizations such as the PTA, Department of Social Welfare and Development (DSWD), and the Baguio Mental Health Council should provide parents with psychoeducation regarding adolescent neurobiology and effective communication strategies to mitigate the "loneliness and appeal" factors that correlate with high risk. For future research, the use of qualitative methodologies is recommended to gain a deeper understanding of the lived experiences behind these statistics, allowing for the continuous refinement of localized suicide prevention protocols.

Contribution of Author/s

The author is responsible for all aspects of this study, including conceptualization, research design, participant recruitment, data collection, data analysis, interpretation of findings, and manuscript preparation.

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Conflict of Interest

The author declares that there is no conflict of interest regarding the publication of this manuscript. There are no financial, personal, or professional relationships, including affiliations with healthcare institutions or academic bodies, that could be perceived as inappropriately influencing the research findings, their interpretation, or the integrity of this study.

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Disclosure of Use of Generative AI

The author used Google Gemini to refine academic language, format statistical data technically, and ensure overall grammatical precision in the manuscript. The author verified the publication and content and revised all the necessary aspects. Moreover, the author of this publication takes full responsibility for the content of this publication.

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A Hermeneutic Phenomenological Approach to Studying Nurses' Duty and Fear in Armed Conflict

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ABSTRACT

Introduction: Nurses in conflict zones face an impossible tension — they are expected to keep delivering care even as their own lives are at risk. Most existing research has documented outcomes like PTSD, but far less attention has been paid to how studies on nurses' lived experiences of duty and fear are actually designed and conducted.

Aim: This article justifies Heidegger's hermeneutic, interpretive, phenomenological use as the philosophical underpinning and the methodology while van Manen's approach as both the methodology and methods used to guide in exploring how nurses experience duty and fear while working during armed conflict.

Methods: The study was grounded in Heideggerian hermeneutic phenomenology and operationalized through van Manen's phenomenology of practice. In-depth, face-to-face interviews were conducted with seven nurses who had provided hospital-based care across two armed conflicts. Data were analyzed using phenomenological thematic analysis, progressing from thematic structures to thematic categories, which were then reflected through van Manen's five lifeworld existentials. Heidegger provided the interpretive foundation for meaning-making, while van Manen structured the methodological processes of inquiry.

Results: The analytic process generated 75 thematic structures that were consolidated into 19 thematic categories and subsequently organized across van Manen's five lifeworld existentials. These lifeworld-reflected categories yielded three general essences that capture how nurses navigated professional duty alongside fear, ethical tension, and the constant threat to their own existence. The findings demonstrate how hermeneutic phenomenology can produce structured yet existentially grounded interpretations of complex clinical experiences.

Conclusion: Grounded in Heideggerian hermeneutic phenomenology and operationalized through van Manen's approach, this study demonstrates a coherent integration of philosophical interpretation and methodological execution. The approach offers a rigorous, transparent, and practice-oriented framework for examining deeply subjective nursing experiences in high-risk contexts, applied as a flexible and reflective guide rather than a rigid procedural sequence. By making the analytic process explicit, this article provides qualitative researchers with a replicable methodological blueprint that strengthens the credibility, interpretive depth, and applicability of phenomenological findings in nursing research.

Keywords: *hermeneutic phenomenology, duty, fear, armed conflict, van Manen*

I. INTRODUCTION

Caring is at the heart of what nurses do (Watson, 2009; Boykin & Schoenhofer, 2013). Across virtually every nursing theory, caring is not just a value, it is the defining purpose of the profession. That expectation does not disappear when the environment becomes dangerous. In armed conflict, nurses are asked to care for patients even while managing their own fear, and even while confronting conditions that threaten their safety.

These settings push nurses to keep fulfilling their professional responsibilities in the face of imminent physical danger, ethically agonizing dilemmas, and profound emotional strain. Armed conflict represents one of the most extreme contexts in which nursing practice takes place. The existing literature has largely focused on the psychological fallout including PTSD, moral distress, particularly among military nurses. What remains underexplored is how nurses actually experience and make sense of their experience on duty and fear in the middle of active conflict, while they are still in the midst of it.

Understanding those experiences calls for research approaches that can reach beneath the surface, into the covert meanings, ethical tensions, and contextual complexities that shape them. Quantitative designs are valuable for measuring outcomes, but they are limited in what they can tell us about how nurses interpret and live through fear while continuing to care. Qualitative phenomenological approaches, especially those grounded in hermeneutics, offer a way into these

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experiences as nurses themselves understand and live them (van Manen, 2014).

This article presents the methodological framework used in a hermeneutic phenomenological study of nurses who provided hospital-based care during two major armed conflicts in the Philippines. It explicitly articulates the alignment between Heideggerian, hermeneutic, interpretive phenomenology and van Manen's phenomenology of practice approach, demonstrating how philosophical grounding and methodological execution converge in the study of lived experience. By detailing the flexible, non-prescriptive application of van Manen's approach and making the analytic process from thematic structures to lifeworld-reflected categories and essences transparent, this article offers a rigorous and practice-oriented model for qualitative nursing research in conflict and disaster settings.

II. Methods

Research Design

The study where this article is based employed a qualitative hermeneutic, interpretive, phenomenological design to explore nurses' lived experiences of duty and fear during armed conflicts. The design was philosophically informed by Heideggerian phenomenology and methodologically guided by van Manen's approach, ensuring alignment between interpretive depth and methodological rigor.

Heidegger's hermeneutic phenomenology is the philosophical underpinning of the study. Heidegger's concepts of Being-in-the-world, Being-with-others, Sorge (care), temporality, and Being-toward-death informed how the phenomenon was understood—as an existential experience rather than a purely psychological or behavioral response of the nurses. These concepts guided the interpretation of participants' narratives, particularly in understanding how fear disclosed nurses' awareness of mortality and how caring emerged as an ontological commitment in the midst of threat.

Van Manen's approach (1990, 2014) guided the procedural and structural aspects of the study—from the design of the inquiry to sampling, data collection, analysis, and writing. This approach operationalizes hermeneutic phenomenology by providing concrete strategies for exploring lived experience through reflective inquiry and writing. The study followed van Manen's approach as a guiding framework rather than a rigid sequence, encompassing: (1) turning to the nature of lived experience; (2) investigating experience as lived; (3) hermeneutic phenomenological reflection; (4) phenomenological writing; (5) maintaining a strong oriented relation to the phenomenon; and (6) balancing the parts and the whole (van Manen, 1990, 2014).

Importantly, Heideggerian phenomenology and van Manen's approach were not applied as separate or competing frameworks, but as complementary and inherently aligned perspectives. Heidegger provided the interpretive (hermeneutic) foundation for understanding lived experience as an existential phenomenon, while van Manen translated this philosophical stance into a practice-oriented research method. In this sense, van Manen's lifeworld existentials—lived relationality, spatiality, corporeality, temporality, and materiality—reflect Heideggerian concepts such as Being-with-others, Being-in-the-world, embodiment, and temporality in applied form. Thus, Heidegger guided the interpretation of meaning, while van Manen guided the methodological execution of the study.

Furthermore, van Manen's approach structured the data collection, analysis, and writing processes, while Heidegger's philosophy informed the interpretive lens applied to the findings. Turning to the nature of lived experience informed the formulation of the research problem, while investigating experience as lived guided the conduct of in-depth interviews. Hermeneutic phenomenological reflection structured thematic analysis, and phenomenological writing served as the primary mode of interpretation. Maintaining a strong oriented relation ensured sustained focus on the phenomenon of duty and fear, while balancing parts and whole was achieved through iterative movement between individual narratives and the overall structure of meaning (van Manen, 1990, 2014).

Applied Method of Inquiry

Van Manen's (2014) approach served as a flexible guide rather than a rigid protocol. The activities it describes do not constitute a sequence of steps to be followed mechanically; rather, they were applied in ways appropriate to the study's particular context and demands. The following sections describe how the approach was enacted in practice.

Participants and Sampling

Participants were nurses who had worked in hospitals during either the Zamboanga City or Marawi City armed conflicts. Selection was open to nurses regardless of age, gender, rank, employment status, or length of service, provided they were willing and able to articulate their experiences. These criteria were deliberately inclusive, to ensure participants had rich, direct experience of the phenomenon.

A purposive sampling strategy was used to identify information-rich participants suited to phenomenological inquiry (Patton, 2015). Participants were selected based on their direct exposure to armed conflict and their capacity to speak about their experiences in depth (van Manen, 2014).

In Zamboanga City, access was facilitated through professional contacts. In Marawi City, recruitment was initiated through professional networks and direct invitations by email and text message. Some potential participants declined — for personal reasons, due to relocation, or out of concern about institutional consequences. Interviews were scheduled at times and locations that were mutually convenient, private, and safe, with a single face-to-face contact per participant.

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The conventional notion of data saturation was not applied, because phenomenological meaning is not the kind of thing that can be exhausted (van Manen et al., 2016). Unlike concept analysis, where one might stop searching for new words when nothing new emerges, the meaning of a phenomenon as lived by individuals does not reach a saturation point. That meaning may continue to unfold across a lifetime of reflection (van Manen et al., 2016). Seven participants were nonetheless selected, consistent with Guest et al.'s (2006) recommendation that phenomenological studies include at least six.

Data Gathering Tools

Data were generated through a single open-ended interview question: "Can you tell me about your experience of fear while caring for patients during hospital duty in the armed conflict?" Follow-up prompts were used as needed to invite elaboration or clarify meaning.

Data Gathering Procedure

This study followed a hermeneutic phenomenological process informed by Martin Heidegger and operationalized through Max van Manen's approach as guide. The research unfolded through the following interrelated steps:

Step 1. Defining the Phenomenon of Interest

The study began by identifying the phenomenon as the lived experience of duty and fear among nurses during armed conflict. This reflects van Manen's activity of turning to the nature of lived experience, where the inquiry is oriented toward understanding the meaning and essence of a human experience.

Step 2. Adopting a Heideggerian Hermeneutic Stance

The study was grounded in Heideggerian phenomenology, which assumes that human experience is always interpreted within context and that complete bracketing is not possible. The researcher acknowledged her own exposure to armed conflict as part of her interpretive fore-structure, managed through reflexive awareness rather than elimination.

Step 3. Recruiting Participants with Lived Experience

Participants were purposely selected nurses who had provided hospital-based care during the Zamboanga and Marawi armed conflicts, ensuring direct, first-hand experience of the phenomenon. This corresponds to van Manen's activity of investigating experience as lived.

Step 4. Generating Data through In-Depth Interviews

Data were collected through face-to-face, in-depth interviews conducted in settings that ensured privacy and comfort, consistent with van Manen's phenomenological approach. Rapport was established prior to each interview, and informed consent was obtained. Participants were encouraged to recount their experiences freely, while follow-up questions were used to maintain focus on the central phenomenon of duty and fear.

The interview had one general question: "*Can you please tell me about your experience of fear while caring for patients while you were on duty in the hospital during the armed conflict?*" From the general unstructured question, follow-up questions such as "Can you please explain what you said…?" and "What do you mean by…?" were asked, when the need arose to expand the description and understanding of the lived experience.

Field notes were taken to capture non-verbal cues such as tone of voice and facial expressions, adding depth to the verbal accounts. Participants were reminded of their right to pause or terminate the interview at any time and were informed that psychological referral was available if distress arose. Interviews ranged from 30 to 120 minutes.

Each interview was audio-recorded and transcribed verbatim within 72 hours after the interview, then translated into English from the local language, as appropriate. Clarifications were sought during transcription and translation, and participants were contacted to verify meanings.

While van Manen (2014) stated that "appraisal of the originality of insights and the soundness of interpretive processes demonstrated in the study" (p. 322), it was used in this study selectively to clarify interpretations and ensure accuracy of representation. Participants were later informed of how their accounts were presented and were provided with the interpreted analysis of their lived experiences.

Step 5. Immersion and Iterative Engagement with the Data

Each interview was fully transcribed, translated, clarified, and initially analyzed before proceeding to the next interview. This iterative approach allowed the researcher to remain fully present to each participant's unique experience and prevented premature abstraction across cases.

Data Collection and Analysis

Data analysis followed an iterative hermeneutic process, consistent with both Heideggerian phenomenology and van Manen's approach. Analysis involved repeated engagement with the data through reading, reflection, and writing, guided by the hermeneutic circle. The numbering will continue from step 5 in data collection to properly guide the readers on the step-by-step process done in this study using van Manen's approach as guide.

Step 6. Isolating Thematic Structures

As mentioned in steps 4 and 5, interview transcription, translation, selective/highlighting technique and thematic analysis are done per interview. In the selective/highlighting approach, only those meaningful statements of the experience were highlighted and lifted from the verbatim account. The highlighted texts were translated into the nursing

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language using linguistic transformation, which stands as the thematic structure (van Manen, 1990).

Step 7. Formulating Thematic Categories

With the generated thematic structures, similar themes were combined to form thematic categories. However, it is best to determine the essential themes from incidental themes when coming up with the best description of the phenomenon under study. Essential themes are those themes that adequately describe the phenomenon, and will dramatically alter the phenomenon described when removed. The research consistently ask herself, "Does removing this theme strip the phenomenon of its fundamental meaning?" (van Manen, 1990, p. 107). Each thematic category carefully described adding meaning to the experience.

Step 8. Reflecting Thematic Categories through the Lifeworld Existentials

Thematic categories were subsequently reflected through van Manen's five lifeworld existentials—lived relationality (lived other), lived space, lived body, lived time, and lived materiality (van Manen, 2014). Guided questions were used to situate each category within the appropriate lifeworld.

For *lived relationality*, the focus was on how nurses experienced duty and fear in relation to others, including colleagues, patients, and God. For *lived space*, reflection centered on how the armed conflict environment shaped their experience of duty and fear. For *lived corporeality*, the analysis considered how nurses experienced duty and fear through their bodies, including physical sensations and internal responses during gunfire. For *lived temporality*, the focus was on how nurses experienced time under the threat of imminent death. For *lived materiality*, reflection examined how available objects and resources influenced their experience of duty and fear.

Step 9. Deriving General Essences

From the lifeworld-reflected categories, the analysis progressed toward identifying general essences—integrated expressions that captured the fundamental meaning of nurses' experiences of duty and fear during armed conflict which led to the identification of three general essences that completes the description of the nurses' lived experience of duty and fear in the midst of armed conflict.

Step 10. Engaging in Phenomenological Writing

Writing was used as an analytic method through iterative cycles of reflection, writing, and rewriting. This process allowed meanings to be clarified and interpretations to be refined while ensuring fidelity to participants' lived experiences. Heideggerian concepts were engaged during this stage as interpretive lenses to deepen understanding, rather than as pre-imposed analytic structures.

Step 11. Interpreting Findings through Heideggerian Concepts

Heideggerian philosophy was engaged during the writing stage as an interpretive lens. Concepts such as Being-in-the-world, Being-with-others, Sorge, temporality, and Being-toward-death were used to deepen understanding of the themes, allowing the findings to be interpreted as expressions of existential conditions rather than purely descriptive accounts.

Step 12. Maintaining Phenomenological Orientation.

Throughout the study, a strong oriented relation to the phenomenon of duty and fear was maintained. This ensured that all analytic decisions remained grounded in the central research question.

Step 13. Balancing Parts and Whole

The analysis involved continuous movement between individual narratives, thematic structures, thematic categories, lifeworld interpretations, and general essences, reflecting the hermeneutic circle and ensuring coherence of interpretation.

Step 14. Producing an Integrated Phenomenological Account

The final outcome was an integrated phenomenological account that captured the meaning of caring under threat, grounded in participants' lived experiences and shaped through hermeneutic interpretation.

Ethical Consideration

Ethical clearance was obtained before data collection began. All participants provided written informed consent after receiving a full explanation of the study's purpose, procedures, and provisions.

Participants were informed of their rights to confidentiality and anonymity, their right to withdraw at any time without consequence, and the voluntary nature of their participation. Pseudonyms were used throughout to protect identity. All audio recordings, transcripts, and analytic materials were stored in password-protected digital folders and on external drives accessible only to the researcher. Reflexive journals were kept in locked storage. Study data will be securely retained and destroyed five years after publication.

Given the potential for emotional distress when revisiting armed conflict experiences, participants were informed of the minimal risk involved and of the availability of psychological referral if needed; none of the participants needed psychological referral. Transportation costs, meals, and a financial token were offered as reimbursement; participants declined.

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III. Results

Demonstrating the Output of the Method

The seven nurses revealed a total of 75 thematic structures from their shared lived experiences of duty and fear in the midst of the armed conflict. From the highlighted themes, 75 essential themes emerged. These themes underwent linguistic transformation that became the thematic structures. The 75 thematic structures generated nineteen thematic categories. The nineteen thematic categories were classified according to the five lifeworlds. Six thematic categories were grouped under lived relationality, two under lived spatiality, two under lived corporeality, five under the lived temporality, and four under lived materiality. The thematic structures reflected show the meaning units of the participants' expression of their experience of duty and fear during the armed conflicts, grouped according to their corresponding thematic categories under the five lived worlds. The thematic categories in the five lived worlds were further grouped, which resulted to three general essences: (1) finding meaning and purpose in life through duty of caring; (2) persisting amid challenges; and (3) the ethico-legal issues in professional practice, all three of which reflect the nurses' lived experience of duty and fear in the midst of the armed conflict.

Phenomenological Writing

Phenomenological writing was a reflective process in which writing and rewriting served as a method of inquiry, not merely a way of recording conclusions. Each cycle of writing brought the researcher back to the data, allowing her to interrogate her interpretations and ask whether the developing text remained faithful to participants' experiences while also revealing their deeper meanings (van Manen, 1990, 2014). Where an interpretation felt distorted, oversimplified, or abstracted beyond recognition, it was revised or set aside.

The philosophical frameworks identified in the research proposal stage provided interpretive lenses rather than explanatory frameworks. Heidegger's concepts of Being-in-the-world, Being-with-others, Sorge (care), temporality, and Being-towards-death guided the researcher in reading nurses' narratives as expressions of existential conditions rather than as isolated emotions or professional behaviours (Heidegger, 1927/1996). Through writing, the researcher reflected on how fear disclosed nurses' awareness of their own mortality, how duty emerged as an ontological commitment to care, and how nurses navigated authenticity and inauthenticity while practising in the midst of conflict. Philosophy was used to illuminate lived meaning, not to impose pre-formed theoretical explanations.

Kierkegaard's notion of fear and dread further informed the writing by drawing a distinction between existential fear and psychological pathology (Kierkegaard, 1843/1983). This distinction allowed participants' accounts to be interpreted as expressions of profound uncertainty, ethical responsibility, and moral tension — rather than as symptoms requiring clinical categorization. Bringing Kierkegaard into dialogue with the findings moved the discussion beyond trauma-centred explanations and toward an understanding of fear as inseparable from duty, faith, and ethical decision-making.

Relevant nursing, disaster, and armed-conflict literature was incorporated dialogically throughout the writing process. Consistent with phenomenological principles, literature was engaged after themes and essences had already been articulated, so that participants' narratives remained primary (van Manen, 2014). Prior studies were used to situate findings within broader professional, ethical, and contextual conversations — not to validate them or reduce individual experiences to general patterns. Literature functioned as a means of contextual enrichment and critical dialogue.

Analytic decisions were refined throughout through reflexive questioning and consultation with academic supervisors, which served as an interpretive audit supporting conceptual clarity, philosophical coherence, and fidelity to the phenomenon. In this way, phenomenological writing functioned simultaneously as method and outcome, enabling a nuanced, ethically grounded account of nurses' lived experience of duty and fear.

Use of van Manen's Phenomenology and Lifeworld Existentials in Writing the Discussion

The discussion of findings was written following van Manen's approach, in which writing functions as an analytic method for revealing lived meaning (van Manen, 1990, 2014). Van Manen's approach guided not only how themes were interpreted, but how the discussion was structured, sequenced, and reflexively refined.

The concept of phenomenological writing required sustained movement between description and interpretation. Each section of the discussion was developed through repeated cycles of writing and rewriting, during which the researcher returned to participants' narratives to test whether emerging interpretations remained faithful to lived experience while offering deeper insight (van Manen, 1990). If an interpretation distorted, oversimplified, or abstracted the experience beyond recognition, it was revised or abandoned.

The lifeworld existentials were incorporated as organizing and interrogative devices rather than rigid analytic categories (van Manen, 1990, 2014). In writing the discussion, each existential generated interpretive questions posed to the findings.

Lived relationality shaped discussion sections by examining how duty and fear were experienced in relation to others — patients, colleagues, family members, God — rather than treating fear as an individual psychological state. This allowed care to be

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interpreted as a relational and ethical phenomenon embedded in being-with-others.

Lived spatiality oriented interpretation toward how nurses experienced space during armed conflict. Hospitals were discussed not merely as physical settings but as perceived and felt spaces — alternately experienced as refuge, confinement, or threat. This spatial lens made visible how duty and fear were intensified or transformed by the militarization of what is ordinarily a healing environment (van Manen, 1990).

Lived corporeality brought attention to how nurses experienced duty and fear through their bodies. Rather than describing bodily reactions as physiological symptoms, the discussion examined how fatigue, vigilance, fear responses, and physical endurance disclosed nurses' embodied engagement with care under threat — enacting nursing not as an abstract professional role but as something lived in and through the body (van Manen, 1990).

Lived temporality was incorporated by examining how nurses experienced time subjectively during the conflict. Time was interpreted not as clock-measured shifts but as lived time that accelerated, slowed, or became suspended during moments of crisis. This allowed duty and fear to be interpreted as unfolding within a horizon of uncertainty and anticipated death, rather than within routine clinical schedules (van Manen, 1990, 2014).

Lived materiality guided interpretation of how objects, tools, and material conditions — medical supplies, hospital infrastructure, the sounds of weapons, protective barriers — shaped nurses' experience of duty and fear. These things were treated as meaningful constituents of experience rather than neutral background elements, and their role in shaping how care was enacted and understood was taken seriously (van Manen, 2014).

Importantly, the lifeworld existentials were not applied mechanically. They served as reflective prompts that structured the discussion while allowing themes to overlap across lifeworlds. This flexibility preserved the wholeness of the phenomenon and avoided fragmenting lived experience into discrete analytic compartments.

Throughout, the discussion returned to the central question of meaning — what it means to care amid fear — ensuring that philosophical reflection remained grounded in practice (van Manen, 2014).

IV. Conclusion

This article presents a rigorous and transparent methodological framework for exploring nurses' lived experiences of duty and fear during armed conflict through hermeneutic phenomenology. By grounding the study in van Manen's phenomenological approach and adhering to established criteria for qualitative rigor, the methodology achieves interpretive depth, ethical sensitivity, and reproducibility.

The framework described here offers a practical presentation for future hermeneutic qualitative nursing research in conflict, disaster, and other high-risk clinical contexts. Clear articulation of methodological processes strengthens the credibility of findings and supports their translation into clinical practice, education, and policy aimed at protecting and sustaining nurses working under extreme conditions.

V. Recommendations

This study demonstrates that hermeneutic phenomenology, guided by Heidegger's philosophical framework and van Manen's methodological approach, is a powerful means of uncovering the lived meanings behind nurses' experiences in extreme clinical contexts. The following recommendations are offered.

For Researchers New to Hermeneutic Phenomenology

Researchers are strongly encouraged to develop a thorough understanding of the philosophical foundations of this methodology before proceeding to data collection. Without grounding in Heidegger's key concepts, there is a risk of applying van Manen's approach superficially. Maintaining a reflexive journal throughout is equally essential, both as a methodological safeguard and as a means of monitoring one's own emotional responses and interpretive tendencies, particularly when working with participants who have experienced trauma.

For Nursing Educators

Hermeneutic phenomenology should be incorporated into qualitative research curricula not only as a methodology to be studied, but as one to be practiced. Students benefit from guided exercises in phenomenological interviewing and in the iterative process of phenomenological writing as a method of deepening interpretive understanding, rather than simply reporting findings.

For Future Researchers

This methodology is not confined to duty and fear, nor to armed conflicts. It is well suited to any nursing phenomenon that is deeply subjective and beyond quantification — including moral injury, compassion fatigue, and end-of-life care. Researchers should nonetheless anticipate practical challenges, including the difficulty of accessing participants who have experienced trauma and the emotional toll the inquiry places on the researcher and how to safeguard psychological risks.

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For Policy Makers and Hospital Administrators

Qualitative phenomenological research surfaces dimensions of nurses' experience that surveys and outcome measures cannot reach. Commissioning this kind of research as part of the institutional evidence base will produce more informed and genuinely responsive policies around preparedness training, psychosocial support, and staffing in high-risk environments.

Contribution of Author/s

The author is responsible for all aspects of this study, including conceptualization, research design, participant recruitment, data collection, data analysis, interpretation of findings, and manuscript preparation.

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Conflict of Interest

The author declares no financial conflict of interest. However, the author acknowledges a prior personal acquaintance with some of the study participants. This relationship was managed through the implementation of rigorous methodological safeguards, including reflexive journaling and audit trail documentation, to ensure that interpretations remained grounded in participants' own accounts and that findings were not unduly influenced by prior familiarity.

Disclosure of Use of Generative AI

The author used Claude (Anthropic) to improve the language, consistency, and grammar of this manuscript. The author reviewed all AI-assisted revisions, verified the accuracy of the content, and made all necessary corrections. The author takes full responsibility for the content of this publication.

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Patient Safety Incidents of Student Nurses in Clinical Placement: A Convergent Parallel Study

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ABSTRACT

Introduction: Upholding patient safety remains a significant challenge for student nurses during clinical placements. Patient safety incidents (PSIs) result from lapses in safe care, causing actual or potential harm. While explored in literature, there is a gap in examining PSIs from a multifactorial, local perspective, especially regarding their emotional and psychological effects and impact on student nurses' professional growth and reporting behaviors.

Aim: It aimed to comprehensively understand the nature and contributing factors of PSIs, reporting behaviors, and the lived experiences of student nurses through a mixed-method approach.

Methods: A convergent parallel mixed-methods design was employed among Levels II, III, and IV student nurses who committed PSIs in five nursing schools in Baguio City. Using purposive sampling, 386 respondents were surveyed in the quantitative phase using self-made tool, while 13 participated in semi-structured interviews. Quantitative data were analyzed using frequency and percentage, while qualitative data underwent thematic analysis. Triangulation followed Onwuegbuzie and Teddlie's (2003) process.

Results: Most PSIs were near misses involving medication errors. Contributing factors included personal, interpersonal, and social challenges. Honesty drives reporting but is hindered by fear and punitive culture. Emotional distress affects well-being yet support fostered resilience. PSIs helped develop accountability and clinical maturity. Five themes emerged: multifactorial nature of PSIs, emotional distress affecting performance and well-being, accountability and clinical maturity, interpersonal relationships as buffers, and reporting challenges.

Conclusion: PSIs are multifaceted, shaped by personal, interpersonal, and social factors. While ethical drive and emotions encourage reporting, fear and punitive environments hinder it. Improving patient safety requires technical training and emotional resilience, supported by clinical companionship and institutional reforms that promote a culture of learning. Ultimately, PSIs reflect broader realities of the clinical training environment, its emotional and psychological effects on student nurses, and its influence on clinical maturity and holistic development of future professionals.

Keywords: *clinical placement, lived experience. patient safety incidents, reporting behavior, student nurses*

I. INTRODUCTION

Safe patient care remains a challenge during student nurses' clinical placements (Gradisnik et al., 2024). Patient safety incidents (PSIs) are unintended events or near-misses that may cause harm during healthcare delivery (Hegarty et al., 2021; WHO, 2023), including errors or omissions by student nurses such as medication errors, patient falls, infection control failures, and procedural mistakes. These incidents result from multiple interrelated factors affecting both patients and student nurses. System-level issues, (e.g. unclear protocols and look-alike medications), environmental stressors, (e.g. noise and high patient acuity), and student-related factors, (e.g. inexperience, fatigue, and inadequate supervision) increase error risk (Espin et al., 2019). In addition, limited simulation training, ineffective communication, unsupportive clinical environments, poor supervision, lack of belongingness, and fear of punitive responses to errors heighten student vulnerability and may lead to underreporting of incidents, ultimately affecting the quality and safety of patient care (Panda et al., 2021; Aljabari & Kadhim, 2021; Gore & Schrems, 2025).

The consequences of PSIs are significant for both patients and student nurses. Patients may experience harm, prolonged hospitalization, or even death (Cooper

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et al., 2018). For student nurses, involvement in PSIs may lead to psychological distress or the "second victim" phenomenon, including anxiety, depression, and reduced confidence (Sachs & Wheaton, 2022). These emotional and psychological responses, although often overlooked, can influence learning experiences, increase fear of committing errors, and discourage incident reporting. Consequently, these factors can indirectly affect patient safety and the overall quality of care. Globally, PSIs affect over 10% of patients, many of which are preventable (WHO, 2023).

Despite the availability of international studies on patient safety incidents, research specifically addressing Filipino student nurses remains limited. The study by Galanza et al. (2012) at Saint Louis University provided important baseline information on PSIs, but its findings may not fully reflect current clinical training environments, reporting practices, and patient safety frameworks, given changes in nursing education and healthcare delivery over the past decade. This gap underscores the need for updated, context-specific research that considers the contemporary challenges faced by student nurses in the Philippines.

Based on the gaps identified, this study aims to provide a comprehensive understanding of patient safety incidents among three levels of student nurses during clinical placements in selected nursing schools in Baguio City. Specifically, it seeks to describe the nature of PSIs in terms of category, type, level of harm, and reporting practices; identify factors that influence the occurrence of PSIs; examine the factors affecting the reporting or non-reporting of incidents; and explore the lived experiences of student nurses related to PSIs. By addressing these objectives, the study intends to generate context-specific evidence that can inform strategies to enhance patient safety and improve nursing education practices in the Philippines.

II. Methods

Research Design

The study employed a convergent parallel design based on Santos' (2019) Theoretical-Methodological Framework to achieve an extensive comprehension of patient safety incidents (PSIs) among student nurses. This framework involved the analysis, convergence, and interpretation of quantitative and qualitative data, focusing on the nature, contributing factors, reporting practices, and lived experiences related to PSIs.

Participants and Sampling

Utilizing purposive and simple cluster sampling, 386 Level II, III, and IV student nurses from five private universities and colleges in Baguio City were recruited, with no government institutions included. There were 106 students from Level II, 121 in Level III, and 159 from Level IV. Participants with clinical experience in hospital or community settings were included, while those without such experience or who declined participation were excluded. OpenEpi software determined a minimum sample size of 385 at a 95% confidence level for the quantitative phase. For the qualitative phase, critical purposive sampling selected participants involved in PSIs with serious consequences. After utilizing an iterative processing of the transcripts, data saturation was reached after 13 participants, hence, 13 accounts of lived experiences.

Data Gathering Tools

The quantitative phase utilized an self-made instrument based on the NCSBN Safe Student Report (SSR) and Galanza et al. (2012). Permission was obtained to adapt both tools. The instrument covered the nature of PSIs and influencing factors. Content validity was confirmed by three experts (CVI = 0.98), and pilot testing with 30 students yielded a Cronbach's alpha of 0.91. A semi-structured interview guide was developed for the qualitative phase based on preliminary interviews. The interview guide was subjected to validation from a research experts of SLU.

Data Gathering Procedure

After ethical approval from the SLU Research Ethics Committee, data were collected concurrently from March 6–29, 2025. The researchers were divided into 3 subgroups to cover all five universities, acquiring data from 1-2 sections of students per year level per day. Quantitative data were gathered through on-site surveys coordinated with nursing schools, including only students who reported committing PSIs. For the qualitative phase, 13 participants consented to interviews; nine were conducted face-to-face and four online. Interviews were recorded, transcribed, and secured via file encryption and file transfer to a local storage device. Coding and iterative processing were conducted concurrently with data collection, hence, saturation was immediately identified.

Data Collection and Analysis

Quantitative data were organized and analyzed using frequency and percentage to describe the nature of PSIs and factors influencing occurrence and reporting. Qualitative data were analyzed using Creswell's (2014) thematic analysis, involving data organization, coding, theme development, and interpretation. Integration followed Onwuegbuzie and Teddlie (2003), combining datasets through comparison and joint presentation in tables and diagrams.

Reflexivity

To ensure credibility, bracketing, member checking, and peer debriefing were applied. Purposive sampling and iterative questioning enhanced depth. Transferability was supported through thick descriptions, while audit trails and cross-checking ensured confirmability and minimized bias.

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Ethical Consideration

Ethical standards were upheld through informed consent, confidentiality, and secure data storage. Participants could withdraw without penalty. Psychological First Aid training was completed by researchers, with referral systems prepared if needed. Pseudonyms and data anonymization ensured privacy. Small tokens in the form of personalized pens were provided to qualitative participants, ensuring fairness via uniformity of incentives.

III. Results

Quantitative

A total of 386 student nurses participated in the quantitative phase of the study, drawn from selected nursing schools in Baguio City. The respondents consisted of 159 Level IV, 121 Level III, and 106 Level II students. All participants were enrolled in the BSN program, actively engaged in clinical placements across hospital and community settings, and had experienced patient safety incidents (PSIs) during their clinical exposure.

1. Category of Patient Safety Incidents

Table 1
Category of Patient Safety Incident (PSI)

Category	Frequency	Percentage (%)
Near Miss	292	75.65
Error	94	24.35
Total		**356**

Table 1 shows the category of patient safety incidents (PSIs) encountered by student nurses. Near misses (n=292; 75.65%) were more common than actual errors (n=94; 24.35%), indicating that many potential risks were identified before causing harm. In this study, the "error" category specifically refers to incidents that reached the patient and may or may not have caused harm, while a "near miss" refers to an event or situation with the potential to cause harm but did not reach the patient. Similarly, Benneck et al. (2019) suggested that near misses are widespread in dynamic clinical environments. These results align with the Swiss Cheese Model, where harm occurs only when multiple safety barriers fail. Overall, the predominance of near misses reflects functioning safety systems but also underlying vulnerabilities.

2. Type of Patient Safety Incident (PSI)

Table 2 shows that medication-related PSIs, particularly violations of the 10 Rights of Drug Administration (n=221; 22.41%), were most frequent, followed by underinfusion (n=172; 17.44%) and overinfusion (n=106; 10.75%). These findings identify medication administration as a high-risk area for student nurses (Bam et al., 2021). In contrast, non-nursing interventions and blood transfusion-related incidents (0.10%) were least reported, likely due to stricter protocols and closer supervision (Mousa et al., 2024). These patterns suggest that tasks requiring independent judgment and precision carry greater risk, highlighting the need for strengthened training and supervision.

Table 2
Category of Patient Safety Incident (PSI)

Type of PSI	*f*	%
Medication-related PSI		
Violation of the 10 Rights of Drug Administration	221	22.41
Administration of unprescribed medications or treatment	2	0.20
Input and Output PSI		
Underinfusion	172	14.44
Overinfusion	106	10.75
IVF ran dry	60	6.09
Failure to monitor strict input and output	34	3.45
Wrong hooking of IVF	8	0.81
Blood Transfusion-related PSI	1	0.10
Infection Control PSI		
Break in sterility in areas requiring sterile technique	58	5.88
Violation in the Chain of Infection	24	2.43
Procedural PSI		
Failure to perform independent nursing interventions	52	5.27
Incorrect/wrong execution or performance of an intervention/procedure that causes harm to a patient	21	2.13
Performed or allowed patients to do a contraindicated intervention/s	11	1.12
Failure to monitor adverse events after administration of a high-risk medication	10	1.01
Performed procedures not yet allowed to be done	10	1.01
Given food/medication while the patient is on NPO	7	0.71
Failure to transcribe doctor's order	7	0.71
Performed non-nursing interventions	1	0.10
Communication-related PSI		
Electronic medical or health-record/IT-related errors	40	4.06
Failure to report significant findings	33	3.35
Wrong forwarding of medication cards resulting in double dosing/no dose given	25	2.54
Breach confidentiality	9	0.91
Environmental Safety		
Improper sharps disposal/handling	42	4.26
Failure to raise side rails for fall risk patients	18	1.83
Medical device/equipment malfunction	14	1.42
Total	**986**	**100.0**

3. Status or Issues on Harm

Table 3
Status or Issues on Harm and PSI Reporting

Status or Issues on Harm	*f*	%
No Harm	370	95.85
Harm	9	2.33
Not sure what happened after PSI	7	1.81
Total	**386**	**100.0**

Table 3 indicates that most PSIs resulted in no harm (n=370; 95.85%), with only a small proportion causing harm (n=9; 2.34%) or having uncertain outcomes (n=7; 1.81%). When comparing the number of no-harm and *harmful incidents to the number of errors and near*

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misses reported in Table 1, it is evident that some incidents did reach the patient and constituted errors but ultimately did not result in harm. This suggests that preventive mechanisms are largely effective. However, the presence of harmful and uncertain cases indicates gaps in monitoring and follow-up. As noted by Mutair et al. (2021), even no-harm incidents are critical for learning and system improvement. These findings highlight the importance of continuous reporting and evaluation.

4. *PSI Reporting (Was the PSI Reported?)*

Table 4
PSI Reporting (Was the PSI Reported?)

PSI Reporting (Was the PSI Reported?)	*f*	%
Yes	286	74.09
No	100	25.91
Total	**386**	**100.0**

Table 4 shows that most student nurses reported PSIs (n=286; 74.09%), while 25.91% did not. In this study, "Reported" includes both verbal reports made to the Clinical Instructor or staff nurse and written incident reports (IRs). This reflects a generally positive reporting culture supported by awareness, mentorship, and accessible systems (Espin et al., 2019). However, underreporting persists due to fear of blame and misconceptions about no-harm incidents, consistent with Fronczek et al. (2017). These findings indicate that while reporting practices exist, both emotional and procedural barriers remain.

5. *Factors that Influence the Occurrence of PSIs*

Table 5 highlights that PSIs are a confluence of personal, interpersonal, and environmental factors. The most prominent factor was anxiety toward duty (n=174; 8.79%), showing how emotional stress affects performance. Anxiety, often linked to fear of errors, lack of knowledge, or unpredictable situations, can impair concentration and decision-making, increasing error risk, especially in medication tasks (Onieva Zafra et al., 2020). Interpersonal factors, particularly lack of communication (n=132; 6.67%), also contribute to PSIs. Ineffective communication may result from hierarchical structures or unclear roles, highlighting the need for open communication and supportive supervision (Mohammed Aseeri et al., 2024). Environmental pressures, including time constraints (n=112; 5.66%), heavy workload (n=95; 4.80%), and busy clinical areas (n=87; 4.40%), further increase stress and cognitive load, reducing safe performance (Sussman & Sekuler, 2022). Less frequent factors, such as traumatic experiences and reporting-related issues, still indicate vulnerabilities. Consistent with Imogene King's Conceptual System Theory, PSIs arise from the interaction of personal, interpersonal, and social factors. Addressing these requires emotional support, communication training, and improved clinical environments.

Table 5
Factors that Influence the Occurrence of PSIs

Factors that Influence the Occurrence of PSIs	*f*	%
Personal System		
Anxiety Towards Duty	174	8.79
Time Pressure	112	5.66
Tired/fatigue	105	5.31
Lack of knowledge	75	3.79
Physical stress	72	3.64
Lack of Preparation	54	2.73
Unable to eat	47	2.37
Lack of skills	30	1.52
Previous traumatic duty experience	25	1.26
Preoccupied with IR	10	0.51
Interpersonal System		
Lack of communication (CI/Staff/Colleague)	132	6.67
Terrorizing instructor	80	4.04
Unclear/wrong/inadequate endorsement	73	3.69
Uncooperative patient	73	3.69
Groupmates' attitude	62	3.13
Lack of supervision (CI/Staff)	61	3.08
Unclear penmanship (Doctors/Staff/CI)	61	3.98
Unapproachable medical personnel on duty	54	2.73
Complicated or critical clinical disease (patient with >1 medical diagnosis)	50	2.53
Lack of group cooperation	46	2.32
Emotional problems (i.e. family/love life)	37	1.87
Language differences/barrier)	34	1.72
Wrong forwarding of medication card	29	1.47
Unclear doctor's order	26	1.31
Social System		
Perceived heavy workload	95	4.80
Ward / clinical area	87	4.40
Lack of orientation (e.g., ward set up)	59	2.98
Number of medications to be administered	59	2.98
Shift/hours of duty	58	2.93
Guidelines or policy that are not clear and non-existing	51	2.57
Lack of suitable equipment	37	1.87
Use of abbreviations that are not internationally accepted	11	0.56
Total	**1,979**	**100.0**

6. *Factors that Influence the Reporting and Nonreporting of Patient Safety Incidents*

Table 6 presents factors influencing the reporting and non-reporting of PSIs, whether verbally or in writing an incident report. Among those who reported incidents, honesty (n=222; 30.66%) was the primary motivator, reflecting strong ethical values in nursing practice (Poorchangizi et al., 2019). Emotional factors such as conscience (n=178; 24.59%) and concern for patient harm (n=173; 23.90%) also played significant roles (Gore & Schrems, 2025). Lesser factors, including lack of knowledge and adherence to protocol, suggest that internal moral values outweigh formal systems. Within King's framework, these behaviors reflect the personal system, where ethical judgment guides decision-making.

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In contrast, non-reporting was driven mainly by fear and interpersonal pressures. Fear of being perceived as incompetent (n=41; 15.77%), blame (n=33; 12.69%), and disciplinary action reflects a blame-oriented culture that discourages transparency (Dhamanti et al., 2020). Some students also perceived incidents as non-harmful or were unaware of errors. Structural barriers were less influential, indicating that emotional and relational factors dominate. Addressing these requires fostering ethical responsibility, supportive mentorship, and a non-punitive reporting culture to enhance patient safety.

Table 6

Factors that Influence the Reporting and Nonreporting of Patient Safety Incidents

Factors that Influence the Reporting and Nonreporting of PSIs	*f*	%
Factors that Influence Reporting		
Personal System		
For honesty purposes	222	30.66
Bothered by conscience	178	24.59
Fear that the incident may cause negative effects to the patient	173	23.90
Fear that not reporting the incident will bring about another IR and sanction	99	13.67
Lacks knowledge or skill on how to manage the incident	51	7.04
Social System		
Followed the protocol of the institution	1	0.14
Total	**724**	**100.0**
Factors that Influence Non-Reporting		
Interpersonal System		
Fear of being considered incompetent by fellow students/CI	41	15.77
Fear of being blamed for negative patient outcome	33	12.69
Fear of reprimand from higher authority	21	8.08
Personal System		
Perceived incident as not harmful to the patient	32	12.31
Unaware that errors occurred	17	6.54
Lacks confidence in reporting	17	6.54
No perceived benefit, reporting incidents will not make any difference	14	5.38
Perceived incident as not important to report	14	5.38
Forgot to report the incident	10	3.85
Too busy/Reporting is not a priority	4	1.54
Social System		
Fear of disciplinary actions/sanctions	30	11.54
Extra work in reporting	13	5.00
No clear policy or guideline on reporting errors	7	2.69
Construction of incident report is not easy	7	2.69
Total	**260**	**100.0**

Qualitative

Theme 1: Acknowledging the Multifactorial Nature of Patient Safety Incidents

Theme 1 highlights that patient safety incidents (PSIs) are multifactorial, arising from the interaction of personal, interpersonal, and environmental factors.

Personal factors such as fatigue and emotional strain were prominent. SNI02 shared:

SNI02: *"Maybe it was because of personal matters, like sleep, stress, and I also had a lot of things on my mind at the time. I was not in the condition to perform well on duty."*

Fatigue has been shown to impair cognitive and motor functions (Bell et al., 2023), while emotional strain reduces confidence and increases error susceptibility (Gradišnik et al., 2023). Interpersonal factors, particularly communication lapses, also contributed to PSIs.

SNI05: *"When it was my patient's turn for endorsement, they [staff nurses] said he was doing well and skipped endorsement for his medications."*

Similarly, strained peer relationships affected accountability.

SNI13: *"I was still charting, so I endorsed my patient on cystoclysis to my clinical groupmates, but no one checked on the patient, so the fluid ran dry. At that time, we were all upset with each other, saying things like, 'Why should I care? That's your patient.' That's why both the duty and the groupmates felt really toxic."*

This account highlights a toxic group dynamic, where interpersonal conflict led to diffusion of responsibility and disengagement from patient care. Such dynamics may foster avoidance and reduced responsibility (Ghasempour et al., 2023). Unlike typical communication lapses, this reflects a breakdown of shared accountability. From a systems perspective, this represents a latent failure in the Swiss Cheese Model, wherein dysfunctional team dynamics weaken critical safety barriers such as communication and supervision. This finding suggests that toxic peer environments are an underrecognized gap in patient safety models, contributing to the occurrence of PSIs.

SNI01: *"Applications of concepts in the clinical duty came first before the lecture, so there is a significant knowledge gap."*

Theory–practice gaps may lead students to rely on unsafe shortcuts or observation without understanding (Lee & Sim, 2020). Environmental factors, including workload and patient assignment, also increased risk.

SNI07: *"There were so many patients in the pediatric ward. There was one patient who wasn't specifically assigned to any one member.... the patient was underinfused by 800 mL, and we only discovered it two hours before the end of our shift. The patient wasn't properly monitored because no one was specifically assigned to him."*

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Stolic et al. (2022) stated that student nurses are most susceptible to errors in overcrowded and unsupervised wards.

Overall, Theme 1 supports a systems-based perspective: PSIs arise from interconnected personal, interpersonal, and social factors. Consistent with Imogene King's Conceptual System Theory, these findings emphasize shifting from blame to comprehensive prevention strategies, including improved preparation, communication, supervision, and clinical environments.

Theme 2: Experiencing Emotional Distress and Its Impact on Performance and Well-being

Theme 2 highlights the emotional distress experienced by student nurses following PSIs and its

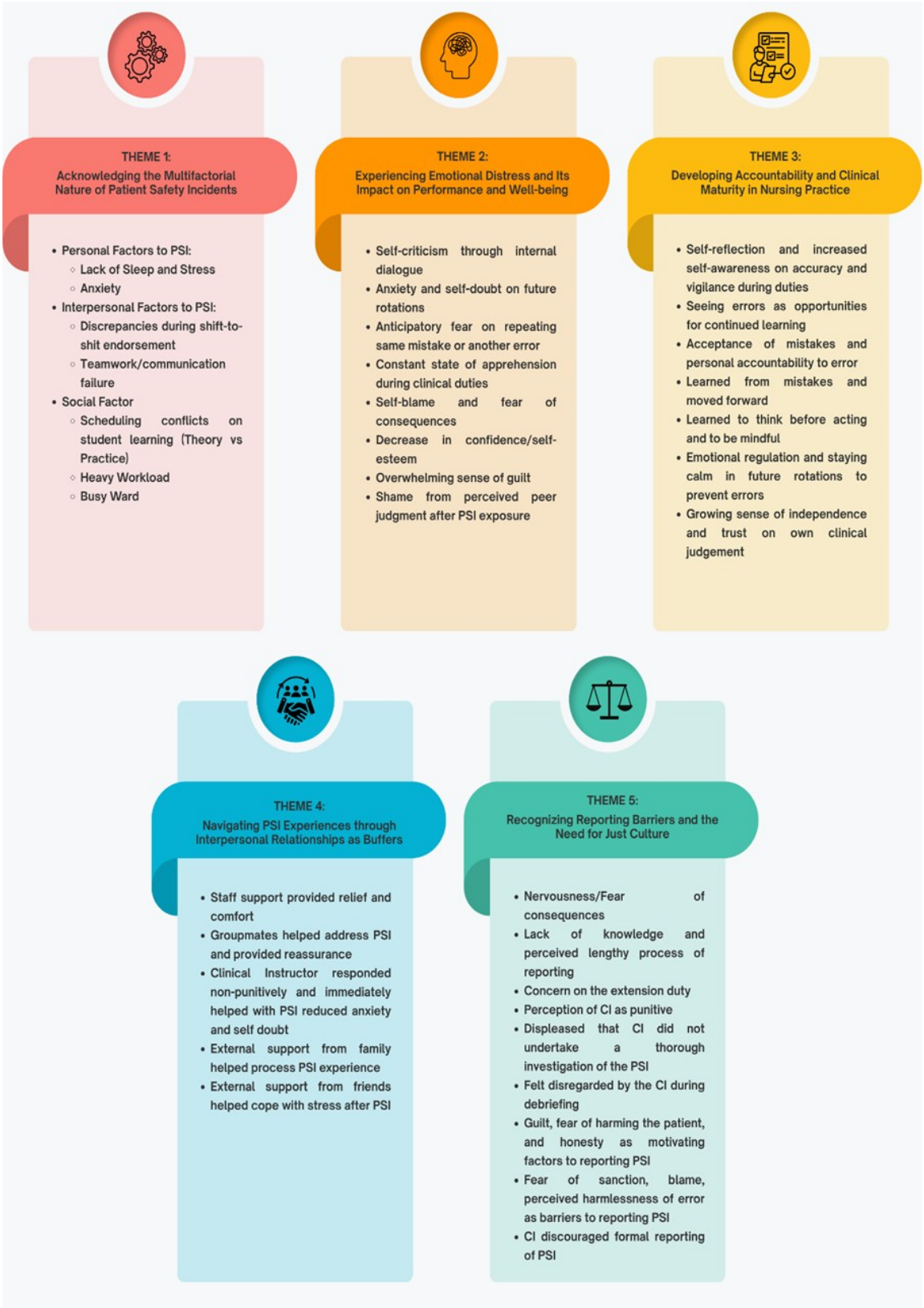

Figure 1. *Themes on the Lived Experiences of Student Nurses related to PSIs in the Clinical Placement*

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impact on confidence, performance, and well-being. Participants commonly reported guilt, fear, anxiety, and self-doubt, often internalizing blame despite recognizing systemic factors.

SNI13: *"Initially, my confidence dropped…it turned into a kind of self-punishment…where I was putting myself down, talking negatively to myself."*

Similarly, another participant (SNI08) verbalized:

SNI08: *"Whenever I learn that a patient has a heart like failure [heart failure], I just hope they don't get assigned to me…what if something bad happens while I'm taking care of them? I get scared."*

Feelings of guilt were also commonly expressed. SNI07 shared:

SNI07: *"There was guilt right after because you reflect that it happened because of your negligence."*

These accounts show that PSIs can significantly affect psychological well-being and clinical confidence. Similar findings indicate that students often experience guilt and anxiety after errors, which may impair performance (Catalan et al., 2021; Ulenaers et al., 2021).

Theme 3: Developing Accountability and Clinical Maturity in Nursing Practice

Theme 3 reflects how PSIs contribute to the development of accountability and clinical maturity. Participants described how errors became turning points for reflection and behavioral change. These qualitative findings align with the quantitative results in Table 4, where the majority of student nurses (74.09%) reported PSIs, suggesting that developing accountability is reflected not only in attitudes but also in actual reporting behaviors.

SNI01 recounted her first Incident Report (IR) or Occurrence Variance Report (OVR), which at first was unfamiliar but eventually accepted responsibility.

SNI01: *"...it was my first time to get an OVR back then…because there really was a mistake on my part and I just try to be better in the next rotation."*

Some participants also expressed feelings of accountability and reflected on the learnings they get from these incidents.

SNI06: *"I realized again how important it is to think before you act…think more about the effect of my actions, rather than just doing things for my own comfort and benefit."*

Additionally, SNI12 talked about her shift towards greater independence in confidence in clinical duties.

SNI12: *"So, after that happened, I got more thorough in assessments…I realized that in some things I don't have to always ask my instructor."*

Lastly, SNI02's experience illustrates a crucial aspect of fostering accountability and actively seeking ways to improve after documentation errors.

SNI02: *"I was reading the code of conduct myself, all of it then I made templates of the drugs I will give and the medication sheet, I printed it out, and practiced how to document per shift."*

Errors prompted students to refine clinical habits, such as verifying procedures, improving documentation, and strengthening decision-making. Consistent with Gradišnik et al. (2023), students often move from fear and guilt toward learning and behavioral change. Hood and Copeland (2021) similarly emphasize that supported reflection enhances clinical judgment. This progression from error recognition to behavioral change reinforces how accountability contributes to increased willingness to report PSIs, as reflected in the high reporting rates observed.

Theme 4: Navigating PSI Experiences through Interpersonal Relationships as Buffers

Theme 4 highlights the role of interpersonal relationships in helping student nurses cope with PSIs. Support from peers, instructors, staff, and family provided emotional relief, practical assistance, and a sense of belonging.

For example, SNI02 shared that after a medication documentation error, staff nurses' humor lightened the mood:

SNI02: *"They were kind and joked around…I felt at ease because I knew they were trying to lighten the mood and understood I was still a beginner."*

Similarly, SNI01 described how, upon discovering an under-infusion, her clinical groupmates reassured her and helped her address the PSI. In contrast to the "toxic group dynamics" identified in Theme 1, these findings demonstrate that peer relationships can also function as protective factors, highlighting the dual role of interpersonal dynamics in influencing patient safety.

SNI01: *"They reassured me that everything was okay."*

In the case of SNI08, her clinical groupmates not only offered emotional support but also actively helped manage the situation.

SNI08: *"They assisted me in calculating and making up for the underinfusion as much as possible."*

SNI07 also highlighted the supportive role of her clinical instructor during an under-infusion incident.

SNI07: *"When we reported it to her, we were relieved that she wasn't angry. She wanted to help…which helped ease our anxiety."*

Furthermore, external support was also essential. SNI01 sought emotional comfort from her mother.

SNI01: *"She said to treat it as a lesson but not to dwell on it too much."*

These findings align with Javornicka et al. (2024), who emphasize the importance of emotional and clinical companionship. Supportive relationships reduce vulnerability and promote learning. Similarly, positive staff responses shape professional development through the hidden curriculum (Hardie et

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al., 2022; Panda et al., 2021). Overall, interpersonal support acts as a buffer, enabling students to process errors constructively and continue developing professionally.

Theme 5: Recognizing Reporting Barriers and the Need for Just Culture

Theme 5 demonstrates that PSI reporting is shaped by a complex interplay of emotional, interpersonal, and systemic factors. Reporting is not purely procedural but influenced by psychological safety and clinical culture.

Several participants identified fear, uncertainty, and lack of clarity in reporting procedures as major barriers. For instance, one participant (SNI03) shared:

SNI03: *"I felt more anxious because I didn't know the process…my biggest concern was how long I'd have to extend because of that incident."*

Moreover, interpersonal factors also played a role, particularly when students felt unsupported by clinical instructors. SNI09 recounted:

SNI09: *"I was unsure if my CI read my explanation…we weren't really given much of a chance to explain what really happened."*

On the other hand, some participants based their decisions on perceived severity of the incident, especially when no harm was observed. SNI12 stated:

SNI12: *"I handled the incident…as long as we were able to control the situation."*

Despite these barriers, many student nurses still demonstrated strong moral accountability. SNI07 shared:

SNI07: *"We felt guilty…we reported it to our CI and the assigned nurse."*

Similarly, SNI11 emphasized honesty:

SNI11: *"I just admitted it right away rather than lying about it."*

However, authority figures may also influence reporting practices. SNI13 noted:

SNI13: *"When he inquired about submitting an incident report, the CI advised against it, attributing the error to several shifts."*

Overall, these findings show that reporting is shaped more by emotional and relational factors than by formal systems. Fear of blame, lack of clarity, and weak support contribute to underreporting (McGovern et al., 2023; Meyer et al., 2021). At the same time, moral values continue to drive reporting behavior (Hansen et al., 2024). These results emphasize the need for a just culture. As Nguyen and Crossan (2021) note, ethical reporting thrives in environments where students feel safe and supported. Moving away from punitive approaches toward learning-oriented systems is essential to strengthen transparency and patient safety.

Mixed-Method Integration

1. Factors that Influence the Occurrence of Patient Safety Incidents (PSIs) among Student Nurses in Clinical Placements

Finding 1: Anxiety Impairing Clinical Performance

Quantitative: 8.79% of students (n=174) primarily associated patient safety incidents with anxiety.

Qualitative: SNI03's account reflected that anxiety came from unfamiliarity within the clinical setting.

Integration: Both data sets confirm anxiety as a key catalyst of errors.

Discussion: Pre-duty anxiety leads to underperformance and adverse patient outcomes (Aloufi et al., 2021). It commonly stems from lack of knowledge, perceived incompetence, and role ambiguity (Natalia et al., 2021; Marriott et al., 2024). Anxiety triggers psychological and behavioral responses that impair performance (Simpson & Sawatzky, 2020).

Implication: Nursing curricula should strengthen emotional resilience and clinical preparedness.

Finding 2: Communication Lapses as Precursor to Error

Quantitative: "Lack of Communication (CI/ Staff/ Groupmate)" was the second-highest response among student nurses, at 6.67% (n=132).

Qualitative: SNI08's account described discrepancies between the information provided during patient handovers and the actual status of patient care.

Integration: Qualitative data clarified communication lapses identified quantitatively.

Discussion: Ineffective endorsements disrupt continuity of care and contribute to medication errors (Khalaf, 2023). Inconsistent information compromises care quality, though training programs improve handovers (Sahu et al., 2020).

Implication: Communication training and supportive environments are essential to ensure safe handovers.

Finding 3: Exhaustion of Students Affecting Performance

Quantitative: "Tiredness/Fatigue" at 5.31% (n=105) was fourth among student nurses' precipitating factors for PSIs.

Qualitative: SNI02 described how stress and sleep deprivation compromised the quality of care and patient safety.

Integration: Both data sets identify fatigue as a determinant of PSIs.

Discussion: Academic and clinical demands lead to exhaustion, increasing burnout and error risk (Abbaszadeh et al., 2024). Fatigue manifests as stress

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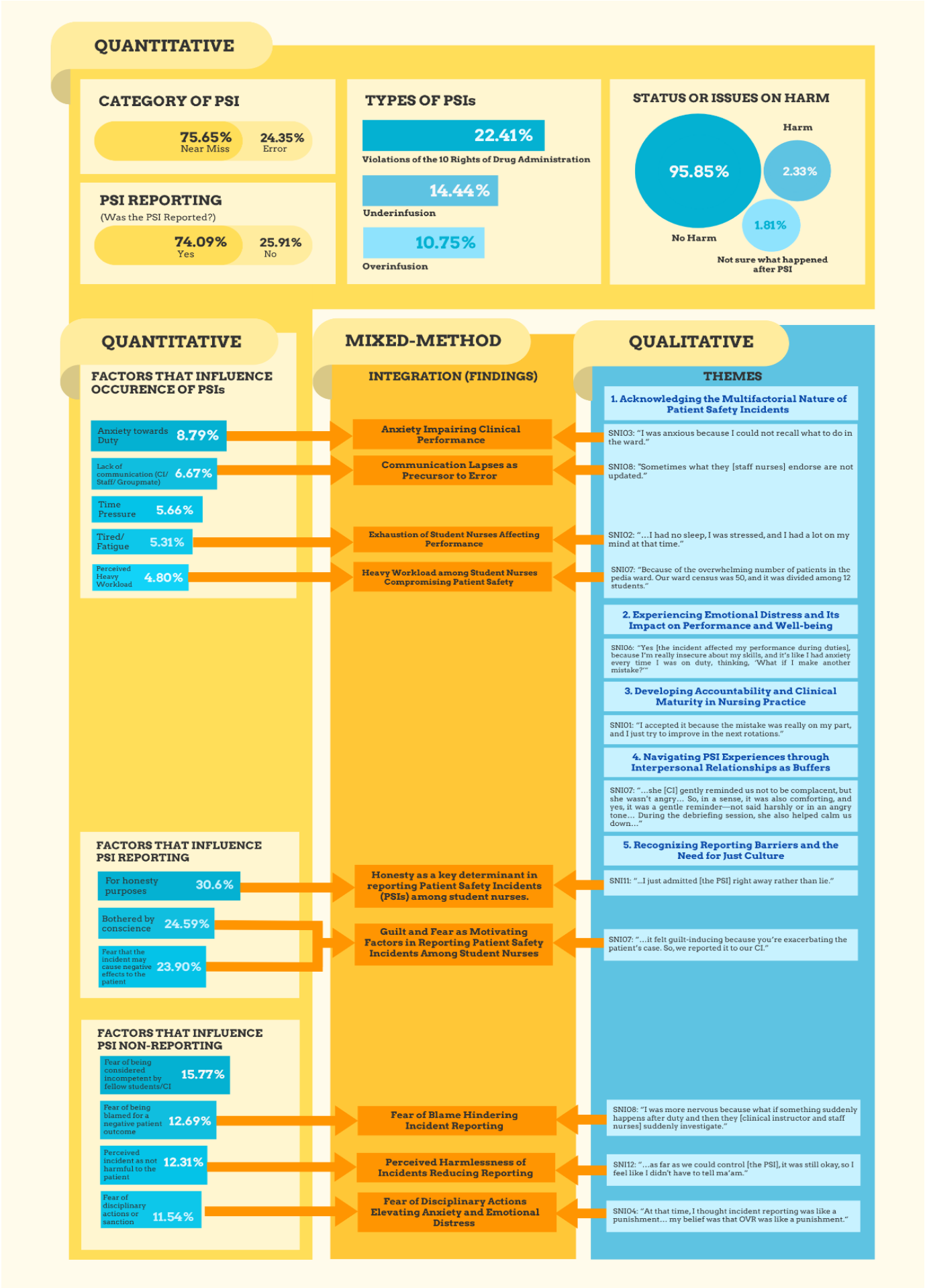

Figure 2. *Mixed Method Triangulation of Data Sets*

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Juna, 2024).

Implication: Institutions should implement wellness programs, mentoring, and flexible schedules.

Finding 4: Heavy Workload among Student Nurses Compromising Patient Safety

Quantitative: 4.80% (n=95) identified heavy workload as the fifth most important primary factor contributing to patient safety incidents.

Qualitative: SNI07 reported increased student nurse-to-patient ration as a contributory factor in the inability to monitor patients, resulting in an error.

Integration: Findings show workload impairs decision-making capacity.

Discussion: High patient loads overwhelm students, reducing prioritization and judgment (Mohsenpour et al., 2020). While exposure builds competence, excessive workload increases error risk.

Implication: Assignments must align with students' capacity and include training on prioritization and adaptability.

2. Factors that Influence the PSI Reporting of Patient Safety Incidents among Student Nurses in the Clinical Placements

Finding 5: Honesty as Key Determinant in Reporting PSIs

Quantitative: 30.66% (n=222) reported PSIs for honesty purposes.

Qualitative: SNI11 admitted medication error immediately rather than concealing it.

Integration: Honesty strongly motivates reporting.

Discussion: Ethical values promote transparency and accountability in patient safety (Stewart et al., 2018; Hewitt et al., 2017).

Implication: Ethics education and supportive environments should be reinforced.

Finding 6: Guilt and Fear as Motivators in Reporting PSIs

Quantitative: 24.59% (n=178) cited conscience-driven guilt; 23.90% (n=173) feared patient harm as reasons to report PSIs.

Qualitative: SNI07 expressed guilt over worsening a patient's condition, leading to reporting.

Integration: Emotional responses influence reporting behavior.

Discussion: Guilt and concern for patient harm encourage disclosure and responsibility (Hung et al., 2016; Gore & Schrems, 2025).

Implication: Emotional intelligence and ethical decision-making should be integrated into training.

3. Factors that Influence the PSI Non-reporting of Patient Safety Incidents among Student Nurses in the Clinical Placements

Finding 7: Fear of Blame Hindering Incident Reporting

Quantitative: 12.69% (n = 33) identified fear of being blamed as the main reason for not reporting PSIs.

Qualitative: SNI08 expressed anxiety about being investigated by instructors and staff, leading to non-reporting.

Integration: Fear of blame discourages disclosure.

Discussion: Anticipated negative judgment leads to avoidance behaviors and limits learning opportunities (Oweidat et al., 2023).

Implication: Promote a learning-oriented, non-punitive environment.

Finding 8: Perceived Harmlessness of Incidents Reducing Reporting

Quantitative: 12.31% (n = 32) did not report PSIs, believing they caused no harm.

Qualitative: SNI12 perceived reporting unnecessary because the incident was not harmful after managing.

Integration: Minor incidents are often not reported.

Discussion: Perceiving incidents as harmless contributes to underreporting and weakens safety systems (Oweidat et al., 2023).

Implication: Emphasize reporting of all incidents to strengthen patient safety culture.

Finding 9: Fear of Disciplinary Actions Elevating Anxiety

Quantitative: 30% (n = 30) reported anxiety due to fear of sanctions in PSI non-reporting.

Qualitative: SNI04 shared her distress over perceiving the OVR (reporting system) as punishment.

Integration: Fear of sanctions discourages reporting.

Discussion: Anxiety about consequences reduces participation in reporting systems (Gqaleni & Mkhize, 2024).

Implication: Supportive policies and structured debriefing should replace punitive approaches to encourage transparency.

Limitations

The study was limited to six nursing schools in Baguio City, with one school unable to participate, limiting generalizability. The self-made data collection tool may not have fully captured emotional and psychological impacts, and underreporting of patient safety incidents (PSIs) may have occurred due to stigma and lack of non-punitive systems. Additionally, the absence of a standardized distress scale limited

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objective assessment of psychological burden and weakened data integration.

IV. Conclusion

Patient safety incidents (PSIs) among student nurses were mostly near misses, commonly involving medication errors and causing no harm. These incidents arise from interacting personal, interpersonal, and systemic factors such as anxiety, communication breakdowns, time pressure, and heavy workloads. While many students reported PSIs due to ethical responsibility, reporting was often hindered by fear of judgment and punitive environments. PSI experiences also triggered emotional distress, affecting confidence and performance, though support systems helped mitigate these effects. Through the convergent parallel design, the qualitative findings provided deeper explanations of the quantitative results, illustrating how statistical patterns (e.g., high reporting rates and identified contributing factors) are shaped by lived experiences such as fear, accountability, and interpersonal dynamics. Despite challenges, these experiences promoted accountability and clinical growth, highlighting that PSIs are shaped by complex emotional, ethical, and systemic factors rather than individual errors alone.

V. Recommendations

Based on the findings and conclusion, the researchers recommend the following:

1. Enhance Simulation-Based Training and Supervision

   Nursing institutions should strengthen simulation training using high-risk scenarios (e.g., medication errors) across all year levels to improve decision-making. Clinical instructors must reinforce supervision during medication administration.

2. Improve Reporting Systems and Normalize Transparency

   Reporting systems should be simplified through clear guidelines and accessible platforms. A non-punitive environment, including anonymous reporting and positive reinforcement, should be fostered to encourage accountability.

3. Strengthen Clinical Preparation and Student Support

   Pre-duty orientations should reduce anxiety and improve familiarity with clinical settings. Workloads must match student competence, and buddy systems should support communication. Psychological support should also be available.

4. Collaborate with Clinical Facilities to Foster a Just and Supportive Culture

   Nursing schools and clinical facilities should collaborate to implement just culture principles through ethics training, resilience development, and supportive supervision, ensuring a blame-free environment that promotes reporting and patient safety.

Contribution of Authors

All authors contributed substantially and collaboratively to the completion of this study, including the conceptualization and design of the research, development of the methodology, data collection, qualitative coding, quantitative and qualitative data analysis, interpretation of findings, and manuscript preparation and revision. John Carlo C. Baltazar led the conceptualization of the study, refinement of the mixed-methods methodology, coordination of the research team, and major aspects of data analysis and manuscript development. Jermaine Olive Q. Jimenez and Kris Guyong contributed significantly to the conceptualization, methodology development, instrument validation, data analysis, and manuscript revision. Easter Pearl S. Ablog, Alexa Shein B. Bilog, Danica A. Calantoc, Ethan B. Balasuit, Zhybelle Jencen E. Guzman, Sarah Alexandria R. Tinaza, and Aliyah Faye D. Villanueva contributed to data collection, qualitative coding, thematic analysis, data organization and validation, interpretation of findings, and manuscript drafting, editing, and formatting. Jefferson S. Galanza served as the research promoter and provided overall supervision, scholarly guidance, methodological and analytical support, ethical oversight, and critical review and final approval of the manuscript. All authors approved the final version of the manuscript and agreed to be accountable for all aspects of the work, ensuring its accuracy and integrity.

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Conflict of Interest

There is no conflict of interest disclosed by the researchers. There was no outside funding, no personal or financial relationships that might have improperly influenced the research process or results, and the study was carried out independently.

Disclosure of Use of Generative AI

The authors used ChatGPT to assist with drafting and refining text. All content was verified, edited, and revised as necessary by the author(s). Furthermore, the authors take full responsibility for the accuracy, integrity, and final content of this publication.

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Differences in Nursing Workplace Quality Between Rural and Urban Hospitals: A Quantitative Analysis

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ABSTRACT

Introduction: The quality of nursing workplaces differs across rural and urban settings, influencing both staff performance and patient care. This study quantitatively examined workplace quality in one rural and one urban hospital, focusing on workload, available resources, and nurses' experiences, with the goal of identifying location-specific strategies to improve working conditions

Aim: This study aims to analyze the quality of nursing workplaces in rural and urban hospitals, with a particular focus on identifying key similarities and differences in workplace conditions.

Methods: A quantitative descriptive design was employed, and data were collected using a modified Nursing Workplace Quality Survey administered through physical and online forms. Descriptive statistics were used to analyze five workplace dimensions: Workplace Environment, Personnel Relationships, Physical Working Conditions, Job Perception, and Support Programs and Services.

Results: Findings revealed strong interpersonal relationships in both hospital settings, but notable gaps remained: Physical Working Conditions scored lowest in the rural hospital, while Support Programs and Services were least adequate in the urban hospital.

Conclusion: These results highlight the importance of strengthening infrastructure in rural areas and expanding support systems in urban settings to promote nurse motivation, job satisfaction, and overall performance. The study recommends strategic initiatives such as improved staffing, facility upgrades, mentorship, wellness programs, and burnout prevention. This may be done by conducting a one-day seminar to the concerned offices to relay the results of the study. Future research should expand to larger samples and utilize more robust measurement tools for greater generalizability and reliability.

Keywords: *nursing workplace quality; quantitative analysis; rural hospitals; urban hospitals; work environment*

I. Introduction

How do workplace conditions in rural and urban hospitals shape the experiences and effectiveness of nurses in delivering quality care? This question has become increasingly relevant in today's healthcare landscape, where systems are expected to meet growing patient demands while operating under persistent constraints in workforce, infrastructure, and resources. The nursing work environment plays a critical role in determining not only the well-being and retention of nurses but also the quality and safety of patient care. As such, understanding variations in workplace conditions across different healthcare settings is essential in addressing systemic challenges within the profession.

The quality of the nursing workplace has been widely recognized as a key factor influencing job satisfaction, performance, and patient outcomes. Supportive work environments are associated with improved nurse retention, reduced burnout, and enhanced quality of care. However, disparities in workplace conditions continue to exist, particularly between rural and urban hospitals. These disparities are shaped by differences in resource allocation, patient volume, organizational support, and access to professional development opportunities. In many cases, such variations create unequal working conditions that may directly or indirectly affect the ability of nurses to perform their roles effectively.

Healthcare professionals frequently encounter challenges related to understaffing, inadequate institutional support, and limited access to essential resources. These issues are often more pronounced in facilities that are underfunded or geographically isolated (Desmond, 2021). While hospitals typically

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establish policies aimed at promoting employee welfare—such as flexible work schedules, mental health support programs, and continuing education initiatives—the implementation and effectiveness of these policies can vary significantly depending on the setting. In developing countries like the Philippines, systemic issues such as workforce shortages, uneven distribution of healthcare professionals, and insufficient medical equipment further complicate the delivery of quality care (Alibudbud, 2023).

Recent literature has increasingly emphasized the existence of disparities in nursing workplaces between rural and urban hospital settings. Urban hospitals, often situated in densely populated areas, tend to accommodate a higher volume of patients, leading to increased workload demands for nurses. This high patient turnover is frequently associated with time pressure, fatigue, and increased risk of burnout (Manag, 2022). In contrast, rural hospitals, while generally managing lower patient volumes, often face challenges related to limited infrastructure, outdated medical equipment, and restricted access to specialized services and professional support systems (Connerton, 2020). These structural limitations may hinder the efficiency of care delivery and place additional strain on healthcare workers who must compensate for these gaps. Moreover, the distribution of healthcare resources and personnel is often uneven, with urban centers receiving a greater concentration of funding, advanced technologies, and specialized healthcare professionals. This imbalance contributes to differences in workplace environments that extend beyond workload alone. For instance, nurses in urban hospitals may experience high levels of stress due to overcrowding and complex case management, while those in rural settings may encounter professional isolation and limited opportunities for career advancement. Both scenarios present unique challenges that influence job satisfaction, motivation, and overall work performance.

The Philippine healthcare system reflects many of these global patterns. Hospitals in urban areas are often burdened by high patient demand, while rural healthcare facilities struggle with resource scarcity and workforce limitations. These contrasting conditions highlight the need for a deeper understanding of how workplace environments differ across settings and how these differences impact nursing practice. Despite the growing body of research on nursing work environments, there remains a need for more focused and context-specific studies that examine disparities between rural and urban hospitals within the local setting.

While previous studies have explored issues such as burnout, job satisfaction, and workforce migration, fewer have provided a direct comparative analysis of workplace quality across different hospital locations. Additionally, there is a need to examine these factors using a quantitative approach to generate measurable and generalizable insights. Addressing this gap is essential in identifying patterns, informing evidence-based interventions, and supporting the development of policies that promote equitable working conditions for nurses regardless of location.

This study aims to quantitatively analyze the quality of nursing workplaces in rural and urban hospitals, with a particular focus on identifying key similarities and differences in workplace conditions. Rather than isolating variables in controlled settings, the study emphasizes the importance of examining workplace environments within their real-world contexts. This approach allows for a more comprehensive understanding of how structural and organizational factors interact to influence nurse well-being and performance.

The findings of this study are expected to contribute to the advancement of nursing practice, theory, and policy. From a practice perspective, the results may inform the design of interventions that address specific workplace challenges in both rural and urban hospitals. In terms of theory, the study adds to the growing body of knowledge on nursing work environments by providing empirical evidence on contextual disparities. From a policy standpoint, the insights generated may support decision-makers in developing more equitable and sustainable healthcare policies, particularly those aimed at improving resource distribution, workforce support, and overall healthcare system performance.

II. Methods

Research Design

The study was conducted using a descriptive comparative research design because the goal is to describe the quality of the nursing workplace and compare and analyze the differences between rural and urban hospitals. The study aimed to be quantitative in nature to objectively analyze the quality of the nursing workplace between rural and urban hospitals, therefore limiting any personal biases and opinions. This design allowed systematic measurement of the different workplace quality aspects and compared them between the two settings.

The focus of the study was on identifying and describing differences between hospital locations and the quality of the nursing workplace. There was no manipulation of the variables nor explanation of why the differences exist. The research design was selected to generate numerical data that can be statistically analyzed between both rural and urban nursing workplaces. It also allowed an immediate turnaround of data collection. The study was set to be cross sectional since the researchers aim to gather the results within only a given timeframe.

Participants and Sampling

The study was conducted in one urban hospital and one rural hospital in the Province of Camarines Sur. These hospitals were chosen because their bed capacity (95-100) was similar. These hospitals were both public,

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government-owned, and accredited as a Level 1 hospital by the Department of Health.

The number of respondents was distributed equally from each of the two chosen hospitals, all of whom were nurses of various positions assigned to multiple wards. The participants were obtained through simple random sampling, since the researchers selected random nurses for each hospital. At least 30 nurses in each hospital were accommodated. The target participants for this study were both males and females with at least one year of clinical experience and one year of permanent and regular status in their respective institutions.

Data Gathering Tools

The research instrument used in this study was a modified version of the Nursing Workplace Quality Survey (NWQS) to quantitatively assess the quality of nursing workplaces in rural and urban hospitals. The adapted instrument was based on previously established tools in nursing workplace assessment literature. The modification focused on improving contextual relevance to rural and urban hospital settings while maintaining the core dimensions of nursing workplace quality.

The questionnaire consists of five key domains: Workplace Environment, Personnel Relationships, Physical Working Conditions, Job Satisfaction, and Support Programs and Services. These domains were used to capture the multidimensional aspects of the nursing work environment across different hospital settings.

The instrument was reviewed for clarity, relevance, and appropriateness through expert evaluation by the researchers' adviser and research panel, and revisions were made based on the feedback received. Prior to data collection, the questionnaire was further examined to ensure that the items were understandable and suitable for the target respondents.

The survey utilized a Likert scale format, where respondents indicated their level of agreement with each statement on a scale from 1 to 5, interpreted as follows: 1 (Poor: 1.00–1.80), 2 (Fair: 1.81–2.60), 3 (Satisfactory: 2.61–3.40), 4 (Good: 3.41–4.20), and 5 (Excellent: 4.21–5.00).

The questionnaire was self-administered, and data collection was conducted using both Google Forms and printed copies. These were distributed and collected on-site to facilitate accessibility and participation among respondents.

Data Gathering Procedure

The researchers requested permission from the Dean of the College of Nursing and obtained approval from the hospital administrators to conduct the study and survey with their nursing staff. After receiving approval, the researchers consulted with the Hospital Administrators and/or Heads in regards to the number of viable employees for the research and their schedule of availability for the survey. After the schedule was established, the researchers collected the data in the chosen hospitals, with the researchers aiming to conduct it one at a time only, and on two separate dates.

The participants were informed about the purpose of the study and were asked for consent to conduct the survey. After that, the researchers distributed the questionnaires through a Google Forms link and printed questionnaires to the nurses in their chosen rural and urban hospitals. To guarantee accuracy and completeness, verification and cleaning of data were performed, and any inconsistent or missing responses were addressed. Additionally, data was securely stored, ensuring confidentiality and protection against unauthorized access.

Data Collection and Analysis

The researchers conducted the analysis of data through descriptive statistics to summarize and explain characteristics of data collected from hospitals in rural and urban setups. This involved some statistical measures like mean, median, standard deviation, and frequency distributions in evaluating the data along five essential workplace aspects: Workplace Environment, Personnel Relationships, Physical Working Conditions, Job Satisfaction, and Support Programs and Services. Descriptive statistics was used to give the preliminary view of the data to describe the general nature of nursing workplaces in the rural and urban settings.

The inferential statistical techniques were then used to search for any relationships and patterns within the data. It highlighted the strength and direction of association between workplace factors and overall job satisfaction. More work is expected on how selected workplace factors affect the perception and experience of nurses to establish predictors in nursing job satisfaction and quality work-life by regression analysis. Analytically, underlying trends in the two places were found and hence deep understandings about the dynamics involved.

A professional statistician was consulted throughout the analysis process about the appropriateness of the methods applied for both the results and the strength of the findings. Their expertise guided the most appropriate analytical tool selection and validated the given results. This kind of approach rigorously enhanced the results' reliability, making valid inferences about the dimensions that are shaping the nursing workplace quality.

Ethical Consideration

This study followed important ethical rules throughout the process. These ethical considerations were confidentiality and anonymity, non-maleficence, integrity, autonomy, and justice.

Confidentiality and anonymity were ensured when the identities of the participants were not revealed and all of the information was kept private and was used only for this study.

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Autonomy is the right of individuals to make their own informed decisions. Autonomy allows the participants to have the right to make their own choices and decisions on deciding whether they will or will not take part in the study without forcing them to participate. Each of the participants was provided with informed consent to ensure they understood the purpose and limits of the study.

Non-maleficence means to not harm the participants. Non-maleficence was needed to ensure that the research would not cause any harm to the participants in terms of stress, anxiety, or any emotional distress. This was practiced through providing the participants ample time and a schedule that would not disrupt their work hours.

Integrity is the quality of being honest and having strong moral principles. Integrity was maintained to ensure honesty and transparency in conducting the research and reporting the data gathered without distortion or bias.

Following these ethical considerations ensured that this research study respected the rights and well-being of all the participants in both rural and urban hospitals.

III. Results

1. Quality of Nursing Workplace in Rural Hospitals

1.1. Workplace Environment

Table 1
Quality of Nursing Workplace of Rural Hospital in the Aspect of Workplace Environment

Indicators	Mean Rating	Interpretation
The workplace provides a safe and secure environment for nurses.	4.09	Good
The workplace is free from harassment, bullying, and discrimination.	4.03	Good
I do not work beyond my position, meaning, the number of nursing staff is adequate.	3.83	Good
The hospital fosters a culture of respect and professionalism.	4.3	Excellent
Noise levels in the workplace are well-managed and conducive to work.	4.13	Good
The temperature and ventilation in the workplace are comfortable.	3.83	Good
Policies and procedures in the workplace are clear and consistently applied.	4.07	Good
The hospital ensures the cleanliness and hygiene of the workplace.	3.9	Good
Approval of leave of absence requests due to valid reasons are valued.	4.37	Excellent
The hospital provides adequate facilities for breaks and rest periods.	4.27	Excellent
Average Weighted Mean	**4.09**	**Good**

The hospital's provision of adequate facilities for breaks and rest periods earned a mean rating of 4.27, which also indicates that nurses strongly agreed that they have an excellent quality of workplace environment in rural hospitals. Among the other 10 indicators, there are two indicators with the lowest ratings, the lowest rated indicator has a mean rating of 3.83, regarding the nurses agreeing that they do not work beyond their position, meaning the number of nursing staff is adequate. The same mean rating of 3.83 is regarding having a comfortable temperature and ventilation in their workplace. This was both interpreted as a Good quality.

While both the staffing adequacy and the level of comfort of the nursing staff in the workplace are both rated as a good quality, their lower mean rating scores compared to the other indicators highlights areas wherein there are still improvements that can be made and requires development in their workplace environment. These ratings may imply that even though the nursing staff feel supported and comfortable in their work, there may still be underlying factors that impact their overall satisfaction.

Most of the respondents from rural hospitals rated their Work Environment as a good indicator, with an average mean rating of 4.09, and this rating is interpreted to be Good quality, indicating that the rural nurses are satisfied with their good working environment.

This result highlights the article Critical Care Nurses (2022), which emphasizes that a good workplace environment leads to a better quality of care, less burnout, better employee engagement, and job satisfaction. The rural nurses in the study believed that their overall atmosphere and safety in the workplace is good but can be improved.

A supportive and safe workplace environment does not only lead to a high quality care but also reduces the risk of burnout, better employee cooperation, and increases job satisfaction, especially when nurses feel valued and protected in the workplace. While the rural nurses in the study believed that their overall atmosphere and safety is good, this recognition shows an openness to change to be able to enhance the commitments in working conditions. By engaging in

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these areas that could be improved, better patient care outcomes can be achieved.

1.2. Personnel Relationships

Table 2
Quality of Nursing Workplace of Rural Hospital in the Aspect of Personnel Relationships

Indicators	Mean Rating	Interpretation
I have good working relationship with my colleagues	4.43	Excellent
Communication among nursing staff is effective and open.	4.4	Excellent
Teamwork is encouraged and practiced in this workplace.	4.53	Excellent
There is mutual respect among nurses and other healthcare staff.	4.43	Excellent
Conflicts among staff are addressed promptly and fairly.	4.37	Excellent
My supervisor provides constructive feedback on my performance.	4.5	Excellent
I feel supported by my supervisor when handling difficult situations.	4.56	Excellent
Collaboration between nurses and physicians is effective.	4.1	Good
I feel comfortable voicing my concerns to my team or supervisor.	4.4	Excellent
Nursing in this workplace trust and support one another	4.53	Excellent
Average Weighted Mean	**4.43**	**Excellent**

Table 2 presents the mean rating and interpretation of the quality of the nursing workplace of rural nurses, specifically regarding Personnel Relationships. The highest mean rating of 4.56 was rated regarding the perception of support that the employees receive from their superiors during difficult situations. It was then followed by a mean rating of 4.53 to the indicator describing how the respondents feel entrusted and supported in the workplace.

With a mean rating of 4.5, they expressed excellent quality regarding the provision of constructive criticism in the workplace. The lowest rated indicator refers to the quality of collaboration between nurses and physicians in a rural workplace, with only 4.1 equivalent to Good quality only. Most respondents from the rural hospital rated their Personnel Relationship as Excellent, with an average mean rating of 4.43, suggesting that positive employee and managerial relationships among nurses are both present and valued in their environment.

The study by Angelo (2020) highlights that both personnel and patients in rural hospitals often belong to tightly knit communities with strong interpersonal connections. This close-knit nature may contribute to the higher levels of satisfaction experienced in these settings, as the sense of belonging and familiarity fosters mutual trust between healthcare providers and the community they serve. Positive interactions were reiterated by the study of Cruz (2021), which emphasized that colleagues and supervisors play a crucial role in fostering a collaborative work environment, ultimately leading to better outcomes for patients—a characteristic prominently observed in rural hospitals. Furthermore, these interpersonal dynamics not only enhance teamwork but also strengthen resilience among nurses when facing challenges such as limited resources.

Although there is still a gap between nurses and physicians in the rural workplace due to hospital culture and role differences, Angelo (2020) states that this gap can be easily bridged with open dialogue, mutual respect, and interprofessional collaboration, rural healthcare facilities can further maximize the benefits of their close-knit environment while ensuring high-quality care for patients. Strengthening interprofessional relationships also improves decision-making, as diverse perspectives from different health professionals contribute to more holistic care.

1.3. Physical Working Conditions

Table 3
Quality of Nursing Workplace of Rural Hospital in the Aspect of Physical Working Conditions

Indicators	Mean Rating	Interpretation
My workplace has available technology to accommodate the growing needs of patient care.	3.17	Satisfactory
Equipment and supplies are regularly updated and in good working condition.	3.15	Satisfactory
Lighting in the workplace is adequate for nursing tasks.	3.87	Good
There are sufficient handwashing stations and infection control facilities.	3.87	Good
Workspaces are designed to minimize physical strain and injury.	4.03	Good

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Indicators	Mean Rating	Interpretation
I have access to the tools I need to perform my duties effectively.	3.87	Good
Restrooms and break rooms are clean and accessible.	3.77	Good
There are sufficient space and equipment to perform nursing duties effectively.	4.03	Good
The hospital provides ergonomic furniture and workstations.	3.67	Good
I feel physically comfortable and safe in my working conditions.	4.03	Good
My workplace has available technology to accommodate the growing needs of patient care.	3.17	Satisfactory
Average Weighted Mean	**3.74**	**Good**

Table 3 above shows the mean rating as well as the interpretation of the quality of the nursing work place of rural nurses in terms of Physical Working Conditions showing a mean rating of 3.74, which directly interprets that their physical working conditions are adequate and of good quality, but still needs improvement. Among the 10 indicators, the top three indicators that received the highest rating were, workspaces designed to minimize physical strain and injury, sufficient space and equipment to perform nursing duties effectively, and the feeling of being physically comfortable and safe to perform their duty properly. These three got the same rating of 4.03 indicating that nurses generally perceive their work environment as safe, comfortable, and efficient. The least indicator is, equipment and supplies are regularly updated and in good working condition. This has a rating of 3.15 suggesting that there is a concern in the adequacy and maintenance of hospital resources that can affect the quality of care and operational efficiency.

These findings support the study by Moyimane et al. (2020) that highlights that medical equipment is a crucial tool for giving the proper quality health care intervention used by nurses for prevention, diagnosis, treatment of diseases, and rehabilitation of patients. An insufficient supply of medical equipment and supplies in rural hospitals not only impacts the institutions themselves but also affects the working conditions for nurses and quality of care given to the clients. The study suggests that improvement on equipment management systems in rural healthcare facilities is important to support both health care providers and patients effectively.

These data shows that while the basic physical setup of the work environment meets the standards, issues persist between the high and low rating within this aspect reflects the partial fulfillment of the physical working condition wherein environmental factors are addressed, but the resource availability and functionality remain insufficient. This indicates that despite having infrastructure in place, the lack of consistent access to functional equipment limits the efficiency of nursing care. Consequently, nurses may experience increased stress and burnout when resources are inadequate for patient needs.

1.4. Job Satisfaction

Table 4
Quality of Nursing Workplace of Rural Hospital in the Aspect of Job Satisfaction

Indicators	Mean Rating	Interpretation
I feel fulfilled in my role as a nurse.	4.43	Excellent
My workload is manageable and reasonable.	4.23	Excellent
I am satisfied with my opportunities for professional growth.	4.13	Good
I feel adequately compensated for my work.	3.9	Satisfactory
I receive sufficient recognition for my contributions.	3.6	Satisfactory
My work aligns with my professional goals and values.	4.33	Excellent
I am satisfied with the level of autonomy in my role.	4.26	Excellent
I feel motivated to perform my best every day.	4.2	Good
I am confident in the job security provided by this workplace.	4.1	Good
Overall, I am satisfied with my nursing career in this hospital.	4.33	Excellent
Average Weighted Mean	**4.17**	**Good**

Table 4 presents the mean rating and interpretation of the quality of the nursing workplace of rural nurses in terms of Job Satisfaction. With the highest mean rating of 4.43 indicating that the nurses are fulfilled with their assigned roles as a nurse in rural areas, followed by the alignment of their work according to their profession, with a rating of 4.33. Their overall satisfaction of their

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nursing career also has a rating of 4.33 suggesting that the nurses are mainly satisfied with their role and their career. The indicator with the least rating of 3.6 includes their insufficient recognition that they receive based on their contribution for the area which indicates that the nurses feel undervalued in their job. Overall, this aspect has an average weighted mean of 4.17, which indicates that the nurses are satisfied with their roles and careers that are given to them in rural areas.

The finding supports the study of Woods (2022), which noted that nurses tend to stay when they feel valued by their organization. Gratitude and acknowledgment significantly enhance their motivation and job satisfaction.

This indicates that nurses' job satisfaction goes beyond financial compensation, emphasizing recognition and appreciation from the hospital. A workplace that values its nurses can also greatly enhance the quality of patient care.

1.5. Support Programs and Services

Table 5
Quality of Nursing Workplace of Rural Hospital in the Aspect of Support Programs and Services

Indicators	Mean Rating	Interpretation
The hospital provides adequate training and development opportunities.	3.87	Good
I have access to mental health and wellness support services.	3.43	Good
The hospital offers programs to promote work-life balance.	3.80	Good
I receive adequate support in handling workplace stress.	4.63	Excellent
There are clear policies on sick leave and vacation benefits.	4.13	Good
The hospital provides mentorship and guidance for professional growth.	3.03	Satisfactory
I feel supported in pursuing further education or certifications.	4.23	Excellent
Support services are readily available for dealing with workplace challenges.	3.73	Good
The hospital encourages feedback and suggestions from nursing staff.	4.23	Excellent
I feel that my well-being is a priority for the hospital.	3.83	Good
Average Weighted Mean	**4.01**	**Good**

Table 5 presents the quality of nursing workplace of rural hospitals in the aspect of Support Programs and Services. "I receive adequate support in handling workplace stress" rated highest with (4.63). Other areas included multiple responses under the category "Strongly Agree/Excellent." In addition, it was rated recently high for supporting input from staff (4.23) and funding for further education (4.23), indicating a work culture that supports open communication and professional growth. It does, however, indicate a less favorable score in the domain of mentoring and guidance for career growth (3.03), thereby showing that there is not much of a structured career development opportunity. A total score of 4.01 indicates that the current initiatives are mostly of good quality, yet there is considerable opportunity for enhancement to better meet nurses' needs.

Ulep et al. (2021) state that a shortage in staffing, infrastructure, and resource distribution may affect hospitals from delivering reliable and efficient care. More to these, nurses might experience a deeper dedication to professional growth and personal well-being if hospital management prioritizes workplace wellness and impactful support initiatives.

The table below shows a summary of the overall quality of nursing workplace of Rural Hospitals in the aspect of Workplace Environment, Personnel Relationships, Physical Working Conditions, Job Satisfaction, and Support Programs and Services.

Table 6
Overall Quality of Nursing Workplace of Rural Hospitals

Aspects	Average Weighted Mean	Interpretation
Workplace Environment	4.09	Good
Personnel Relationships	4.43	Excellent
Physical Working Conditions	3.74	Good
Job Satisfaction	4.17	Good
Support Programs and Services	4.01	Good

Table 6 presents the perceived quality of the nursing workplace in the rural hospital across different workplace domains, along with their corresponding weighted mean scores. The overall mean rating of 4.09 indicates that the nursing workplace in the rural hospital is generally perceived as having good quality. Among the identified domains, Personnel Relationships obtained the highest rating (M = 4.43), interpreted as excellent, followed by Job Satisfaction (M = 4.17) and Workplace Environment (M = 4.09), both interpreted as

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good quality. Physical Working Conditions received the lowest rating (M = 3.74), although it still falls within the good category.

The high rating for Personnel Relationships may suggest that interpersonal dynamics among nurses and healthcare staff in rural hospital settings are relatively strong. This finding is consistent with Tannady et al. (2020), who emphasized that positive employee relationships may contribute significantly to improved productivity and service delivery. In the context of rural hospitals, this may possibly be attributed to smaller workforce sizes, which could foster closer professional interactions and stronger collegial support among staff members. Such conditions may help maintain morale despite limitations in other workplace resources.

Job Satisfaction also received a relatively high rating, which may indicate that rural nurses derive fulfillment from their roles despite environmental constraints. This could possibly be influenced by intrinsic motivational factors such as professional commitment, community ties, or a sense of purpose in serving underserved populations. However, this may also suggest that job satisfaction in rural settings is shaped not only by material conditions but also by relational and emotional aspects of nursing work.

Workplace Environment domain obtained a good rating, which may reflect a generally acceptable perception of organizational conditions. However, this may also indicate that while basic structural and operational needs are met, there could still be areas for improvement in terms of resources and workplace optimization.

Physical Working Conditions received the lowest score among all domains, which may suggest limitations in infrastructure, equipment availability, or facility maintenance in rural hospital settings. This finding aligns with Landy et al. (2023), who reported that outdated medical equipment and inadequate infrastructure are commonly observed in many rural healthcare facilities. This situation may possibly contribute to challenges in delivering optimal care and may place additional strain on healthcare workers who must adapt to resource constraints.

Overall, the findings may suggest that while rural hospital workplaces demonstrate strong interpersonal and motivational factors, structural limitations in physical working conditions may still present challenges that affect the overall quality of the nursing work environment.

2. Quality of Nursing Workplace in Urban Hospitals

2.1. Workplace Environment

Table 7
Quality of Nursing Workplace of Urban Hospital in the Aspect of Workplace Environment

Indicators	Mean Rating	Interpretation
The workplace provides a safe and secure environment for nurses.	4.1	Good
The workplace is free from harassment, bullying, and discrimination.	3.17	Satisfactory
I do not work beyond my position, meaning, the number of nursing staff is adequate.	3.03	Satisfactory
The hospital fosters a culture of respect and professionalism.	3.8	Good
Noise levels in the workplace are well-managed and conducive to work.	3.87	Good
The temperature and ventilation in the workplace are comfortable.	4.37	Excellent
Policies and procedures in the workplace are clear and consistently applied.	3.6	Good
The hospital ensures the cleanliness and hygiene of the workplace.	4.03	Good
Approval of leave of absence requests due to valid reasons are valued.	3.83	Good
The hospital provides adequate facilities for breaks and rest periods.	3.67	Good
Average Weighted Mean	**3.75**	**Good**

Table 7 above presents the mean rating and interpretation of the quality of the nursing workplace of an urban hospital, specifically in the Workplace Environment. Among the 10 indicators, the mean rating of 4.37 ranks first, regarding the comfort of temperature and ventilation in the workplace. This indicates that nurses strongly agreed that they have an excellent workplace environment in an urban hospital regarding ventilation in their work. Following the safe and secure environment for nurses, which ranks second, with a mean rating of 4.1. This indicates that nurses agreed that they have a good quality of secure environment in their workplace.

The hospital's cleanliness and hygiene of the workplace ranks third with a mean rating of 4.03. This indicates that nurses agreed that they have good hygiene in their workplace. Among these indicators, the "do not work beyond my position, meaning the number of nursing staff is adequate", which reflects the adequacy of nursing staff, falls last in the ranking, with a mean

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rating of 3.03. This indicates that while nurses are satisfied with the number of staff, there is still room for improvement in staffing levels to be able to support their work environment better.

While the adequacy of nursing staff is interpreted as a good indicator, this lower mean rating score compared to the other indicators highlights that there are still improvements that can be achieved. This shows that even though nurses generally feel that there are enough staff members, there are still instances wherein an increase in workload is not fully manageable.

Although there are still areas to improve, an article by Nurses in Crisis: Challenges They Face in the Workplace (2023) indicates how few factors, such as workload, safety, and job stress, can contribute to the quality of care delivered by urban nurses. Poorly designed and chaotic environments can cause urban nurses to develop anxiety and burnout. Considering these factors, it could further enhance the work environment for urban nurses.

Addressing these issues and providing additional support can help promote and improve a healthier and more balanced and healthy work environment among nurses in urban hospitals.

2.2. Personnel Relationships

Table 8
Quality of Nursing Workplace of Urban Hospital in the Aspect of Personnel Relationships

Indicators	Mean Rating	Interpretation
I have good working relationship with my colleagues	4.27	Excellent
Communication among nursing staff is effective and open.	3.63	Good
Teamwork is encouraged and practiced in this workplace.	4.2	Excellent
There is mutual respect among nurses and other healthcare staff.	4.13	Good
Conflicts among staff are addressed promptly and fairly.	3.7	Good
My supervisor provides constructive feedback on my performance.	4.17	Good
I feel supported by my supervisor when handling difficult situations.	4.27	Excellent
Collaboration between nurses and physicians is effective.	4.07	Good
I feel comfortable voicing my concerns to my team or supervisor.	4	Good
Nursing in this workplace trust and support one another	3.97	Good
Average Weighted Mean	**4.04**	**Good**

Table 8 shows the quality of the nursing workplace of Urban nurses in the aspect of Personnel Relationships. Among the indicators, the highest mean rating was 4.27, regarding the quality of support that a nurse receives from their superiors during difficult situations. The same mean rating of 4.27 was rated in regard to having good relationships between colleagues in the workplace. This is both directly interpreted as Excellent quality. It was closely followed by the indicator regarding encouragement and practice of teamwork in the workplace, with a mean of 4.2, directly interpreted as Excellent quality as well. The least rated indicator was about the quality of communication in terms of effectiveness and openness, with only 3.63, interpreted as only Good Quality. Overall, Personnel Relationships in the Urban workplace have an average mean rating of 4.07, which is directly interpreted as Good. It suggests that although there is a great relationship between the nurses in urban hospitals, improvements are still needed.

Mutair et al. (2022) states that blooming interpersonal relationships among urban coworkers may be skewed due to unique circumstances such as team transfers, pre-existing friendships, and frequent interactions. The increased workload in urban hospitals often results in extended work hours, which naturally creates more opportunities for employees and leaders to interact. These frequent interactions during patient care can foster stronger rapport and collaboration, ultimately improving teamwork within the organization. However, the same increased workload and longer working hours also introduce challenges that cannot be overlooked. The heightened pressure and stress that come with such demanding schedules may lead to fatigue, irritability, and decreased tolerance among healthcare workers. Over time, this can increase the likelihood of conflicts, both minor and significant, and limit the ability of staff to address these issues effectively.

As a result, communication may become strained, with essential concerns left unresolved or dismissed due to time constraints. The study suggests that while urban hospital settings can provide fertile ground for strong interpersonal bonds, the intensity of the work environment often creates conditions where these relationships are tested, underscoring the need for structured communication strategies and effective conflict management systems to maintain healthy professional relationships.

2.3. Physical Working Conditions

Table 9

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Quality of Nursing Workplace of Urban Hospital in the Aspect of Physical Working Conditions

Indicators	Mean Rating	Interpretation
My workplace has available technology to accommodate the growing needs of patient care.	3.57	Good
Equipment and supplies are regularly updated and in good working condition.	3.20	Satisfactory
Lighting in the workplace is adequate for nursing tasks.	4.10	Good
There are sufficient handwashing stations and infection control facilities.	4.03	Good
Workspaces are designed to minimize physical strain and injury.	4.07	Good
I have access to the tools I need to perform my duties effectively.	3.73	Good
Restrooms and break rooms are clean and accessible.	3.97	Good
There are sufficient space and equipment to perform nursing duties effectively.	3.90	Good
The hospital provides ergonomic furniture and workstations.	3.70	Good
I feel physically comfortable and safe in my working conditions.	3.97	Good
Average Weighted Mean	**3.83**	**Good**

Table 9 shows the mean rating and interpretation of the quality of the nursing workplace in urban hospitals in terms of Physical Working Conditions, which showed a mean rating of 3.83, which directly interprets that physical working conditions in urban hospitals are of good quality. The three indicators that received the highest ratings were "lighting in the workplace is adequate for nursing tasks" with the rating of 4.10, also "workspaces are designed to minimize physical strain and injury" with the rating of 4.07, and lastly "there are sufficient handwashing stations and infection control facilities" with the rating of 4.03. The least-rated indicator was "Equipment and supplies are regularly updated and in good working condition" with the rating of 3.20". The results suggest that the nurses in urban hospitals generally see their work environment as safe, comfortable, and conducive to providing quality care for the patients. High rating in lighting, ergonomic design, and infection control and prevention reflects how well maintained their physical working conditions are. However, low scores regarding regular updating and maintenance of their equipment show that there are ongoing issues with resource management.

The findings are supported by an article titled "Quality Hospital Equipment in Critical Areas: Ensuring Effective Medical Care" (Tedisel, 2023). This article emphasizes the importance of medical devices for continuous patient monitoring, accurate medication administration, and performing surgical interventions. Construction and financial budgets focus on urban development rather than rural areas. This leads to a lack of resources in rural settings. Nurses in urban hospitals often believe their working conditions are acceptable. They feel they have the equipment needed to provide good care. Having access to medical equipment is crucial for nurses to carry out essential tasks effectively.

While these findings indicate that there is a favorable physical work environment in urban hospitals, the low rating for equipment maintenance shows a critical gap. Even though there is advanced infrastructure and greater access to resources in urban areas compared to rural settings, maintaining their equipment and resources is still a challenge for urban hospitals. Issues such as high patient volume and frequent use of medical equipment can be a factor in these issues.

2.4. Job Satisfaction

Table 10
Quality of Nursing Workplace of Urban Hospital in the Aspect of Job Satisfaction

Indicators	Mean Rating	Interpretation
I feel fulfilled in my role as a nurse.	4.00	Good
My workload is manageable and reasonable.	3.80	Satisfactory
I am satisfied with my opportunities for professional growth.	3.73	Good
I feel adequately compensated for my work.	3.66	Good
I receive sufficient recognition for my contributions.	3.53	Good
My work aligns with my professional goals and values.	4.13	Good
I am satisfied with the level of autonomy in my role.	4.03	Good
I feel motivated to perform my best every day.	4.03	Good

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I am confident in the job security provided by this workplace.	3.70	Satisfactory
Overall, I am satisfied with my nursing career in this hospital.	3.96	Good
Average Weighted Mean	**3.89**	**Good**

Table 10 shows the mean rating and interpretation of the quality of the nursing workplace of urban nurses in terms of Job Satisfaction. The highest includes the alignment of the nurses' work according to their professional goals and values with a mean rating of 4.13 followed by their satisfaction with the level of autonomy in their role, and also their motivation to perform their best daily with a both rating of 4.03 suggesting that nurses in urban hospital experience accurate work that are aligned according to their profession while being motivated inside the area.

The least rated indicator has a rating of 3.7, which is their confidence in the job security provided by their current workplace, suggesting the retention of the nurses' job in urban hospitals may still improve for the nurses to have their job secured. Overall, the average weighted mean of this aspect in the urban hospitals is rated 3.89, which indicates good quality and satisfaction of the nurses with their profession in terms of how aligned their roles are according to the job they applied for, the autonomy in their roles, and their motivation for their job while also allowing room for improvement when it comes to their job security. The findings highlight a strong sense of purpose and autonomy among urban nurses, which are indicators of job satisfaction. Nurses generally feel that their roles match their professional values, and as a result, they are trusted to work independently.

In the study of Tannady et al. (2020), a positive work environment plays a significant role in enhancing job satisfaction. It makes connections among staff and helps reduce fatigue, which can improve job performance. This aligns with the findings, which emphasize strengths in natural motivation and role alignment. Although urban hospitals demonstrate a strong and positive environment, there is still a need for improvements. Hospital administrators should take into consideration increasing their job security, including the provision of clearer career routes, long-term contracts, retention pay, or retention schemes.

These results show that there is still room for improvement in several areas, such as strengthening support systems, increasing recognition efforts, and enhancing work conditions. Addressing these factors could further boost job satisfaction for nurses and increase their motivation.

2.5. Support Programs and Services

Table 11

Quality of Nursing Workplace of Urban Hospital in the Aspect of Support Programs and Services

Indicators	Mean Rating	Interpretation
The hospital provides adequate training and development opportunities.	3.73	Good
I have access to mental health and wellness support services.	3.23	Satisfactory
The hospital offers programs to promote work-life balance.	3.23	Satisfactory
I receive adequate support in handling workplace stress.	3.53	Good
There are clear policies on sick leave and vacation benefits.	3.40	Satisfactory
The hospital provides mentorship and guidance for professional growth.	3.76	Good
I feel supported in pursuing further education or certifications.	3.90	Good
Support services are readily available for dealing with workplace challenges.	3.70	Good
The hospital encourages feedback and suggestions from nursing staff.	3.76	Good
I feel that my well-being is a priority for the hospital.	3.60	Good
Average Weighted Mean	**3.63**	**Good**

Table 11 presents the quality of the nursing workplace in urban hospitals in the aspect of Support Programs and Services. The indicator with the highest mean average, further education and certification support (3.90), followed by the hospital, which provides mentorship and guidance for professional growth and encourages feedback and suggestions from nursing staff, both of which scored (3.76). This implies that respondents feel encouraged to grow professionally, which is key to long-term career fulfillment. However, there is also a gap in mental health support and work-life balance provisions.

The findings reveal that many health sector institutions still struggle to provide emotional resilience and personal wellness. The survey is consistent with the occurrence above because both mental health services and work-life balance programs were marked at (3.23) (Neutral/Satisfactory). This indicates that professional growth receives a lot of attention, but emotional and personal needs may not have been handled adequately.

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If left unattended, such an imbalance can lead to burnout and disengagement. A total score of 3.63 indicates that nurses recognize the presence of support programs equating to sound quality; however, there is still potential for enhancement in terms of accessibility, effectiveness, and scope.

A study conducted by M.S. (2024) highlights that these initiatives are systematic efforts by organizations to provide resources and support, helping nurses overcome challenges and successfully meet their responsibilities. When nurses experience appreciation, support, and empowerment, it becomes more crucial than merely adhering to rules and procedures in a healthy work environment. Programs and services that promote the success of healthcare workers have a significant impact on employee retention, job satisfaction, and workplace morale.

Table 12
Overall Quality of Nursing Workplace of Urban Hospitals

Aspects	Average Weighted Mean	Interpretation
Workplace Environment	3.75	Good
Personnel Relationships	4.04	Good
Physical Working Conditions	3.83	Good
Job Satisfaction	3.89	Good

Table 12 presents the perceived quality of the nursing workplace in the urban hospital across different workplace domains, along with their corresponding weighted mean scores. The overall mean rating of 3.83 indicates that the nursing workplace in the urban hospital is generally perceived as having good quality. Among the identified domains, Personnel Relationships obtained the highest rating (M = 4.04), interpreted as good quality, followed by Job Satisfaction (M = 3.89) and Physical Working Conditions (M = 3.83), both also interpreted as good. Support Programs and Services received the lowest rating (M = 3.63), although still within the good category.

The relatively high rating for Personnel Relationships may suggest that interpersonal collaboration and communication among healthcare staff in urban hospitals remain functional despite high workload demands. This may possibly be attributed to more structured organizational systems and larger professional networks within urban healthcare settings, which could help maintain coordination among staff. However, this does not necessarily eliminate workplace stress, as interpersonal dynamics may still be affected by workload intensity and patient volume.

Job Satisfaction also received a relatively favorable rating, which may indicate that urban nurses continue to find meaning in their roles despite demanding work conditions. This could possibly be associated with career advancement opportunities, exposure to diverse clinical cases, and access to professional development in urban hospital settings. Nevertheless, the moderate score may also suggest that job satisfaction is influenced by competing stressors such as workload pressure and time constraints.

Physical Working Conditions obtained a slightly lower but still good rating, which may indicate that while urban hospitals generally have better infrastructure compared to rural settings, challenges may still exist in terms of space utilization, patient congestion, and workload distribution.

The lowest rating observed in Support Programs and Services may suggest limited utilization or perceived accessibility of institutional support systems. This finding is supported by Love (2024), who reported that only a small proportion of urban nurses make use of employer-provided mental health services due to stigma and fear of negative professional perception. This may possibly indicate that although support systems exist in urban hospitals, cultural or organizational barriers may reduce their effectiveness or utilization.

Overall, these findings may suggest that while urban hospital workplaces provide relatively stronger structural and professional support systems compared to rural settings, challenges related to workload intensity and underutilization of support services may still influence nurses' overall workplace experience

3. Intervention Program for the Improve the Nursing Working Conditions in Rural and Urban Hospitals

Based on the findings of the study, the following intervention programs were made.

Physical working conditions are notably poor in rural hospitals, as revealed by the findings of this study. In response, the researchers developed the *"Rural-CARE"* program — a student-led, advocacy-based initiative designed to raise awareness about the need for enhanced resource availability, improved facility safety, and sustainable support in rural healthcare settings. Rather than implementing direct structural changes, this program focuses on engaging stakeholders through educational forums, presenting data-driven needs, and promoting community involvement to help address infrastructure limitations. The key objective is to encourage collaboration with hospital administrators, local government units, and potential sponsors by highlighting the long-term benefits of adequate funding and well-maintained equipment. By fostering informed dialogue and proactive planning, Rural-CARE aims to support the gradual improvement of working conditions in rural hospitals.

The *"Urban-SHIELD"* program was developed by the researchers to address challenges surrounding the accessibility and inclusivity of support services for nurses in urban hospitals. While many institutions offer wellness and professional development programs, they are often underutilized due to factors like scheduling barriers, workplace stigma, or lack of awareness. This student-led intervention emphasizes the importance of normalizing mental health support, promoting work-life

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balance, and making existing services more visible and approachable.

The program will include the implementation of informed dialogues with the hospital administrators and feedback mechanisms with the staff nurses., Urban-SHIELD encourages a cultural shift toward holistic, inclusive, and sustainable support systems within a fast-paced urban healthcare environment.

IV. Conclusion

This study aimed to analyze and compare the quality of nursing workplaces in rural and urban hospital settings, focusing on identifying similarities and differences across key workplace domains such as Personnel Relationships, Job Satisfaction, Physical Working Conditions, Workplace Environment, and Support Programs and Services.

The findings revealed that both rural and urban hospitals were generally perceived as having good-quality nursing workplaces. Rural hospitals obtained a higher overall mean rating compared to urban hospitals, which may suggest more favorable perceptions of workplace conditions in rural settings. In both contexts, Personnel Relationships emerged as the highest-rated domain, indicating that interpersonal collaboration remains a strong and consistent aspect of nursing workplaces regardless of setting. However, challenges were also identified, particularly in Physical Working Conditions in rural hospitals and Support Programs and Services in urban hospitals, suggesting context-specific areas for improvement.

These findings have important implications for nursing theory, practice, and research. Theoretically, the results support frameworks that emphasize the influence of organizational and environmental factors on nurse well-being and workplace experiences. In terms of nursing practice, the study highlights the need for targeted interventions to improve specific aspects of the work environment, such as infrastructure development in rural hospitals and enhanced accessibility and utilization of support programs in urban hospitals. For future research, further studies may explore additional variables such as staffing patterns, leadership styles, and workload distribution to deepen understanding of workplace disparities.

This study has contributed to a clearer understanding of nursing workplace quality across rural and urban hospital settings by providing empirical evidence of both similarities and differences in workplace conditions. It highlights the importance of context-specific evaluation of nursing environments rather than a one-size-fits-all approach.

Ultimately, this paper promises to serve as a useful reference for healthcare administrators, policymakers, and nursing leaders in developing strategies aimed at improving workplace conditions. By addressing identified gaps and strengthening support systems in both rural and urban hospitals, more equitable and sustainable nursing work environments may be achieved, ultimately contributing to improved nurse well-being and patient care outcomes.

V. Recommendation

This study has several limitations that should be considered in interpreting the findings. First, the study was conducted in only one rural hospital and one urban hospital. This limited scope may restrict the generalizability of the results, as the findings may only reflect the specific conditions of the selected institutions rather than broader rural and urban healthcare settings.

Second, the study relied on self-reported data, which may be subject to response bias, including social desirability bias and subjective interpretation of workplace conditions. This may potentially influence the accuracy of responses, as participants may not fully reflect objective workplace conditions.

In addition, formal psychometric testing (e.g., Cronbach's alpha) of the modified instrument was not conducted due to time constraints. This may be considered a limitation, as it limits the ability to fully establish the internal consistency and reliability of the tool.

Possible alternative approaches that could strengthen future studies include the use of a multi-site design involving a larger number of rural and urban hospitals to improve generalizability. The use of mixed-method approaches, such as interviews or focus group discussions, may also provide deeper insight into nurses' lived experiences and help explain quantitative findings. Additionally, future researchers may consider the use of fully validated instruments with established reliability testing to enhance measurement accuracy.

Despite these limitations, the study provides useful baseline evidence on nursing workplace quality in rural and urban hospitals and offers meaningful insights that may guide future research, policy development, and workplace improvement strategies.

Contribution of Authors

The authors confirm that they meet the international criteria for authorship. Each author has made substantial contributions to the conception or design of the work; the acquisition, analysis, or interpretation of data; and the drafting or critical revision of the manuscript. All authors have approved the final version for publication and agree to be accountable for all aspects of the work.

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Disclosure of Use of Generative AI

Generative Artificial Intelligence tools were utilized solely to support language refinement and improve the clarity of the manuscript. All core aspects of the study, including conceptualization, research design, data collection, analysis, and interpretation, were independently carried out by the authors. The authors take full responsibility for the content, accuracy, and conclusions presented in this work.

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About the Author

SOFIA LYNN R. REBANCOS, RONALD JOHN D. ABNER, ERIKA G. BERNEJO, JOEPET CARRERAS, and BENJAMIN JOSE V. GARCIA, are third-year Bachelor of Science in Nursing students from Ateneo de Naga University, united by a shared commitment to excellence in nursing practice and research. Coming from various parts of Camarines Sur, the team brings together diverse backgrounds, experiences, and interests that enrich their academic and clinical perspectives.

Each member actively balances the demands of nursing education with personal passions and leadership roles. Their interests range from sports and the arts to student leadership and community engagement, reflecting a holistic approach to growth both inside and outside the classroom. As student nurses, they have developed a strong foundation in patient care, teamwork, and evidence-based practice. In December 2025, they represented their institution at a national nursing research conference, where they presented their study, engaged with fellow researchers and healthcare professionals and was awarded a distinction in Research Poster Presentation.

Driven by their aspirations in the healthcare field, the authors aim to contribute meaningful insights through their research. Their collective goals include pursuing advanced nursing opportunities locally and internationally, with interests spanning clinical specialization, travel nursing, and global healthcare practice. Through this study, they hope to add value to the existing body of nursing knowledge and inspire continued improvement in nursing work environments.

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From Bedside to BPO: Quality of Life and Coping Orientation of Nurses

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ABSTRACT

Introduction: The persistent global shortage of nurses and the escalating rates of professional turnover have intensified the need to explore alternative career pathways within the nursing profession. These challenges provide the rationale for examining the well-being of nurses who transition from direct patient care to administrative roles, particularly within healthcare-related Business Process Outsourcing (BPO) facilities.

Aim: The study's central purpose was to evaluate the Quality of Life (QoL) and coping orientation of registered nurses who had transitioned from bedside to healthcare BPO jobs within the Philippine setting.

Methods: This study used a descriptive-correlational design to examine the relationship between quality of life (QoL) and coping strategies among 138 registered nurses in Metro Manila who transitioned to healthcare BPO roles, aged 25–45, with at least three years bedside experience. Data were collected via convenience sampling through an online survey using adapted WHOQOL-BREF and Brief-COPE instruments. Descriptive statistics and Spearman's rho were used for analysis.

Results: Findings revealed a significant positive correlation between quality of life and coping orientation ($r = .681$, $p < .001$), suggesting that nurses who transitioned to healthcare BPO roles generally experienced favorable well-being and effective coping. Environmental Health yielded the highest quality-of-life scores ($M = 87.18$, $SD = 10.97$), while problem-focused coping was the most commonly employed strategy ($M = 3.35$, $SD = 0.61$). In contrast, Physical Health recorded the lowest mean score ($M = 72.51$, $SD = 14.63$), indicating persistent concerns regarding physical well-being.

Conclusion: The transition to BPO was associated with effective coping and a good quality of life, establishing a viable alternative for nurses, although physical well-being remains a concern. These findings hold significant implications for policymakers, underscoring the need for targeted wellness interventions within nursing practice and education to address declines in physical health, promote professional development, strengthen retention strategies, and improve job satisfaction.

Keywords: *Quality of Life (QoL), coping orientation, transitioned nurses, BPO work*

I. Introduction

The Philippine BPO sector has long solidified its status as a global powerhouse, with the healthcare segment alone providing jobs for at least 100,000 Filipinos and continuing to forecast strong annual growth (Ramotowski, 2024). While the nation remains a primary exporter of clinical talent, a significant internal exodus occurs: registered nurses are increasingly abandoning bedside practice for non-clinical roles within healthcare-focused BPO companies. This transition is historically framed by "push" factors, such as the 27.1% turnover rate driven by hospital burnout, and the "pull" of the BPO sector, which offers competitive remuneration, standardized work hours, and lower physical risk (Lindquist, 2023; Balasolla, 2024).

The growing exodus of registered nurses from bedside practice into healthcare-focused BPO roles highlights a critical workforce challenge in the Philippines. With a 27.1% turnover rate in 2021 (Lindquist, 2023) and an estimated shortage of 127,000 nurses needed to meet national service demands (Department of Health, as cited in Senate of the Philippines, 2025), the migration of experienced clinicians to corporate settings threatens the stability of the healthcare system. While BPO employment offers higher pay, standardized hours, and improved work–life balance, little is known about how this transition affects nurses' quality of life (QoL) and coping strategies. This

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study, conducted among major healthcare BPO companies in Metro Manila, seeks to determine whether such occupational shifts genuinely enhance well-being or introduce new stressors, thereby addressing a critical gap in understanding how nurses adapt to non-clinical environments and how these changes shape their long-term psychosocial health.

A critical research gap exists in understanding nurse turnover and occupational stress beyond the dominant trajectories of international migration and burnout-driven workforce exit. Limited evidence examines nurses who transition to healthcare BPO roles—the "middle path" of remaining in the local workforce while shifting to non-clinical, corporate settings. Although work-life balance is a commonly cited motivator, existing BPO studies focus on general call center agents and overlook the unique challenges faced by nurses, including moral injury, loss of professional identity, and the need to translate clinical expertise into corporate metrics (Toker & Güler, 2022). Consequently, little is known about how these nurses reconcile their caregiver identity with corporate roles and how this affects their long-term quality of life.

This study explores the psychosocial evolution of the nurse-turned-corporate-professional, moving beyond turnover and occupational stress to examine coping orientations as mediators of role reidentification. By identifying problem-focused and avoidant coping strategies, it provides insight into how professional identity is maintained or lost during career transitions, highlighting a shift in how nursing expertise is utilized in a digitalized global economy. It also examines the relationship between coping orientations and quality of life (QoL) domains, challenging the assumption that better work-life balance ensures higher QoL, and identifying potential BPO stressors such as sedentary health risks or social isolation. These findings inform targeted retention strategies in clinical settings and guide occupational health practices in the healthcare BPO industry.

This study aimed to:

1. Describe the demographic profile of the respondents in terms of age, sex, length of hospital employment prior to transition, years of experience in the healthcare BPO industry, and current job position.
2. Assess the quality of life of the respondents in relation to physical, psychological, social, and environmental domains.
3. Determine the coping orientations of the respondents in terms of problem-focused, emotion-focused, and avoidant coping.
4. Examine the relationship between quality of life and coping orientation among nurses who transitioned from bedside nursing to healthcare BPO employment.

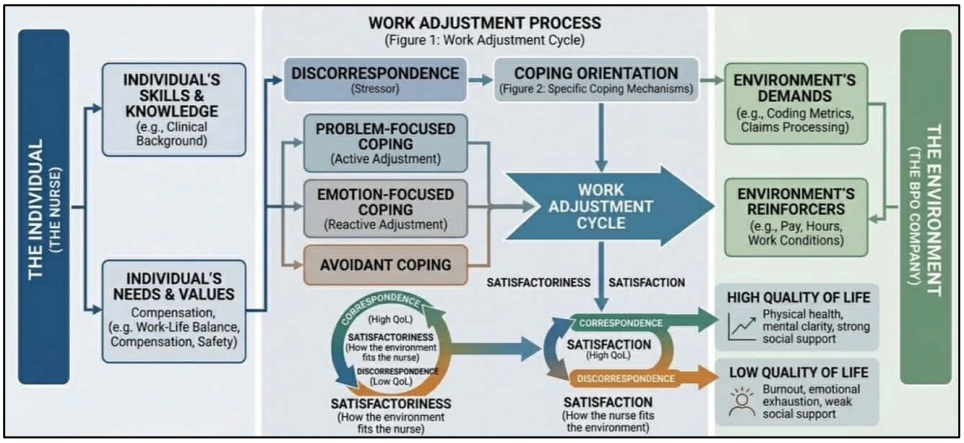
Theoretical Framework

This study is anchored in the Theory of Work Adjustment (TWA) by Dawis and Lofquist (1984), which describes the dynamic, reciprocal relationship between individuals and their work environments. It frames nurses' transition to healthcare BPO roles as an ongoing process of aligning personal needs with workplace reinforcers. Here, the nurse represents the individual, and the BPO firm represents the work environment, highlighting the shift as a process of adaptation and professional growth rather than a permanent exit from nursing.

TWA emphasizes two dimensions: Satisfaction, the individual's view of how well the environment meets needs like compensation and predictable hours, and Satisfactoriness, the organization's view of how well the individual meets demands such as coding accuracy and productivity. Discorrespondence between these dimensions prompts adjustment behaviors, conceptualized here as coping strategies—problem-focused coping to actively modify the environment, and emotion-focused or avoidant coping to manage internal stress.

This framework guides the examination of how nurses' demographics and coping strategies relate to Quality of Life (QoL). It illustrates how clinical values interact with BPO demands, triggering coping responses. Successful adjustment enhances QoL across physical, psychological, social, and environmental domains, while poor adjustment may cause reduced QoL, identity strain, or burnout. Applying TWA, the

Figure 1
Theory of Work Adjustment



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study assesses whether healthcare BPO roles represent a sustainable occupational fit for nurses and informs broader discussions on workforce sustainability and the evolving use of nursing expertise in a digital economy.

Scope and Limitations

This research evaluated the professional transition of registered nurses in Metro Manila from clinical bedside practice to healthcare-related Business Process Outsourcing (BPO) roles. By utilizing the WHOQOL-BREF and Brief COPE frameworks, the study assessed how this career pivot impacted quality of life across physical, psychological, social, and environmental domains. Furthermore, it explored the critical nexus between demographic profiles—including years of hospital experience and current BPO positioning—and specific coping orientations, such as problem-focused, emotion-focused, and avoidant strategies. By analyzing these intersections, the study provided a foundational understanding of the well-being and adaptive mechanisms of nursing professionals who navigated the shift into the corporate healthcare sector.

To ensure scholarly transparency and credibility, several methodological parameters were considered when interpreting the findings of this study. Primarily, the geographic scope was focused on Metro Manila; while this reflected a major global outsourcing hub, the results may not be generalizable to nurses in rural or less urbanized regions where work conditions and resources differed. It is also important to note that specific participant distributions across various districts or companies within Metro Manila were not disclosed, as strict company confidentiality policies restricted the release of granular organizational data.

Methodologically, the study employed a cross-sectional design, which provided a high-value snapshot of current trends but precluded the ability to track longitudinal changes or establish definitive cause-and-effect relationships. Furthermore, the use of convenience sampling introduced the potential for selection bias, as participants were selected based on availability rather than random distribution. The study also acknowledged that certain internal variables—including specific job roles, salary scales, and localized workplace conditions—were not controlled and may have influenced individual quality of life and coping strategies. While standardized self-reporting instruments were utilized to maintain academic rigor, the data may have been further influenced by inaccessible organizational factors inherent in the private sector. These limitations highlighted the study's role in providing an exploratory foundation for future research in the evolving field of healthcare outsourcing.

II. Methods

This section describes the research design, data collection procedures, research instruments, and ethical considerations employed in the study.

Research Design

This study employed a descriptive-correlational quantitative design to investigate the relationship between quality of life (QoL) and coping strategies among nurses who transitioned to healthcare BPO roles. This quantitative approach focused on the systematic collection of numerical data to provide an objective analysis of the variables involved (Devi et al., 2023). A correlational design facilitates the evaluation of complex, non-manipulable human experiences that cannot be ethically or practically subjected to experimental control (Polit & Beck, 2021). Since QoL is an intrinsic state influenced by pre-existing professional and psychological factors, this design allowed for the measurement of how specific coping mechanisms naturally co-vary with perceived well-being within their naturalistic environment, rather than through a controlled experimental framework.

The appropriateness of this design was reinforced by established literature that utilized quantitative measures to identify predictors of well-being. For instance, Shao et al. (2020) employed this design to pinpoint specific environmental stressors that significantly influenced QoL scores, while Nowrouzi et al. (2016) utilized correlational data to link coping mechanisms with job satisfaction. Ultimately, this methodology was selected to provide an objective, numerical overview of the participants' transition, ensuring high statistical validity in assessing the strength and direction of the relationships between quality of life and coping strategies among nurses within the Metro Manila BPO sector.

Participants and Sampling

TAs reported by Estrellado (2024), the number of BPO nurses in 2024 was estimated at approximately 100,000, which served as the basis for determining the required sample size. A minimum of 138 participants was established through a power analysis using G*Power 3.1.9.4, a widely recognized and validated software in behavioral and social science research (Faul et al., 2009). This procedure ensures adequate statistical sensitivity to detect meaningful relationships while reducing the likelihood of Type II errors. The estimation applied standard parameters, including a 95% confidence level, a 5% margin of error, and an assumed medium effect size of 0.3. Such specifications are appropriate for the healthcare BPO context, where population are not fully established and prior empirical estimates remain limited; under these conditions, the use of a medium effect size is recommended to support a balanced and methodologically rigorous estimation (Alwahaibi et al., 2020).

Convenience sampling was utilized to recruit participants who were readily available within healthcare-related BPO companies. While convenience sampling limits broader generalizability, its use was necessitated by the unique constraints of the healthcare BPO sector. Access to this population was restricted by stringent corporate security protocols and confidentiality policies that precluded randomized

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selection. Furthermore, the 24/7 rotational nature of BPO operations rendered traditional random sampling logistically unfeasible. Convenience sampling is a practical and acceptable approach in health-related research when the target population is geographically concentrated or when organizational barriers prevent the use of a true random frame (Stratton, 2022).

To mitigate potential bias, strict inclusion and exclusion criteria were enforced to ensure the sample remained representative of the target nursing demographic. This approach provided a high-quality, targeted baseline for a specialized workforce that is traditionally difficult for researchers to penetrate. Eligible participants included (1) BSN graduates, (2) licensed Philippine registered nurses, (3) individuals with at least three years of bedside experience prior to transitioning to healthcare-related BPO work, (4) those aged 25 to 45, and (5) currently employed in Metro Manila-based healthcare BPO companies providing indirect patient care or remote clinical services. Nurses working in non-healthcare-related BPO companies, those who were unemployed or on career breaks during the data collection period, and those still engaged in bedside nursing, either part-time or full-time, were excluded.

Data Gathering Tools

Data were collected using a structured online questionnaire comprising three sections. The first section gathered demographic and professional information, including age, sex, hospital experience prior to transition, BPO tenure, and current job title. The second section assessed quality of life using the 26 item WHOQOL BREF, which evaluates physical health, psychological well-being, social relationships, and environmental domains (WHO, 2012), with mean scores interpreted as ≤45 = low, 46–65 = moderate, and >65 = high QoL (Kalra et al., 2022). The third section measured coping orientations using the Brief COPE Inventory, capturing problem-focused, emotion-focused, and avoidant strategies, where higher scores indicate greater coping engagement (Carver, 1997).

Content validity was established through review by three experts in nursing research and clinical practice, resulting in a Scale Content Validity Index (S CVI) of 0.94. Pilot testing involved 14 nurses who met the inclusion criteria but were excluded from the final sample. Internal consistency was evaluated using Cronbach's alpha, with coefficients demonstrating acceptable reliability for the WHOQOL BREF (α = 0.800), the Brief COPE Inventory (α = 0.837), and the combined instrument (α = 0.729), which meets standards for social and health science research.

Data Gathering Procedure

Data were gathered using a hybrid distribution strategy, combining on-site coordination with electronic survey administration. To ensure the instrument's validity, it underwent a formal review by a panel of three experts. This was followed by a pilot study among 14 healthcare BPO nurses outside the target locale to evaluate the tool's feasibility. Internal consistency was confirmed using Cronbach's alpha, which yielded coefficients indicating high organizational reliability.

Upon obtaining institutional ethical clearance, formal recruitment began by contacting healthcare BPO firms via official electronic correspondence, supplemented by telephonic follow-ups and on-site visits. Access to eligible participants was facilitated by organizational gatekeepers, such as Human Resources and Team Leads, who assisted in identifying nurses meeting the inclusion criteria. The research instrument—comprising the informed consent form and the survey—was distributed via secure web-based links and Quick Response (QR) codes to accommodate the digital workflow of the BPO environment.

The data collection phase spanned three months; this window was strategically extended to mitigate a low initial response rate and ensure a robust sample size. Throughout the process, participation remained strictly voluntary, with stringent protocols enforced to guarantee respondent anonymity and data confidentiality.

Data Collection and Analysis

Following data collection, raw responses were systematically cleaned, coded, and organized for statistical processing. Microsoft Excel was utilized to generate descriptive statistics (frequencies, percentages, means, and standard deviations) to profile participant demographics and establish baseline scores for Quality of Life (QoL) and coping orientations.

To address the core research objective, Spearman's Rank Correlation Coefficient (ρ) was employed as the inferential statistical tool. This non-parametric test evaluated the strength and direction of the relationship between perceived QoL and specific coping strategies. Throughout the analysis, data integrity was maintained through strict confidentiality protocols, ensuring all procedures adhered to established ethical standards to minimize bias and validate the findings.

Ethical Consideration

Prior to participation, respondents were fully apprised of the study's objectives, procedures, potential benefits, and ethical safeguards. Electronic Informed Consent (EIC) was obtained from all participants, explicitly detailing the voluntary nature of the study and the right to withdraw at any point without prejudice or impact on their professional standing. To ensure absolute anonymity, no personally identifiable information (PII), such as names or specific organizational affiliations, was collected at any stage of the research.

The study strictly adhered to the Data Privacy Act of 2012 (RA 10173). Data were managed through a system of anonymized coding and stored in encrypted, password-protected files accessible only to the primary research team. In accordance with data sovereignty principles, raw data were retained only for the duration

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of the statistical analysis and were subsequently subjected to permanent digital deletion. Confidentiality was rigorously maintained, with a guarantee that no individual or aggregate data would be disclosed to employers or third-party entities. The research posed minimal risk to participants, and all protocols were designed to prioritize participant welfare and the ethical dissemination of findings.

III. Results

This chapter presents the quantitative analysis of 138 nurses who transitioned from bedside practice to healthcare BPO roles, focusing on demographic data, quality of life, coping orientations, and their interrelationships.

Demographic Profile of the Respondents

Table 1
Demographic Profile

	f (n=138)	Percentage (%)
Sex		
Male	51	37.00
Female	87	63.00
Age		
25 to 40 years old	118	85.50
41 to 45 years old	20	14.50
Years of Hospital Experience		
3 years	29	21.00
3.1. to 5 years	48	34.80
5 years and above	61	44.20
Yeas in BPO		
Less than a year	45	32.60
1.1 to 6 years	71	51.40
7 to 10 years	16	11.60
10 years and above	6	4.30
Job Position		
Clinical Coding and Quality Service	15	10.90
Medial Claims Processing and Analyst	83	60.10
Healthcare Advising and Training	40	29.00

The findings suggest that the respondents were largely composed of young (85.50%) to early middle-aged professionals (14.50%), with a predominance of females (63%), reflecting the common demographic trend in the nursing workforce (Masibo et al., 2024). However, the data suggests that sex does not create a significant divide in QoL and coping strategies based on the mean scores from the succeeding tables, suggesting that both groups experienced comparable levels of QoL and utilized similar coping strategies. The workplace psychosocial support and environment are usually the most significant predictors of well-being, rather than sex. This overcomes sex differences in coping, leading both male and female nurses to utilize similar problem-focused strategies (Castillejos et al., 2025). Most participants had already accumulated several years of hospital experience before transitioning, indicating that the shift to the healthcare BPO sector was not primarily made by newly licensed nurses but by individuals with established clinical exposure and competence. This is further supported by the distribution based on Benner's Stages of Clinical Competence, where a large portion of respondents were categorized as proficient (34.80%) to expert (44.20%), implying that many had developed strong clinical skills prior to leaving bedside practice. This strong clinical skill suggests that nurses with deeper hospital experience and nurses who developed professionalism, resilience and coping capacity transition more effectively by applying established problem-solving skills to BPO-related stressors (Kim & Chang, 2022). Hence, this clinical foundation significantly strengthens the correlation between their coping orientation and overall QoL.

In addition, the years of experience in the BPO setting show that many respondents were still in the early (32.60%) to mid-stage (51.40%) of adjustment in their new roles, suggesting an ongoing workforce transition from hospital-based practice to corporate healthcare work. The dominance of medical claims processing and analyst roles (60.10%) also indicates that healthcare BPO positions largely demand accuracy, analytical skills, and familiarity with clinical concepts, while the presence of advising and training roles (29.00%) and clinical coding and quality service roles (10.90%), suggests that professional growth and leadership opportunities are also available within the sector.

The Quality of Life

Table 2
The Quality of Life among Transitioned Respondents

	Mean	SD
General Question	85.68	13.13
Physical Health	72.51	14.63
Environmental Health	87.18	10.97
Psychological Health	80.55	10.41
Social Relationships	86.59	14.71
Overall	**82.50**	**11.04**

Note: Domain scores are transformed into a scale from 0 to 100, where higher scores indicate better quality of life.

The results indicate that nurses who transitioned from bedside practice to BPO-related roles generally experience an improved quality of life, particularly in non-physical aspects of well-being. The environmental domain yielded the highest mean (M = 87.18), suggesting that structured work schedules, safer work environments, and greater access to organizational resources contribute to stability and support in daily living. These conditions appear to promote better psychological adjustment and sustained social functioning (Baldueza, 2023; Candelario et al., 2024).

Social relationships (M = 86.59) and psychological health (M = 80.55) also emerged as key strengths, reflecting reduced exposure to high-acuity clinical stressors and improved work–life balance. These factors likely enhance emotional stability, self-worth, and interpersonal relationships, while consistent routines and supportive workplace environments help nurses maintain meaningful social connections and adapt effectively to their new professional roles (WHO, 2012; Alzoubi et al., 2021).

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Despite these positive outcomes, the physical domain (M = 72.51) appears more vulnerable, scoring lowest among all categories. This reflects a significant occupational shift in physical demands; while bedside nursing is characterized by an "active, on-your-feet" nature involving high-intensity labor—such as lifting patients, frequent ambulation, and prolonged standing—BPO roles introduce a sedentary workflow. This transition replaces acute musculoskeletal exhaustion with chronic sedentary stressors, including repetitive strain, back pain, and eye fatigue from prolonged screen exposure. Furthermore, the data indicates that shift timing is a critical factor, as many respondents work "graveyard" shifts to align with international time zones. This nocturnal schedule is negatively correlated with physical well-being due to disrupted circadian rhythms and restorative sleep deficits (Kim & Chang, 2022).

Overall, while the findings highlight that career transition to BPO roles is associated with enhanced environmental, social, and psychological quality of life, the sedentary nature and night-shift requirements create unique physical vulnerabilities. Consequently, targeted strategies such as ergonomic interventions and sleep-hygiene programs are necessary to address these emerging physical health concerns.

The Coping Orientation

Table 3
The Coping Orientation Among Transitioned Respondents

	Mean	**SD**
Problem – focused Coping	3.35	.61
Emotion – focused Coping	3.01	.51
Avoiding Coping	1.81	.54
Overall	**2.72**	**.47**

Note: Continuous and descriptive scoring, where higher scores indicate greater engagement with a coping strategy

Table 3 shows the coping orientations utilized by transitioned nurses, revealing a clear hierarchy of adaptive strategies. Problem-focused coping had the highest mean (M = 3.35), indicating a frequent and proactive reliance on planning, systematic problem-solving, and active support-seeking. This finding suggests that the participants leverage their clinical background—a field defined by critical thinking and rapid intervention—to navigate the stressors of the BPO transition. Research consistently indicates that such task-oriented strategies are associated with superior well-being outcomes and long-term resilience (Weeratunga et al., 2022). Emotion-focused coping was the second most utilized strategy (M = 3.01), characterized by acceptance, emotional support, and cognitive reframing. While these methods focus on internal regulation rather than external change, they serve as a critical psychological buffer. As noted by Puia et al. (2025), emotion-focused responses are indispensable for maintaining psychological adjustment in corporate environments where certain systemic stressors cannot be directly altered. In contrast, avoidant coping yielded the lowest mean (M = 1.81), reflecting a minimal reliance on maladaptive responses such as denial or behavioral disengagement. The low frequency of this orientation is a positive indicator of the sample's psychological health, as avoidance is traditionally linked to higher distress and poor professional adjustment (Sivadasan & Buyan, 2025). Statistically, the relatively narrow standard deviations (SD = 0.51 to 0.61) indicate a high degree of consistency across the sample. This suggests a homogeneity in coping patterns likely forged by the shared professional identity of former bedside nurses. Overall, the data demonstrates that this cohort maintains a sophisticated "coping toolkit," prioritizing healthy, adaptive strategies over disengagement, which likely facilitates their successful integration into the healthcare BPO sector.

The Relationship Between the Quality of Life and Coping Orientation

Table 4
Significant Relationship Between the Quality of Life and the Coping Orientation

	Correlation Coefficient	**p-value**	**Decision**	**Result**
General Question				
Problem-focused Coping	.670**	<.001	Reject Ho	Significant
Emotion-focused Coping	.603**	<.001	Reject Ho	Significant
Avoidant Coping	.215*	.011	Reject Ho	Significant
Physical Health				
Problem-focused Coping	.755**	<.001	Reject Ho	Significant
Emotion-focused Coping	.660**	<.001	Reject Ho	Significant
Avoidant Coping	.172**	.005	Reject Ho	Significant
Environmental Health				
Problem-focused Coping	.639**	<.001	Reject Ho	Significant
Emotion-focused Coping	.599**	<.001	Reject Ho	Significant
Avoidant Coping	.171**	.046	Reject Ho	Significant
Psychological Health				
Problem-focused Coping	.606**	<.001	Reject Ho	Significant
Emotion-focused Coping	.460**	<.001	Reject Ho	Significant
Avoidant Coping	-.017	.841	Failed to reject Ho	Not Significant
Social Relationships				
Problem-focused Coping	.742**	<.001	Reject Ho	Significant
Emotion-focused Coping	.659**	<.001	Reject Ho	Significant
Avoidant Coping	.149	.081	Failed to reject Ho	Not Significant
Overall Correlation	**.681****	**.001**	**Reject Ho**	**Significant**

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The findings show a significant association between overall quality of life (QoL) and coping orientations, with problem focused and emotion focused coping most strongly correlated with higher QoL, consistent with literature indicating that adaptive coping strategies support wellbeing and life satisfaction.

Similar patterns were observed in the physical health domain, reinforcing that adaptive coping can promote healthier behaviors and reduce strain, while maladaptive strategies tend to relate to poorer outcomes (Melocoton, 2024). In the environmental domain, all coping orientations correlated with QoL, suggesting that contextual factors—such as access to resources and work conditions—shape coping responses in supportive environments (Park & Lee, 2023).

Psychological health was significantly associated with adaptive coping but not with avoidant coping, indicating that active strategies better bolster emotional resilience. In the social domain, problem focused and emotion focused coping correlated with positive social functioning, whereas avoidant coping did not, likely due to its association with withdrawal. Nurses in BPO roles often highlight improved social connections through stable schedules and supportive peer networks, compared to the isolating effects of avoidant coping in bedside settings (Ruiz-Fernandez et al., 2021).

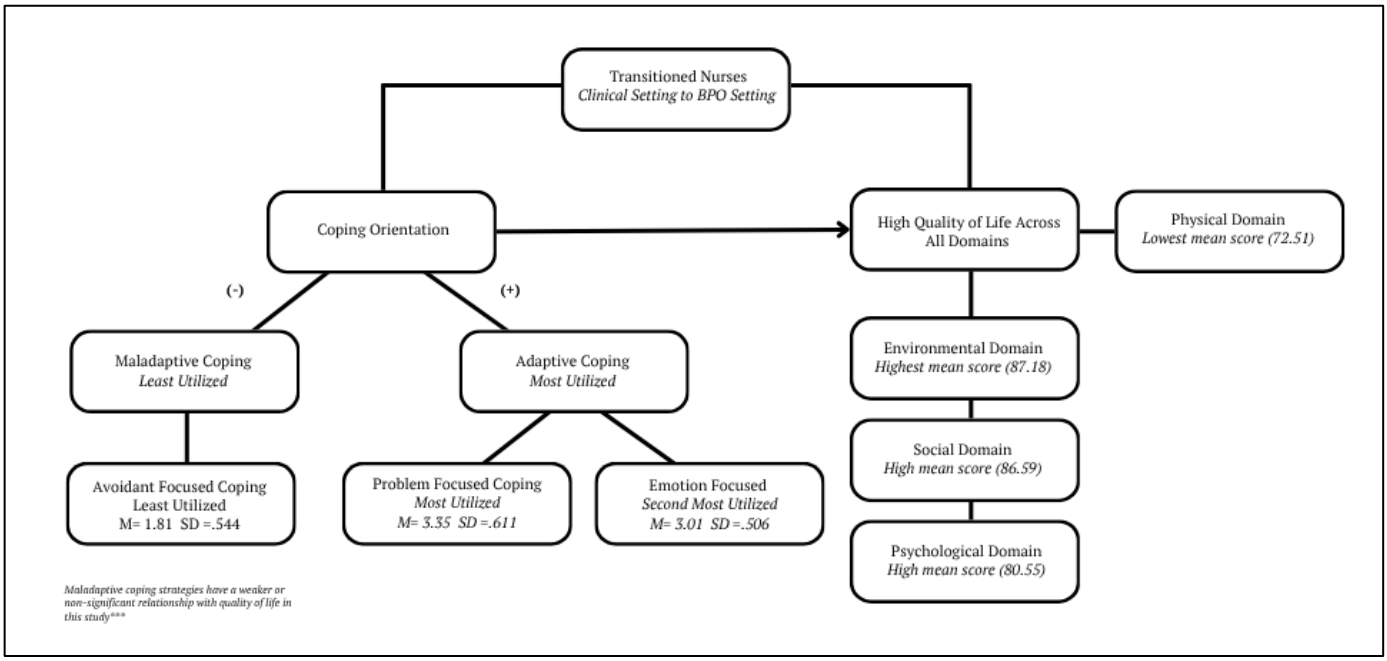
Overall, higher QoL is linked with greater use of adaptive coping strategies and minimal reliance on avoidance among BPO nurses working in Metro Manila.

Reflexibility

As student nurses, our interest in exploring nursing roles beyond traditional hospital settings guided the development of this study. Through our clinical experiences, we identified concerns regarding nurses' quality of life in both hospital and alternative care environments. While we are not yet licensed professionals, these observations motivated us to examine how nurses in both conventional and non-traditional roles manage their well-being. We believe that assessing nurses' quality of life and coping strategies can inform the creation of improved workplace policies, educational programs on coping, and healthier work environments that support work–life balance. We approached this study as both investigators and future professionals dedicated to advancing nursing practice. We acknowledge our assumption that non-traditional nursing pathways may offer professional fulfillment but also introduce distinct stressors and identity-related challenges.

During data collection, we prioritized participants as central to the study and made deliberate efforts to minimize personal bias. We provided comprehensive information, obtained informed consent, and emphasized both the voluntary nature of participation and the confidentiality of responses. Coordination was challenging due to time differences, night shifts, and remote work arrangements. To address these challenges, we utilized respectful online communication, email correspondence, and collaboration with company representatives in Metro Manila BPOs to distribute questionnaires. We applied inclusion criteria consistently and monitored participation through regular updates with team leaders. For data analysis, responses were systematically encoded and maintained confidentially within the research group. Participants who did not meet the criteria were excluded. To further reduce bias, we engaged in peer debriefing and cross-checked results, thereby enhancing the study's credibility and trustworthiness.

Figure 2
The Quality of Life and Coping Orientations of BPO Nurses



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IV. Conclusion

This study examined the quality of life and coping orientation of nurses who transitioned from bedside practice to healthcare-related BPO roles in Metro Manila, revealing generally high quality of life across domains, with Environmental Health scoring highest and Physical Health lowest. Respondents predominantly employed adaptive coping strategies—particularly problem-focused and emotion-focused approaches—which were significantly associated with better quality of life outcomes. The prominence of Environmental Health highlights the decisive role of workplace conditions, indicating that structured schedules, reduced exposure to occupational hazards, and supportive organizational environments in BPO settings substantially contribute to improved well-being. For hospital administrators, these findings translate into concrete retention strategies, including the adoption of more predictable and flexible scheduling systems, reinforcement of workplace safety protocols, minimization of workload-related risks, and expansion of organizational support mechanisms. These results suggest that retention efforts should extend beyond compensation and prioritize the creation of stable, safe, and supportive work environments that foster work–life balance.

At the policy level, the findings underscore the need for enforceable measures such as safe staffing ratios, regulated working hours, and strengthened occupational health protections to address the ongoing migration of nurses to non-clinical sectors. From a workforce planning perspective, aligning hospital environments with these conditions may enhance retention and sustain healthcare system capacity. The relatively lower Physical Health scores further indicate the importance of implementing comprehensive wellness programs that address both physical and psychosocial needs across practice settings. In nursing education, integrating resilience-building, adaptive coping strategies, and career pathway awareness into curricula can better prepare nurses for diverse and evolving roles. Overall, improving nurses' quality of life requires coordinated environmental, organizational, and policy-level interventions to strengthen retention, enhance job satisfaction, and support long-term workforce sustainability.

V. Recommendation

Based on these findings, the researchers proposed initiatives to improve the quality of life of BPO nurses:

For BPO Companies

The study highlights that the physical domain of quality of life was the lowest among BPO nurses despite the ergonomic office environment. In light of this, BPO institutions may consider exploring initiatives that improve the physical health, such as implementing sleep-friendly policies, educating night-shift workers on circadian rhythm management, and offering a sleep hygiene program (Lim & Kim, 2025). The researchers suggest innovative measures that support the physical well-being of nurses, such as a physical fitness incentive program promoting activities like strength training, yoga, and Zumba (Barranco-Ruiz & Villa-González, 2020). As coping strategies influence quality of life outcomes, organizations may benefit from supporting the nurses' physical, mental, and emotional well-being through integrating health education and strength-training activities and establishing structured onboarding programs that could help transitioned nurses adapt more effectively, supporting retention (Muñoz et al., 2025). Further, regular use of tools like WHOQOL-BREF and Brief COPE allows healthcare BPOs to monitor nurses' quality of life and coping, enabling early intervention when well-being declines.

For Nursing Education

The study shows that nurses transitioning to BPO roles generally utilize problem-focused and emotion-focused coping strategies, which are associated with better coping and quality of life. In this context, nursing education programs may consider strengthening the integration of resilience and coping skills within the curriculum (Aryuwat, 2022). Rather than focusing solely on bedside competencies, academic institutions could introduce broader careers that reflect emerging nursing roles, including those in non-clinical and BPO settings.

For Nursing Research

The study encourages future research using qualitative methods to explore nurses' lived experiences before and after transitioning from bedside to BPO roles. Such approaches can provide deeper insights into their motivations and stressors. Additionally, the researchers suggest conducting comparative studies examining differences in quality of life and coping strategies between bedside and BPO nurses, which could further clarify factors influencing turnover and guide institutions in developing retention strategies and improving work conditions (Yamamoto et al., 2024).

Contribution of Authors

The authors contributed through a structured and collaborative division of responsibilities. Lauren Dale G. Paras prepared the abstract, and Jarrell Maisie C. Sanchez wrote the introduction. Kelly Anne G. Pineda and Frances F. Ramos developed the methodology, and all members participated in the literature review. Cheslia Ann C. Perez, Lois Francesca J. Perez, Dianne Dominique Paraton, and Katrina Nicole S. Santos compiled the results and discussion. Redz Joshua D. Reyes wrote the conclusion, and Ellysa Faye B. Roxas drafted the recommendations.

All members participated in data collection during company visits. Frances F. Ramos secured ethical and institutional approvals, and reviewed and revised the manuscript. Resty P. Anibigno, MSN, oversaw and coordinated the study. Collectively, these contributions ensured the integrity, coherence, and successful completion of the research.

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Conflict of Interest

The authors declare that they have no known financial interests or personal relationships that could have influenced the conduct of this research or the integrity of its reported results.

Disclosure of Use of Generative AI

The authors used Grammarly and QuillBot for grammar checking, academic writing, and paraphrasing. Authors verified the publication and content and revised all the necessary aspects. Moreover, the authors of this publication take full responsibility for the content of this publication.

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RESEARCH ARTICLE

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The Relationship Between Social Media Attitude and Ethical Sensitivity of Student Nurses

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ABSTRACT

Introduction: Social media plays a vital role in student nurses' academic and personal lives, influencing communication, learning, and professional identity. As future healthcare professionals, they must demonstrate ethical sensitivity in both clinical and online settings.

Aim: This study aimed to assess student nurses' attitudes toward social media, their ethical sensitivity, and the relationship between the two variables.

Methods: A descriptive-correlational design was used with 384 student nurses from three universities in Baguio City. Data collection was approved by the SLU Research Ethics Committee and coordinated with institutional offices. The Responsible Use of Social Media Attitude Scale (RUSMAS) and Ethical Sensitivity Questionnaire (ESQ) were utilized. Data were analyzed using descriptive and inferential statistics.

Results: Respondents showed positive attitudes toward social media ($\bar{x}$ = 55.97) and high ethical sensitivity ($\bar{x}$=127.48). A weak but statistically significant positive correlation (r = 0.2851) was found, indicating that student nurses with more responsible social media behavior tended to exhibit higher ethical sensitivity.

Conclusion: Student nurses demonstrate both high ethical sensitivity and positive attitudes toward responsible social media use. However, a positive attitude alone may not strongly determine ethical sensitivity.

Keywords: *digital professionalism, ethical sensitivity, ethics education, social media attitude, student nurses*

I. Introduction

In today's digital age, social media is crucial in education and professional development, particularly for students. With over 5.22 billion users worldwide (Petrosyan, 2025) and 86.75 million in the Philippines (Howe, 2024), platforms like Facebook, Instagram, X, TikTok, and Messenger facilitate communication, networking, academic collaboration, and information access, but also raise concerns about professionalism, privacy, and ethics. Understanding how student nurses engage with these platforms, particularly regarding social media attitudes, is essential.

Social media attitude refers to emotional, cognitive, and behavioral stances toward platform use, including responsible conduct, patient confidentiality, misinformation avoidance, and adherence to professional standards (Geraghty, 2021; Oducado et al., 2019). In this study, it relates to ethical and professional use aligned with the Nursing Code of Ethics, measured via the Responsible Use of Social Media Attitude Scale (RUSMAS). Evidence shows student nurses generally exhibit responsible but varied attitudes. Some use social media for academic collaboration and knowledge sharing (Eraydin et al., 2021), while others are cautious due to privacy and professionalism concerns (O'Connor et al., 2022). Most students follow guidelines, avoid offensive or confidential content, reject unknown contacts, and recognize benefits like improved communication and stress management (Al-Shdayfat et al., 2018; Eraydin et al., 2021; O'Connor et al., 2022; Oducado et al., 2019), though trust in online information remains low (Eraydin & Hut, 2021).

However, awareness of digital professionalism does not fully prevent unprofessional behavior. Ethical lapses, such as posting inappropriate content or violating patient confidentiality, persist, with 13.8% admitting to improper posts and 22.9% reporting exposure to peers' unprofessional posts (De Gagne et al., 2019; Zhu et al., 2020). These risks include patient privacy breaches, misinformation, and blurred professional boundaries (Keller et al., 2022; Terzi et al., 2017). Policies such as the American Medical Association (AMA) guidelines, American College of Physicians–Federation of State Medical Boards (ACP-

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FSMB) recommendations, and the Health Insurance Portability and Accountability Act (HIPAA) establish standards for professionalism and confidentiality (Kanchan & Gaidhane, 2023; U.S. Department of Health & Human Services, 2022), yet unprofessional online behaviors still persist. Similar concerns are reported in Asia (Marnocha et al., 2021; Wang et al., 2019) and in the Philippines, where weak enforcement of Republic Act 10173, the Data Privacy Act of 2012, and limited privacy awareness have contributed to breaches, including a viral case of a student sharing a flatlining monitor video (Antonio et al., 2016; Basa, 2024).

These challenges underscore the importance of ethical sensitivity, defined as the ability to recognize ethical issues and respond appropriately, forming the basis for ethical decision-making (Meng & Xu, 2025; Yılmaz & Güven, 2025). It involves respecting patient dignity, prioritizing individual needs, and delivering compassionate, patient-centered care. Higher ethical sensitivity correlates with stronger adherence to professional standards, while lower levels may lead to unprofessional conduct. Ethics education, clinical exposure, and targeted training can enhance sensitivity (Demiray et al., 2019; Shayestehfard et al., 2020; Tahmasbi & Alavi, 2023), yet gaps often remain between knowledge and behavior in real-world and digital contexts.

Nonetheless, the relationship between social media attitudes and ethical sensitivity among student nurses remains underexplored. Most studies examine these variables separately and are limited geographically. In the Philippine context, particularly in Baguio City, research investigating their interaction is lacking despite high social media usage and rising ethical concerns.

To address these gaps, the present study aims to determine the relationship between social media attitude and ethical sensitivity among student nurses in Baguio City. Specifically, it seeks to assess (1) the social media attitude of student nurses, (2) their level of ethical sensitivity, and (3) the relationship between social media attitude and ethical sensitivity of student nurses. By examining this relationship, the study provides evidence that may inform ethics education, institutional guidelines, and strategies that promote responsible digital engagement in nursing education.

II. Methods

Research Design

This study utilized a quantitative descriptive-correlational design to determine the levels of social media attitude and ethical sensitivity among student nurses and to determine the relationship between these variables. The design was selected because it allows examination of relationships among variables without experimental manipulation.

Participants and Sampling

The study targeted Level 1 to Level 4 student nurses enrolled in the Academic Year 2024–2025 from three randomly selected nursing schools in Baguio City, referred to as School A, School B, and School C. Eligible respondents were those actively using at least one social media platform (Facebook, Instagram, TikTok, Messenger, or X) while those excluded were second-course takers and returning students to ensure a more homogeneous sample in terms of academic progression and exposure to nursing education, which may influence ethical sensitivity and social media attitudes.

Respondents were informed about the study's purpose and criteria, encouraged to self-assess eligibility, and asked to decline or notify the researchers if ineligible.

The sample size was determined using Slovin's formula with a 5% margin of error, yielding a total of 384 respondents. To ensure balanced representation, 128 respondents were selected from each university using stratified disproportionate sampling with equal allocation, regardless of variations in population size. Stratification was done first by university and then by year level, and specific blocks were randomly selected through a draw-lots method.

Data Gathering Tools

The study used two adapted instruments—the Ethical Sensitivity Questionnaire (ESQ) and the Responsible Use of Social Media Attitude Scale (RUSMAS)—tailored for the Philippine context. The ESQ (Kim & Joung, 2019) is a multidimensional tool that includes 34 items across eight subdomains: respect for patients (5 items), professional ethics (6), responsibility in nursing tasks (6), willingness to act benevolently (5), ethical reflection (3), ethical burden (3), awareness of ethical situations (3), and empathy (3), rated on a 4-point Likert scale (1 = "not at all true" to 4 = "very true"), with total scores classified as low (1.00 – 45.32), moderate (45.33 – 90.65), or high (90.66 – 136.00). The RUSMAS (Oducado et al., 2019) is a 16-item unidimensional scale assessing attitudes toward ethical social media behavior—professionalism, confidentiality, and responsible posting—rated on a 4-point Likert scale, with reverse scoring for items 1, 6 – 11; mean scores are interpreted as negative (1.00 – 20.00), ambivalent (21.00 – 41.00), or positive (42.00 – 64.00). Both instruments were reviewed by three experts in nursing, ethics, and behavioral science, with CVI scores of 0.94, 0.91, and 0.88 for the ESQ and 1.00, 0.78, and 1.00 for the RUSMAS.

Data Gathering Procedure

Data collection began after ethical clearance from the Saint Louis University Research Ethics Committee. Formal permission was obtained from the deans of Schools A, B, and C.

Randomly selected blocks were identified via draw lots, and class schedules coordinated for administration.

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Brief orientations explained the study purpose, inclusion criteria, voluntary participation, confidentiality, and respondent rights. Eligible participants completed the combined consent form and questionnaire with researchers available for guidance. All paper-based surveys were personally collected from March 3–15, 2025, each taking 15–20 minutes.

Upon collection, responses were reviewed for completeness and consistency. The data were manually encoded into Microsoft Excel and subsequently transferred to statistical software for analysis. To ensure data quality, procedures such as checking for missing values, duplicate entries, and encoding errors were performed. Data cleaning and verification were conducted prior to analysis to minimize inaccuracies and ensure the integrity of the dataset. Coordination with institutional representatives was maintained throughout the process to facilitate efficient and organized data gathering.

Data Collection and Analysis

Data analysis employed both descriptive and inferential statistics using STATA software to address the study objectives. For the first objective, frequencies, percentages, and mean scores were used to describe student nurses' attitudes toward social media based on the Responsible Use of Social Media Attitude Scale (RUSMAS), with results presented in tabular form. For the second objective, similar descriptive statistics summarized the level of ethical sensitivity using the Ethical Sensitivity Questionnaire (ESQ), with mean scores and distributions likewise presented in tables.

For the third objective, which determines the relationship between ethical sensitivity and social media attitude, Pearson's correlation coefficient was used to measure the strength and direction of the linear relationship between the two variables. Since both social media attitude and ethical sensitivity were measured on interval or ratio scales, Pearson's correlation was deemed the appropriate method for this analysis. The correlation was computed for the entire sample, and its significance was evaluated using a two-tailed test with a significance level set at 0.05. A p-value less than .05 was considered statistically significant, indicating a meaningful relationship between the two variables.

Ethical Consideration

This study adhered to core ethical principles to ensure participant protection and research integrity. Justice was ensured through stratified random sampling for fair representation, while respect for autonomy was maintained through informed consent and the right to withdraw without penalty. Guided by beneficence, nonmaleficence, and fidelity, risks were minimized by scheduling convenient data collection and ensuring transparency throughout the process.

Privacy and confidentiality were strictly observed; consent forms were kept separate from questionnaires, and all data were encrypted, securely stored, and accessed only by authorized personnel. In compliance with the Republic Act 10173 (Data Privacy Act of 2012), all personal information was processed lawfully and used solely for research purposes. Findings will be disseminated responsibly to participants and the academic community through presentations and potential publication.

III. RESULTS

Social Media Attitude of Student Nurses

Table

Frequency and percentage of respondents in terms of Social Media Attitude

Social Media Attitude Score	*f*	%
Negative	0	0.00
Ambivalent	1	0.26
Positive	383	99.74
Total	**384**	**100.00**
x̄	**55.97**	**Positive Social Media Attitude**

Legend:
Negative SMA = 1 – 20
Ambivalent SMA = 21 – 41
Positive SMA = 42 – 64

The overall social media attitude score indicates that student nurses have a positive attitude toward social media, recognizing its role in both education and professional development. High scores on the Responsible Use of Social Media Attitude Scale reflect awareness of ethical principles and deliberate efforts to preserve professional integrity, suggesting that students are mindful of how online conduct shapes both professional reputation and the image of the nursing profession. However, one respondent expressed ambivalence, indicating that maintaining consistent ethical discipline in digital environments remains challenging for some students.

Despite the overall positive trend, one respondent displayed ambivalence, suggesting uncertainty in maintaining ethical behavior online. This supports Daigle's (2020) view that blurred boundaries between personal and professional identities in social media can lead to conflicting or inconsistent conduct. While students may know what is ethical, applying that knowledge in digital contexts remains a challenge.

These findings align with prior studies highlighting student nurses' awareness of social media's professional implications. O'Connor et al. (2022) emphasized recognition of professional boundaries online, while Oducado et al. (2019), Al-Shdayfat (2018), and Alharbi et al. (2022) reported positive perceptions of social media's academic and professional value, noting that responsible use strengthens professional identity through reflection, peer interaction, and advocacy. This positive attitude can be explained by Ajzen's Theory of Planned Behavior (1991), which emphasizes attitudes, subjective norms, and perceived behavioral control: students recognize social media's professional value, are guided by social norms, and are aware of confidentiality and professionalism, though challenges

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remain in applying these principles. Overall, these attitudes align with digital conduct expectations and nursing's ethical values; however, awareness alone does not ensure ethical practice (Zhu et al., 2020), highlighting the need for reinforced education, role models, and clear guidelines. Integrating digital professionalism into nursing curricula, as recommended by the ICN Code of Ethics for Nurses (2021), can strengthen professional identity and accountability while minimizing risks to professional reputation (Kohanová, 2025).

Social Media Attitude of Student Nurses

Table 2
Frequency and percentage distribution of respondents in terms of Ethical Sensitivity

Level of Ethical Sensitivity	*f*	%
Low	0	0.00
Moderate	0	0.00
High	384	100.00
Total	384	100.00
x̄	**127.48**	**High Ethical Sensitivity**

Legend:
Low Ethical Sensitivity = 1.00-2.33
Moderate Ethical Sensitivity = 2.34-3.66
High Ethical Sensitivity = 3.67-5.00

The findings show that student nurses have a strong level of ethical sensitivity, indicating a well-developed awareness of ethical principles in nursing practice. Respondents demonstrated attentiveness, respect for patients, professional responsibility, ethical reflection, empathy, and sensitivity to ethical issues in clinical settings. However, ethical sensitivity varies across domains, as students may struggle to meet the emotional demands of complex ethical dilemmas. Such ethical awareness positions student nurses to engage thoughtfully with complex ethical decision-making as they transition into professional roles.

These findings are consistent with studies reporting high ethical sensitivity among student nurses. Hu et al. (2024) and Cevheroğlu (2024) documented strong ethical awareness among student nurses. Chen et al. (2021) found that higher ethical sensitivity was associated with stronger commitments to patient rights, confidentiality, and empathetic care. In contrast, moderate levels of ethical sensitivity have been reported among early-stage student nurses.

Alnajjar and Abou Hashish (2021) identified gaps in ethical behaviors such as academic dishonesty, while Albert et al. (2020) found that first-semester student nurses exhibited limited ethical knowledge. These variations highlight the influence of educational exposure and clinical experience on ethical development.

Interpreted through Ajzen's Theory of Planned Behavior (1991), these findings suggest that student nurses possess positive attitudes toward ethical practice and internalized professional norms reinforced through nursing education. Chen et al. (2021) further suggest that while ethical awareness is high, it does not always translate into ethical action, particularly in emotionally demanding or institutionally constrained situations. This underscores the importance of strengthening perceived behavioral control through continuous ethics education, reflective practice, and supportive learning environments. The results emphasize that ethical sensitivity is a dynamic construct shaped by theoretical instruction and clinical exposure. While student nurses appear to have a strong ethical foundation, ongoing reinforcement through case-based learning, mentorship, and ethical reflection is essential to ensure that ethical awareness is consistently applied in clinical practice.

Relationship Between Social Media Attitude and Ethical Sensitivity of Student Nurses

Table 3
Relationship between Social Medial Attitude and Ethical Sensitivity

	r	*p*	Interpretation
Social Media Attitude and Ethical Sensitivity	0.29	<001	Weak positive linear correlation; Significant

Legend:
Weak Correlation = 0.10 – 0.29
Moderate Correlation = 2.34-3.66
Strong Correlation = 3.67-5.00

The weak positive linear relationship suggests that while social media attitude and ethical sensitivity increase together, the strength of this association is modest. The weak positive correlation suggests that while student nurses with more responsible social media attitudes tend to exhibit higher ethical sensitivity, the relationship is modest. This indicates that social media attitude contributes only minimally to ethical sensitivity and is not a strong determining factor. Nonetheless, the computed p-value ($p < .001$) confirms that the relationship is statistically significant, wherein it is consistent and meaningful across the sample. This implies that student nurses' perceptions and engagement with social media are reliably associated with their ethical awareness, though the influence remains limited. According to Pearson's interpretation, coefficients between 0 and 0.4 fall within the weak range (Nickolas, 2024). This result aligns with Oducado (2019), who reported a similar weak correlation, while Eraydin and Hut (2021) found stronger associations when ethics training was integrated. Other studies likewise stress that social media can either support or hinder ethical practice depending on its use (Terzi et al., 2019), and that even weak but consistent correlations may hold practical significance.

These findings indicate that ethical sensitivity in student nurses is influenced by multiple factors beyond social media, including personal values, education, institutional culture, and clinical exposure. This suggests that improving social media attitudes alone may not significantly enhance ethical sensitivity, which is shaped by broader factors, requiring comprehensive educational strategies integrating ethics training, clinical exposure, and value formation. Responsible

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social media use may support ethical awareness but is insufficient alone to determine ethical sensitivity. While social media offers educational benefits, it also poses risks such as breaches of confidentiality and weakened professional boundaries (Kohonová et al., 2025). Likewise, variability in perceptions of digital professionalism shows that some students still consider unprofessional online behaviors acceptable (O'Connor et al., 2022). Overall, positive social media attitudes do not necessarily translate to higher ethical sensitivity.

Based on Ajzen's Theory of Planned Behavior (1991), behavior is shaped not only by attitudes but also by subjective norms and perceived behavioral control, highlighting the need for reinforcement from educators, peers, and institutions. These findings suggest integrating digital professionalism into nursing curricula through reflective and collaborative learning (Acil et al., 2024), strengthening accountability in clinical practice, and encouraging further longitudinal research on how social media engagement influences ethical development over time.

Limitation of the Study

While this study offers insights for improving nursing education and responsible digital behavior, several limitations exist. It did not assess current curricula on digital professionalism, evaluate the effectiveness of existing educational interventions, or account for other factors, such as demographic, personal, and social factors, that may influence ethical online behavior, as reflected in the weak correlation between social media attitude and ethical sensitivity.

IV. Conclusion

This study examined student nurses' social media attitude, their ethical sensitivity, and the relationship between these factors. Findings revealed that student nurses generally exhibit a positive social media attitude alongside a high level of ethical sensitivity. A weak but statistically significant positive correlation ($r = 0.29$, $p < .001$) indicates that higher SMA scores are associated with greater ethical sensitivity, though the modest strength of this link does not support causal claims. This suggests that while digital attitudes contribute to ethical development, they do not determine it entirely; ethical sensitivity is also shaped by personal values, clinical exposure, and institutional culture. These results underscore the importance of integrating social media responsibility into nursing education and professional development. Policies, curricula, and reflective practices should collectively promote professionalism and ethical standards across both clinical and digital contexts

V. Recommendation

Given that student nurses already demonstrate positive attitudes toward social media, nursing programs should build on this foundation by promoting ethical and professional online behavior. Curricula must emphasize patient confidentiality, responsible communication, and alignment with healthcare standards to ensure students understand the ethical responsibilities of digital engagement. Considering their high ethical sensitivity, nursing education should further develop this through real-world case studies, role-playing, and discussions centered on social media-related ethical dilemmas to help students apply ethical principles in clinical and online contexts. Although the link between social media attitude and ethical sensitivity is weak but significant, targeted interventions such as workshops and training are recommended to strengthen this connection and encourage responsible social media use. Further research should explore factors influencing this relationship, including academic year levels, demographic factors, personal values, peer influence, and institutional culture, to guide comprehensive strategies for integrating digital professionalism and ethical sensitivity in nursing education and to evaluate the effectiveness of curriculum design, workshops, and training modules in enhancing both ethical sensitivity and responsible social media behavior.

Contribution of Authors

All authors contributed to the research and writing process, participating in conceptualization, methodology, investigation, data analysis, drafting, and revising. Each made significant academic contributions and approved the final manuscript.

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Conflict of Interest

The authors declare that there are no conflicts of interest, financial or personal, that could have influenced the conduct or outcomes of this research.

Disclosure of Use of Generative AI

The researchers utilized QuillBot and Grammarly exclusively for grammatical refinement and clarity, while Turnitin was employed to ensure originality. All revisions were thoroughly reviewed and validated by the researchers. The study—including its design, data collection, analysis, interpretation, and manuscript preparation—was conducted independently, with full

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accountability for the accuracy, integrity, and conclusions of the work.

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End-of-Life Health Literacy and Advance Care Planning Engagement Among Older Adults in Baguio City, Philippines

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ABSTRACT

Introduction: As the Philippines' population ages, deeply ingrained cultural taboos about mortality hinder critical discussions. Evaluating End-of-Life (EoL) health literacy and Advance Care Planning (ACP) engagement is essential to facilitate informed, values-aligned decision-making.

Aim: This study evaluated EoL health literacy and ACP engagement among older adults in Baguio City and examined their correlation.

Methods: his study employed a quantitative, correlational, cross-sectional design involving 260 cognitively intact and literate older adults, recruited via multistage random sampling from 20 barangays in Baguio City. Data were gathered using two validated instruments: the Subjective End-of-Life Health Literacy Scale (S-EOL-HLS), which demonstrated excellent internal consistency ($\alpha = 0.93$), and the Advance Care Planning Questionnaire, which showed strong content validity (S-CVI = 0.96) and reliability (KR20 = 0.82). Descriptive statistics (means) summarized the data, while Spearman's rank correlation was applied to determine the relationship between variables. The protocol received formal ethical clearance from the Saint Louis University Research Ethics Committee (SLU-REC 2024-290).

Results: Older adults in Baguio City exhibited moderate levels of both EoL health literacy ($\bar{x} = 8.77$) and ACP engagement ($\bar{x} = 17.10$). Sub-domain analysis revealed moderate literacy across the functional ($\bar{x} = 2.09$), interactive ($\bar{x} = 3.73$), and critical ($\bar{x} = 2.95$) domains. Furthermore, there was adequate engagement in health-related ACP ($\bar{x} = 6.81$), whereas engagement in relationship ($\bar{x} = 4.12$), legal/financial ($\bar{x} = 3.15$), and funerary ($\bar{x} = 3.02$) domains was moderate. A weak but significant positive correlation was identified between overall EoL health literacy and ACP engagement ($r = 0.229$, $p = 0.0001$).

Conclusion: Although older adults in Baguio City demonstrate moderate EoL health literacy, this knowledge does not robustly translate into active ACP engagement, especially within legal, financial, and funerary domains. These findings underscore that health literacy is a necessary but insufficient prerequisite for action; instead, EoL preparation is a complex behavioral outcome dictated by the intersection of cultural taboos, familial collectivism, and systemic healthcare barriers. To bridge this gap, culturally sensitive, multifaceted strategies are urgently needed to enhance both EoL health literacy and ACP engagement among older Filipinos.

Keywords: e*nd-of-life, health literacy; advance care planning; older adults*

I. INTRODUCTION

The Philippines, with its rapidly aging population (Castillo-Carandang et al., 2020) and deep-rooted traditions (Macaranas, 2021), presents a unique context for exploring end-of-life (EoL) health literacy and advanced care planning (ACP). Despite the country's cultural emphasis on family and care for older adults (Felipe-Dimog et al., 2023), many older adults remain unaware of EoL health literacy and ACP (de Vries et al., 2019).

EoL health literacy, defined as an individual's capacity to comprehend and apply fundamental health information and resources for informed decision-making (Aker et al., 2024), is crucial for older adults. EoL health literacy encompasses knowledge about medical terminology, treatment options, care pathways, and cultural beliefs that influence decisions (Meier et

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al., 2023). This literacy differs from general health literacy, as it involves unique skills needed to navigate the challenges of planning and making EoL decisions, such as handling life-and-death issues, uncertainties, intense emotions, and complex conversations with healthcare providers, often while one's health is declining (Meier et al., 2023).

Meanwhile, ACP, a process of documenting preferences for future healthcare decisions (Xu et al., 2021), ensures that an individual's wishes are respected during severe illness and incapacity. It involves communication among patients, families, and healthcare providers to identify, reflect on, and express values, goals, beliefs, and preferences for EoL care (Simpson, 2012).

In this study, EoL health literacy and ACP engagement are examined through distinct yet interrelated domains to capture a holistic view of EoL preparation. Health literacy was assessed across three domains: functional literacy, which involves basic comprehension of health-related information; interactive literacy, which emphasizes the communication skills required to engage effectively with family and healthcare providers; and critical literacy, defined as the capacity to analyze and evaluate health information for informed decision-making (Aker et al., 2024).

Concurrently, ACP engagement was assessed across four domains that address the individual's medical and personal needs. Health-related ACP involves communicating preferences for life-sustaining treatments, pain management, and medical procedures. Relationship-related ACP focuses on emotional and social legacy, including reconciliation, gratitude, and discussing EoL wishes within personal networks. Legal and financial-related ACP centers on completing advance directives, appointing healthcare proxies, and addressing fiscal concerns. Lastly, funerary-related ACP entails the logistical arrangements for final rites, such as burial or cremation, and the designation of individuals to oversee these processes.

Today, more attention is being placed on improving EoL health literacy. However, barriers such as misconceptions, limited access to information, and fear (Pel-Littel et al., 2021) hinder effective communication and engagement in EoL care decisions. Moreover, while ACP is gaining global traction, research exploring its cultural nuances, particularly within the Filipino context, remains limited (Alampay et al., 2018).

Filipino cultural traditions surrounding death and dying can complicate discussions about ACP. The cultural emphasis on family care (De Fries et al., 2023; Guarin et al., 2022), filial piety (Mamayson, 2025), religious beliefs (Ho et al., 2023), and the taboo nature of death-related topics (Westbye et al., 2023) can hinder open conversations about EoL care. This avoidance of discussion can lead to uncertainty and fear about decision-making, causing many to delay or avoid ACP altogether.

Baguio City, a culturally rich and historic city in the Cordillera Administrative Region, offers a unique opportunity to investigate EoL health literacy and the extent of ACP engagement among older people and establish significant relationships between the two variables. The Cordillerans' strong connection to their ancestors and nature, integral to their spirituality and resilience (Samdao, 2021), shapes a cultural reluctance to discuss death and dying openly. This cultural barrier, coupled with the limited availability of EoL services (Ho et al., 2023), such as hospice and palliative care, contributes to low ACP engagement among older adults in the region.

Due to the cultural complexities and limited research on EoL health literacy and ACP engagement in the Philippines, this study aimed to bridge this knowledge gap by investigating the relationship between these two variables among older adults in Baguio City. By examining knowledge levels and ACP engagement, this study sought to provide a culturally nuanced understanding of ACP in the Philippines.

II. Methods

Research Design

A quantitative, correlational, cross-sectional design was used in this study. This design was the most suitable, as this study aimed to evaluate levels of EoL health literacy and ACP engagement among older adults in Baguio City and to examine their correlation.

Participants and Sampling

Baguio City, with its substantial population of older adults, provided an appropriate setting for this study. The participants were identified through multistage random sampling. They met the inclusion criteria: Filipino citizens aged 60 and older, residents of Baguio City, registered members of barangay senior citizens organizations, able to read and write in English, Tagalog, or Ilokano, and not currently enrolled in similar research studies. Individuals with cognitive impairments, indicated by a score of two or less in the Standardized Mini-Cog© in Tagalog, were excluded to ensure accurate responses to the questionnaire items. Participants with hearing or visual impairments were accommodated through the use of assistive devices and clear communication strategies. The sample size was determined using G*Power version 3.1.9.4 (Faul et al., 2009) for a planned correlation coefficient test with a large effect size of 0.5, an alpha of 0.05, and a statistical power of 95%. An initial sample size of 214 was computed, but 46 additional participants were included to account for potential participant dropouts.

Data Gathering Tools

To ensure participants were cognitively intact, the Standardized Mini-Cog© in Tagalog was utilized. Formal permission for the research use of the Mini-Cog© was obtained from the developer, Dr. Soo

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Borson, to ensure compliance with copyright requirements for this study.

To collect the necessary data, the researchers utilized the Subjective End-of-Life Health Literacy Scale (S-EOL-HLS) developed by Meier et al. (2023) and the Advance Care Planning Questionnaire by Aguilar et al. (2017). The S-EOL-HLS is covered by the Creative Commons Attribution 4.0 International (Creative Commons, n.d.), while the ACP Questionnaire was used after getting permission from the developers.

The S-EOL-HLS is an 18-item self-report measure that assesses participants' self-perceived competencies in EoL care decision-making and ACP skills. All items were rated using a four-point Likert scale. The scale has demonstrated strong psychometric properties, including excellent reliability and validity (CFI = 0.993, TLI = 0.992, RMSEA = 0.083, SRMR = 0.061, Cronbach's alpha = 0.93) (Meier et al., 2023).

The ACP Questionnaire is a 30-item measure that assesses participants' engagement in ACP across four domains: health, relationships, legal and financial, and funerary. Items were rated as "Yes" or "No." The questionnaire has also demonstrated strong psychometric properties, as evidenced by a summative content validity index of 0.96 and a Kuder-Richardson 20 reliability of 0.82 (Aguilar et al., 2017).

To ensure cultural appropriateness, the questionnaires and informed consent forms (ICF) were administered in three languages: English, Filipino, and Ilokano. Language experts conducted translations to maintain the original meaning and intent of the instruments.

Data Gathering Procedure

The process commenced after the study received endorsement from the faculty research promoter and technical panel, followed by formal approval from the Saint Louis University Research Ethics Committee (SLU-REC 2024-290). During the ethics review period, communication letters were prepared for barangay officials to outline the research objectives and ethical commitments. Under the guidance of experts, the researchers underwent comprehensive training, including a data-gathering dry run and instruction in psychological first aid to address potential emotional distress among participants.

To ensure eligible participants were included, a systematic screening process was implemented. Out of 271 individuals screened, 260 met the eligibility criteria. Cognitive function was verified using the Standardized Mini-Cog© in Tagalog. The screening steps included obtaining verbal consent for the screening, a three-word recall test, a clock-drawing test to assess executive function, and a final recall of the three words to determine eligibility based on a score of three or higher. A score of three or higher was required for inclusion, ensuring that all 260 final participants possessed the cognitive capacity to provide informed consent and respond accurately to the research items. Individuals scoring two or less were excluded and provided with a recommendation to consult a medical specialist.

Before data collection, informed consent was obtained in the participant's preferred language: English, Filipino, or Ilokano. The researchers provided a comprehensive explanation of the study's purpose, risks, and benefits as detailed in the Informed Consent Form (ICF). Participants were given ample time to consider their involvement and were explicitly informed of their right to withdraw at any time without penalty. Only after all questions were addressed and voluntary willingness was confirmed did participants sign the ICF.

Questionnaire Administration. The data collection involved two validated instruments: the S-EOL-HLS and the ACP Questionnaire. The administration followed these structured steps:

1. Questionnaires were provided in the participant's chosen language; 175 participants utilized the English version, 51 used the Filipino version, and 34 used the Ilokano version.
2. Researchers provided clear instructions, emphasizing honest answers while avoiding interpretations that could bias responses.
3. To ensure a comfortable environment, researchers maintained a distance of at least three meters unless assistance was explicitly requested.
4. Participants were encouraged to complete the forms at their own pace, with breaks permitted as needed.
5. Completed questionnaires were reviewed for completeness before being finalized.

While the study primarily employed a quantitative design, the researchers maintained informal field notes during the data collection process to capture contextual subtleties and non-systematic anecdotal reflections, which served to provide a supplementary interpretation of the quantitative results.

Although a comprehensive distress protocol was in place, incorporating the "Look, Listen, and Link" principles of psychological first aid and access to professional services via the Baguio City Mental Health Helpline and an identified counselor, no participants experienced emotional distress during the data collection period.

Data Collection and Analysis

The researchers utilized both descriptive and inferential statistics to analyze the collected data. Mean scores were computed to determine the level of EoL health literacy and the extent of ACP engagement. The highest possible overall mean EoL health literacy score was 18, while the highest possible overall mean ACP engagement score was 30. Higher scores indicated greater EoL health literacy and ACP engagement. The

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mean scores were interpreted based on pre-specified scales of interpretation.

Spearman's correlation was used to investigate the relationship between EoL health literacy and ACP engagement. This test specifically assessed the monotonic relationship between the two variables. The resulting correlation coefficients were interpreted based on established scores: 0.90-1.00 as very strong, 0.70-0.89 as strong, 0.40-0.69 as moderate, 0.10-0.39 as weak, and 0.00-0.10 as negligible (Schober et al., 2018). All computations were performed using Microsoft Excel 2021 and validated using IBM SPSS Statistics version 21.

Ethical Consideration

This study was conducted in accordance with the National Ethical Guidelines for Research Involving Human Participants (Philippine Health Research Ethics Board, 2022) and received approval from the Saint Louis University Research Ethics Committee (SLU-REC 2024-290).

In upholding respect for autonomy, informed consent was obtained following a comprehensive briefing on the study's purpose, risks, and benefits. Participants were assured of their autonomy and right to withdraw at any time without penalty. All recruitment was conducted without coercion, utilizing neutral language to prevent bias.

To ensure participants' comfort and safety, data collection was conducted in their homes. While the study posed minimal risk, the potential benefits include informing future healthcare policies and enhancing EoL care practices for older Filipinos. Participant anonymity was maintained through coding. Digital data were stored using password-protected encryption, and physical documents were shredded after transcription. Privacy was further protected by conducting interviews in private settings and adhering to a strict data minimization policy.

Lastly, in upholding justice, equitable representation was achieved through multistage random sampling across 20 diverse barangays in Baguio City, ensuring fair and inclusive recruitment across various socioeconomic and cultural backgrounds.

III. Results

End-of-Life Health Literacy

Table 1

Level of EoL Health Literacy among Older Adults in Baguio City

Domain	Mean	Interpretation
Functional	2.09	Moderate EoL Literacy
Interactive	3.73	Moderate EoL Literacy
Critical	2.95	Moderate EoL Literacy
Overall	8.77	Moderate EoL Literacy

Functional EoL Health Literacy		*Critical EoL Health Literacy*	
0.00-2.00	*Low EoL Health Literacy (LL)*	*0.00-1.66*	*Low EoL Health Literacy (LL)*
2.01-4.00	*Moderate EoL Health Literacy (ML)*	*1.67-3.32*	*Moderate EoL Health Literacy (ML)*
4.01-6.00	*High EoL Health Literacy (HL)*	*3.33-5.00*	*High EoL Health Literacy (HL)*
Interactive EoL Health Literacy		*Overall EoL Health Literacy*	
0.00-2.33	*Low EoL Health Literacy (LL)*	*0.00-6.00*	*Low EoL Health Literacy (LL)*
2.34-4.66	*Moderate EoL Health Literacy (ML)*	*6.01-12.00*	*Moderate EoL Health Literacy (ML)*
4.67-7.00	*High EoL Health Literacy (HL)*	*12.01-18.00*	*High EoL Health Literacy (HL)*

Table 1 shows that older adults in Baguio City demonstrated moderate EoL health literacy, with an overall mean score of 8.77. The mean scores for the functional, interactive, and critical domains were 2.09, 3.73, and 2.95, respectively, all within the "moderate" range. These findings suggest that while older adults have a basic understanding of health information, they face challenges with complex medical concepts and critical evaluations needed for informed EoL decisions. This finding indicates a need for targeted interventions to improve their understanding and application of health literacy in this area.

The observed moderate functional literacy suggests that, while older adults can understand basic health information such as artificial nutrition and sedation, they likely struggle with more complex concepts such as prognosis and cardiopulmonary resuscitation. The functional health literacy score being near the lower end of the moderate EoL health literacy range suggests that even basic health information might not be consistently understood. This finding aligns with the findings of other studies. Tejero et al. (2022) noted that lower functional health literacy among older adults may be due to low educational levels. Their study found that, because more than half of their participants had completed only high school or lower, they lacked the academic training in numeracy needed for functional health literacy. Similarly, Stormacq et al. (2019) found that limited education and low income can restrict access to health information and the ability to understand instructions.

Beyond socioeconomic factors, cognitive and functional barriers significantly affect health literacy in older adults. Kim and Oh's (2020) study emphasizes that declining memory, processing speed, and sensory impairments can impede their ability to comprehend and apply health information effectively. These challenges can make it difficult to understand complex medical instructions and evaluate treatment options. Therefore, age-related cognitive factors must be considered when providing health-related information.

Interactive health literacy also raises concerns. While older adults participate in health discussions, their moderate interactive literacy is reflected in a potential hesitation to seek clarifications from healthcare providers actively. Furthermore, personal healthcare experiences significantly shape attitudes toward EoL planning. Maurer et al. (2025) suggest that prior experience as a healthcare proxy or EoL caregiver correlates with higher EoL health literacy. Conversely, distressing past experiences can lead to avoidance, as found by Ishikawa et al. (2022), who reported that Japanese people tend to avoid EoL discussions and prioritize their family's wishes over their own. The intersection of religious and spiritual beliefs with health literacy also plays a crucial role. While faith offers comfort (Kanu & Nosike, 2025), it can sometimes lead to prioritizing

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spiritual interpretations over critical medical evaluation. Cultural and religious norms might also discourage open health conversations, limiting comprehensive health literacy.

Similarly, despite some ability to evaluate health information, older adults in Baguio City demonstrated moderate critical health literacy, suggesting difficulties in applying knowledge to make well-informed EoL care decisions. This difficulty could involve challenges in weighing the benefits and risks of treatments or in articulating their EoL care preferences. Beyond individual cognitive abilities, social determinants significantly shape EoL health literacy. For instance, Muvuka et al. (2020) underscore systemic factors, such as educational disparities and mistrust in the healthcare delivery system, as potential influences on health literacy. In the Philippine context, these issues are compounded by cultural beliefs influencing EoL decision-making and palliative care access. In this

study, many participants reflected Cordilleran cultural norms, in which decision-making is often collective, led by family elders, and emphasizes ancestral traditions and a preference for home-based care. Indigenous beliefs can influence choices about life-prolonging treatments and hospice care. These cultural dynamics significantly shape how older adults interpret and apply EoL health information.

Supporting these observations, de Vries et al. (2019) found that older individuals from cultural and ethnic minorities often face significant barriers to palliative and EoL care. In the Filipino context, cultural taboos surrounding death further complicate EoL discussions. The belief that discussing death invites misfortune creates a reluctance to engage in these conversations, often leading to avoidance of critical decisions about palliative care and life-sustaining treatments. The observations in this study revealed that participants frequently expressed superstition, fear, or discomfort when acknowledging mortality, which discouraged open consideration of EoL interventions. These cultural and literacy-related barriers underscore the critical need for culturally sensitive communication strategies in EoL care.

The significant role of the family in Filipino culture profoundly influences EoL health literacy. Reflections from informal fied notes gathered during data collection suggests that some older adults often adopt a passive role in medical decision-making, entrusting these responsibilities to their families due to cultural values such as filial piety. While this provides emotional support, it frequently delays critical discussions regarding advance directives and EoL care. These delays are compounded by systemic barriers, including ethical dilemmas in pain management and a lack of mentorship in modeling communication strategies about EoL (Alanazi et al., 2024; Goswami, 2021). Consequently, the transition from moderate literacy to active engagement is often stalled by both cultural tendencies toward passive decision-making and a lack of professional guidance.

Theoretically, these dynamics are explained by the interplay of personal agency and developmental milestones. According to Bandura's Social Cognitive Theory (1999), self-efficacy directly influences engagement in EoL planning. In the Cordilleran context, observational learning plays a critical role, as older adults model their EoL behaviors after community and familial experiences, which may inadvertently reinforce a cycle of passive decision-making. However, through the lens of Erikson's psychosocial stages, achieving ego integrity enables older adults to view EoL literacy as a means of securing their legacy (Miller, 2023; Erikson, 1959). To bridge these gaps, a multifaceted approach is required, with nurses serving as cultural mediators, using simplified language and patient-centered education to align medical EoL planning with cultural values.

Advance Care Planning Engagement

Table 2
Extent of ACP Engagement among Older Adults in Baguio City

Domain	Mean	Interpretation
Health	6.81	Adequate ACP Engagement
Relationship	4.12	Moderate ACP Engagement
Legal and Financial	3.15	Moderate ACP Engagement
Funerary	3.02	Moderate ACP Engagement
Overall	17.10	Moderate ACP Engagement

Health-related ACP Engagement		*Legal and Financial-related ACP Engagement*	
0.00-3.33	*Limited ACP Engagement (LE)*	*0.00-2.00*	*Limited ACP Engagement (LE)*
3.34-6.66	*Moderate ACP Engagement (ME)*	*2.01-4.00*	*Moderate ACP Engagement (ME)*
6.67-10.00	*Adequate ACP Engagement (AE)*	*4.01-6.00*	*Adequate ACP Engagement (AE)*
Relationship and Funerary-related ACP Engagement		*Overall ACP Engagement*	
0.00-2.33	*Limited ACP Engagement (LE)*	*0.00-10.00*	*Limited ACP Engagement (LE)*
2.34-4.66	*Moderate ACP Engagement (ME)*	*10.01-20.00*	*Moderate ACP Engagement (ME)*
4.67-7.00	*Adequate ACP Engagement (AE)*	*20.01-30.00*	*Adequate ACP Engagement (AE)*

Table 2 illustrates the engagement levels of older adults in Baguio City, revealing a moderate overall mean score of 17.10. A closer analysis of the specific domains, however, uncovers a distinct disparity in participation. While the health domain reached an adequate level of engagement ($\bar{x}$ = 6.81), the relationship ($\bar{x}$ = 4.12), legal and financial ($\bar{x}$ = 3.15), and funerary ($\bar{x}$ = 3.02) domains remained within the moderate range. This discrepancy suggests that while older adults are relatively comfortable discussing medical preferences and health-related interventions, they are significantly more hesitant to engage in the relational, legal, or logistical aspects of EoL planning.

Adequate engagement in the health domain appears to be driven by personal experiences and healthcare exposure. For instance, individuals who experienced serious health events or witnessed medical interventions, such as resuscitation, are more likely to discuss future care planning (Zhang & Cagle, 2023). Similarly, navigating a personal health crisis or the death of a loved one often triggers ACP discussions within families (Zhang et al., 2023). Managing chronic conditions or observing a loved one's health decline

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also increases the likelihood of considering and discussing treatment options and EoL preferences (Yeoh et al., 2023).

Building on the role of healthcare exposure, healthcare professionals often exhibit higher ACP engagement due to their frequent exposure to EoL care (Carr et al., 2021). They are also crucial in facilitating ACP discussions with patients and families. Proactively integrating ACP discussions into routine care can provide essential guidance. However, the absence of mandated ACP discussions in Philippine healthcare settings represents a significant missed opportunity. Furthermore, personal discomfort with death and dying and reluctance to communicate painful information can impede ACP discussions (Goswami, 2021).

While the health domain shows promising engagement, this study also highlights that other aspects of ACP, particularly those rooted in interpersonal dynamics, present more nuanced challenges. The relationship domain, encompassing expressing emotions, reconciliation, and legacy communication, showed only moderate engagement among older adults in Baguio City. This lower engagement may be attributed to cultural values such as "hiya" (embarrassment) and "amor propio" (self-respect), which significantly shape how Filipinos handle interpersonal conflict and express emotions. Fear of losing face may prevent apologies or reconciliation. Aruta (2021) notes that these cultural values are central to Filipino identity, influencing emotional disclosure and conflict resolution. Consequently, even when desired, pride and fear of humiliation can prevent the initiation of peace-making conversations before the EoL. Relationship quality and emotional safety often dictate whether older adults feel comfortable communicating their EoL preferences. Strong, supportive relationships encourage openness.

As noted, the legal and financial components of ACP show pronounced gaps in engagement. Older adults' involvement in these crucial non-medical dimensions remains limited, with only moderate participation. This is further compounded by limited awareness and access to information on the legal and financial aspects of ACP. Many older adults are unfamiliar with advance directives and the power of attorney, leading to low rates of formal documentation. This situation is likely due to inadequate public education. The absence of formal ACP regulations in the Philippines further complicates this (Martina et al., 2021).

Adding another layer to these challenges is the existing digital divide in the Philippines, which significantly hinders ACP engagement among older adults in Baguio City. This unequal distribution of information and communication technologies impedes the adoption of digital health initiatives by limiting access to crucial ACP information and online planning resources. This divide is fueled by unfamiliarity with technology and limited access to digital resources (Xu et al., 2024). Consequently, older adults with limited digital access face substantial challenges in understanding the importance of ACP and navigating often digitally mediated resources (Saeed & Masters, 2021). Moreover, financial constraints that underpin this digital divide directly contribute to the moderate engagement (Ellison-Barnes et al., 2021).

The deeply ingrained role of religion and cultural taboos in Baguio City creates a complex landscape for ACP engagement. While faith provides significant comfort, religious belief can occasionally conflict with conventional medical practices, particularly regarding legal and financial EoL planning. These challenges are compounded by pervasive cultural taboos that associate discussions of death with misfortune, often leading to the avoidance of funerary planning. Beyond these superstitions, financial constraints, and a collectivist tendency to prioritize immediate health concerns over long-term preparations, these factors further hinder engagement in these domains.

Bandura's Social Cognitive Theory provides a robust framework for understanding these multifaceted influences, positing that the reciprocal interplay of cognitive, social, and environmental factors shapes ACP behavior. In the Philippine context, environmental influences, such as the heavy weight of family opinion and rigid cultural norms regarding mortality, directly dictate an individual's response to plan. Recognizing these structural and psychological barriers is essential for developing a comprehensive, culturally sensitive approach to ACP. Ultimately, these findings underscore the urgent need for interventions that respect Cordilleran traditions while addressing the systemic and financial hurdles faced by many older Filipinos.

End-of-Life Health Literacy and Advance Care Planning Engagement

Table 3 presents the results of the correlation analysis, which revealed a statistically significant yet weak positive relationship between EoL health literacy and ACP engagement (r = 0.229, p = 0.0001). This finding implies that while higher EoL health literacy is associated with increased ACP participation, the weak correlation suggests that literacy alone is not the primary driver of behavior. Instead, other multifaceted factors, such as cultural norms, family dynamics, and systemic barriers, likely exert a more substantial influence on ACP decisions among older adults in Baguio City.

Table 3
Bivariate Correlations (Spearman's) and Overall Means of EoL Health Literacy and ACP Engagement

Variable	Mean	*r*	*p*
EoL Health Literacy	8.77	.229	.0001*
ACP Engagement	17.10		

* value significant at p < .05

The observed weak positive correlation aligns with existing research linking EoL health literacy to ACP engagement. For instance, Meier et al. (2024) found that greater EoL health literacy correlates with a higher likelihood of discussing care preferences and completing advance directives. Similarly, Van Der Plas

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et al. (2021) reported that targeted EoL care information can increase ACP participation. Moreover, Beltran et al. (2024) found that culturally tailored educational interventions effectively improve knowledge and attitudes toward critical aspects of EoL care, including ACP, hospice, and palliative care, suggesting that enhanced literacy can indeed encourage greater engagement.

However, it is crucial to acknowledge that higher EoL health literacy does not automatically guarantee consistent ACP participation. Anecdotal observations from the research team indicated that even with increased awareness through education, many individuals still hesitate to complete advance directives or to have crucial conversations with family about their preferences. This reluctance is often deeply rooted in cultural and religious beliefs, particularly in Asian contexts like the Philippines, where values such as filial piety and deference to physician authority can outweigh individual autonomy in healthcare decisions (Cheng et al., 2020). Consequently, even well-informed older adults might defer decision-making to family or healthcare providers. Furthermore, practical barriers, such as healthy individuals perceiving ACP discussions as premature (Bernard et al., 2020) and healthcare providers' reluctance or lack of training in initiating these sensitive conversations (Goswami, 2021), can further hinder ACP engagement.

The weak correlation between health literacy and ACP engagement strongly suggests that knowledge acquisition alone is insufficient to drive behavioral change in this context. External factors, including deeply ingrained cultural beliefs about death and family roles, prevailing family dynamics, and the accessibility and quality of healthcare services, likely play a significant moderating role. Additionally, the complexities of medical-legal aspects of ACP, as discussed by Hooper et al. (2020), may introduce variables that weaken the correlation between general EoL health literacy and active involvement in ACP.

Moreover, Ishikawa et al. (2022) identified factors such as the need for long-term care, unemployment, and the death of a relative as pertinent to EoL care discussions. When an older adult enters long-term care, the immediate focus often shifts to daily needs, comfort, and managing current health within the facility (Lin et al., 2022), potentially overshadowing proactive EoL care planning. Unemployed older adults may face immediate pressures, such as financial insecurity, that can overshadow broader health planning, regardless of their understanding of EoL care (Svendsen et al., 2021). Furthermore, Wan et al. (2022) mention how EoL discussions can be overwhelming for older adults, potentially leading to avoidance of death-related conversations, including those about their own ACP, even if they understand its importance. These findings underscore that while health literacy can encourage ACP participation, it is not a strong predictor on its own.

Drawing upon Bandura's Social Cognitive Theory, older adults with higher health literacy may better understand medical terms and care options, potentially enhancing their self-efficacy in healthcare decisions. Notably, Meier et al. (2024) found that interactive health literacy was more strongly correlated with ACP behaviors. In contrast, critical health literacy was more strongly linked to completing advance directives and appointing a surrogate. This finding suggests that health literacy provides a foundation for ACP. Still, it is only one part of a more complex decision-making process heavily influenced by environmental and social factors, such as cultural attitudes and supportive role models. Moreover, supportive healthcare environments with clear information and empathetic guidance can further enhance ACP participation by addressing knowledge gaps and emotional barriers.

The weak yet significant link between EoL health literacy and ACP engagement underscores the vital role of nurses in guiding older adults in Baguio City through ACP, particularly in the legal, financial, and funerary domains where engagement was lower. By providing targeted, culturally sensitive education and facilitating crucial family discussions, nurses can empower older adults to make more informed choices regarding their EoL care.

Strengths and Limitations

This study's strengths include diverse perspectives from multiple Baguio City barangays, a multidomain examination of EoL health literacy and ACP engagement, and the questionnaire's availability in English, Filipino, and Ilokano, enhancing accessibility.

Limitations include a shift to convenience sampling in later data-collection stages, which may have introduced selection bias. The predominantly college-educated sample might have skewed EoL health literacy levels and failed to represent the broader older adult population. Cognitive orientation and memory assessments might not have fully captured overall cognitive status. Language switching during surveys could have caused inconsistencies. Finally, reliance on self-reported data carries risks of recall and social desirability bias, despite mitigation measures in place.

IV. Conclusion

While older adults in Baguio City have moderate EoL health literacy, this does not strongly correlate with ACP engagement. This weak correlation reveals a significant "literacy-to-action gap," suggesting that cognitive competence alone is not enough to drive ACP in the Philippines. Cultural and systemic mediators often influence the link between knowledge and active engagement, particularly in legal, financial, and funerary domains. Consequently, promoting ACP requires more than just information-sharing. It necessitates culturally attuned, multifaceted approaches that address the collective emotional and systemic barriers that stall the transition from understanding to action.

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V. Recommendations

To bridge the "literacy-to-action gap" and foster culturally congruent EoL engagement, the following recommendations are proposed:

1. For Nursing Practice, nurses should employ culturally sensitive, multifaceted strategies to enhance both EoL health literacy and ACP engagement. This includes initiating EoL conversations and providing targeted education, among others.
2. For Nursing Education, higher education institutions should emphasize cultural sensitivity and communication strategies for EoL care. With the advent of simulation and virtual reality, classroom-based and clinical trainings should include scenarios involving Filipino traditions and the use of selected Filipino dialects to improve functional literacy.
3. For Healthcare Policy, policymakers should consider the formal integration of ACP into Universal Healthcare and government-supported wellness programs. Establishing clear national guidelines for ACP in the Philippines would provide the needed legal and ethical framework for discussions about EoL issues.
4. For Nursing Research, future studies should employ qualitative or mixed-methods designs to explore the intricacies of the "literacy-to-action gap." Specifically, research into how Filipino cultural values, such as filial piety, act as facilitators or barriers to ACP could provide deeper insights into this phenomenon.

Contribution of Authors

The authors confirm that they meet the international criteria for authorship. Each author has made substantial contributions to the conception or design of the work; the acquisition, analysis, or interpretation of data; and the drafting or critical revision of the manuscript. All authors have approved the final version for publication and agree to be accountable for all aspects of the work.

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Conflict of Interest

The authors declare that there are no financial, personal, or professional conflicts of interest that could have influenced the conduct, outcomes, or interpretation of this research.

Disclosure of Use of Generative AI

During the preparation of this work, the authors used Grammarly and Google Gemini for the sole purpose of linguistic refinement, including the improvement of grammatical flow and the optimization of sentence structure. The authors declare that the intellectual contributions, including the framing of the research questions, the development of the theoretical framework, the presentation and interpretation of data, and the formulation of the conclusions and recommendations, were independently conducted by the research team. Moreover, the authors confirm that no identifiable participant information or raw data, was processed by the aforementioned tools. Hence, it is ensured that ethical standards and confidentiality were strictly upheld throughout the research process. The authors have reviewed and thoroughly edited the manuscript, taking full responsibility for its content.

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Their research proficiency was further refined through specialized coursework in Nursing Research I and II, culminating in this correlational, cross-sectional study. To ensure the highest standards of participant safety, all authors underwent intensive training in health ethics, maintaining full compliance with the National Ethical Guidelines for Research Involving Human Participants.

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RESEARCH ARTICLE

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Environmental Literacy and Awareness about Global Climate Change among Nursing Student Towards Sustainable Development

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ABSTRACT

Introduction: The incidence of diseases has increased due to climate change and nurses play a vital role in addressing these health challenges. However, there is inadequate incorporation of environmental literacy and global climate change in nursing programs, which leads nursing graduates to be unprepared in handling environmental issues.

Aim: This study aimed to determine the degree of environmental literacy of nursing students toward sustainable development, assess their level of awareness of global climate change, and examine the significant relationship between environmental literacy and global climate change awareness among nursing students.

Methods: A descriptive-correlational research design was employed. The study was conducted from March to April 2025 in five universities in Baguio City and involved 358 nursing students. Respondents were selected using simple random sampling through the fishbowl method from each stratum. Data were collected using two standardized instruments: Environmental Literacy Scale for Adults and the Awareness Scale of University Students About Global Climate Change. Descriptive statistics and the Pearson Correlation Coefficient were used for data analysis.

Results: The study revealed that nursing students have a high level of environmental literacy of all three domains with a mean of 4.16. Nursing students have a moderate level of awareness about global climate change with a mean of 3.26. The results showed a weak positive correlation between environmental literacy and awareness about global climate change among nursing students with a Pearson Correlation of 0.372.

Conclusion: Nursing students show proficient knowledge on environmental issues, but demonstrate adequate awareness on global climate change. Enhancing environmental and climate change education may strengthen nursing students' capacity to support climate action and sustainable development.

Keywords: *nursing students, environmental literacy, global climate change awareness, sustainable development*

I. INTRODUCTION

In the current global climate crisis, environmental literacy is essential for health workers due to the needed preparation in facing emerging health challenges driven by climate change. With extreme weather, infectious disease outbreaks, and mental health challenges arising, there is a need to understand these emerging health risks. Environmental literacy goes beyond awareness, emphasizing values and actions that support environmental protection. Environmental literacy is a critical foundation for equipping the next generation with knowledge, skills, and values needed to understand and address complex climate issues existing nowadays (Fajeriadi et al., 2024). This study focuses on three key domains of environmental literacy identified by Atabek-Yiğit et al. (2014), namely, environmental consciousness, environmental anxiety, and environmental awareness. Environmental consciousness involves recognizing environmental issues, committing to solutions, and engaging in sustainable actions like recycling or advocating clean energy (Kim & Lee, 2023). Environmental anxiety refers to the distress caused by climate change, reflecting individuals' concern about environmental degradation and its long-term impacts. It highlights emotional involvement and a sense of urgency toward ecological issues (Coffey et al., 2021). Lastly, environmental awareness means the recognition

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of good practice towards achieving sustainable development, which involves attending to an environmental issue and taking actions towards it (Handayani, 2021).

Integrating environmental literacy domains into nursing is essential, as it equips future nurses to adopt sustainable practices and address the health impacts of environmental degradation. Nursing is recognized as a key driver in achieving the Sustainable Development Goals Taminato et. al., 2023), with nurses having a moral duty to mitigate health consequences of environmental change (Shaw et al., 2021). In the Philippines, Article V of the Nurses' Code of Ethics highlights nurses' responsibility to support community health initiatives, including environmental health (Philippine Board of Nursing, 2004). Studies show mixed levels of sustainability awareness, with some youth and nursing students recognizing its importance while others show low awareness or unfavorable attitudes (Bøhlerengen & Wiium, 2022; Obrecht et al., 2022). Additionally, many Filipinos report limited climate knowledge despite high vulnerability to climate impacts (Bollettino et al., 2020), highlighting the need for nursing education to strengthen climate engagement.

Global climate change is one of the primary sources of the world's environmental problems which resulted from unconscious human activities. According to Shivanna (2022), climate change is a long-term change in atmospheric conditions typically due to human activities like burning of fossil fuels namely, coil, oil, and gas. Hence, climate change is considered a serious global threat to the social and environmental determinants of health like clean air, drinkable water, sufficient food, and safe shelter (IPCC, 2023). Recent years have shown the severe impact of climate change like air pollution, extreme weather, and mitigation of diseases (Romanello et al., 2022). According to Iira et al. (2024), poor environmental sustainability produced chronic health conditions that threaten worldwide health. These emphasize the health impact and the vital role nurses must play. However, Fırat Kılıç et al. (2024) noted that many nursing curricula lack sufficient content to raise awareness of global climate change. These programs often fail to link knowledge with practical nursing action, leaving graduates unprepared to address environmental issues (Fields et al., 2023).

Overall, gaps in environmental literacy and climate change awareness persist, as studies show inconsistent integration of these topics in nursing education, leaving many students inadequately prepared for sustainable healthcare practice (Fields et al., 2024). Despite climate change's urgency, understanding its implications in healthcare remains limited (UNESCO, 2024). Research also shows nursing curricula rarely cover climate topics (Amerson et al., 2022;), and studies assessing students' environmental literacy are few (Cengiz, 2023) This gap exists despite nurses' key role in environmental advocacy (Ryan et al., 2020), underscoring the need to evaluate and improve environmental literacy among nursing students.

This study is relevant to different areas of the nursing profession and higher educational institutions. To nursing practice, it can provide information regarding the knowledge on environmental issues and awareness about global climate change from healthcare team members. Also, integrating SDG 13: Climate action into nursing practices ensures the provision of holistic care that benefits both patients and society. To nursing education, the study's findings can provide baseline data for integrating Sustainable Development Goals into the Nursing Curriculum, particularly incorporating SDG 13: It highlights the necessity of "taking immediate measures to address climate change and its impacts." To nursing research, the findings will generate knowledge and provide data for future researchers on environmental literacy and global climate change awareness of nursing students. To higher education institutions, the integration of SDG into undergraduate and graduate curricula programs, making these programs more relevant and meaningful to stakeholders. This also helps in the implementation of policies and strategic planning toward sustainable development.

This study aimed to determine the environmental literacy and awareness of global climate change toward sustainable practices among nursing students by assessing their level of environmental literacy in terms of environmental consciousness, environmental anxiety, and environmental awareness; evaluating their awareness of global climate change, including its impacts on natural and human environments, causes, relationship with energy consumption, and global organizations and agreements; and examining the significant relationship between environmental literacy and global climate change awareness.

II. Methods

Research Design

A descriptive-correlational design was used in the study. Descriptive design describes aspects of a situation or individual events by studying them as they naturally occur. The research is quantitative: descriptive-correlational design which provided insight into the relationship between environment literacy and awareness on global climate change of nursing students.

Participants and Sampling

The study was conducted in five private universities in Baguio City, Benguet, Philippines, involving randomly selected third- and fourth-year nursing students enrolled in the academic institutions during the academic year 2024-2025. The overall sample size (n) was computed utilizing a simplified formula for proportions, also known as "Yamane Formula", with a margin error of 5%. With a total population of 3,390, the study had a total sample size of 358 respondents from the five different universities.

This study used stratified proportionate random sampling, a probability method that ensures representation by dividing the population into strata

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based on institution and year level (third- and fourth-year nursing students). The total sample (n = 358) size was then proportionally allocated to each stratum according to the number of students per institution and year level to ensure fair representation. Within each stratum, respondents were selected using simple random sampling to ensure equal changes of selection. When official student lists were available, a fishbowl draw method was employed by placing student names in a container and randomly selecting participants until the required sample size per group was achieved. In cases where student lists were not accessible due to privacy restrictions, a randomized seating-based approach (e.g., counting from left to right per row) was used to ensure that each student had an equal chance of selection. This combination of techniques ensured randomness while accommodating institutional limitations in accessing student information.

All nursing students in the third and fourth year levels are eligible to participate in the study, provided that they meet the inclusion and exclusion criteria. The selection process adhered to specific inclusion and exclusion criteria. The inclusion criteria include the following:

- 3rd year and 4th year nursing students who are currently enrolled in Academic Year 2024-2025 in Bachelor of Science in Nursing Program of the five private universities in Baguio City, Benguet, Philippines
- Nursing students who have reached the age of 18 years and above.

This study does not specify explicit exclusion criteria, as the inclusion criteria sufficiently define the target population through establishing precise parameters which effectively delineate a homogenous group for analysis (Willie, 2024). Participation is entirely voluntary; therefore, nursing students who decline to participate or fail to provide informed consent are automatically excluded from the study in accordance with ethical research standards.

Table 1
Sample Size

School	Year Levels	Computed Sample Size
School A	Level 3	60
	Level 4	39
School B	Level 3	72
	Level 4	53
School C	Level 3	24
	Level 4	24
School D	Level 3	20
	Level 4	12
School E	Level 3	28
	Level 4	26
Total		**356**

Data Gathering Tools

The study used two validated instruments: the Environmental Literacy Scale for Adults (ELSA) by Yiğit et al. (2014) and the Climate Change Awareness Scale by Deniz et al. (2021), both employing 5-point Likert scales with strong reliability (α = 0.881 and 0.826, respectively). ELSA measures environmental consciousness, anxiety, and awareness, while the climate change scale assesses impacts, organizations, causes, and energy relationships, with all subscales meeting the acceptable reliability threshold (α ≥ 0.70). Selected items from both tools were contextualized to suit the Philippine setting.

TABLE 2
Comparative Psychometric Summary

Feature	ELSA	Climate Change Awareness Scale
Authors / Year	Yiğit et al. (2014)	Deniz et al. (2021)
Total Items	20	21
Scale Type	5-point Likert	5-point Likert
Domains / Subscales	3	4
Domains	Consciousness (9) Anxiety (6) Awareness (5)	Impacts (9) Organizations (6) Causes (3) Energy (3)
Overall Reliability (α)	0.881	0.826
Subscale Reliability (α)	0.807 0.765 0.715	0.876 0.814 0.814 0.725
Acceptable Threshold	≥ 0.70	≥ 0.70
Contextualized Items	5, 6, 7, 8, 9, 12, 20	1, 4, 5, 7, 8, 15, 22

The questionnaire underwent Content Validity Index (CVI) by three experts to establish their validity. The first expert is a registered nurse and a pollution control managing head of a regional medical center with expertise in environmental health management, healthcare waste disposal, and compliance with environmental regulations. The second expert is a public health nurse that has experience in an academic institution and in-depth experience in community health, health education, and disease prevention. Lastly, the third expert is a Doctor of Engineering and Graduate Program Coordinator for Engineering who possesses advanced expertise in research, project development, composting and composts, municipal solid waste treatment, life-cycle assessment, circularity, and sustainable development.

The experts rated each item based on a four point scale of relevance:

1 = not relevant;

2 = somewhat relevant;

3 = quite relevant;

4 = highly relevant

The CVI was computed by identifying the items rated as 3 and 4 by all the evaluators, which was then divided by the total number of items. A CVI of 0.80 is considered an acceptable value (Polit & Beck, 2007). The researchers evaluated all suggestions given by the experts and incorporated them according to the

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questionnaire. The two questionnaires underwent content validity evaluation by three experts. The results showed a CVI of 1.00 (100%) for both questionnaires, indicating that all items were rated as highly relevant by the experts. This confirms that the questionnaire demonstrates excellent CVI. All suggestions provided by the experts were reviewed and incorporated appropriately into the final version of the questionnaires.

Data Gathering Procedure

The conduct of the study commenced after obtaining the approval of the Research Ethics Committee of Saint Louis University (Approval No. SLU-REC 2025-024) and the Director of University Research and Innovation Center.

After being permitted by the Director of the University Research and Innovation Center, the researchers sent a letter to the Dean of a department of Nursing in an institution of higher learning in Baguio City seeking permission to conduct the study. A letter with the waivers was also sent to the 3rd year Department Head and the Dean of the same department seeking approval to conduct the study outside the institution. The researchers sent a letter to the Research Ethics Committee of the six private universities in Baguio City, seeking permission to conduct the study. However, the Research Ethics Committee of one university denied the approval to conduct the study due to the high number of researchers conducting studies at their institution and unavailability of students who are engaged with other commitments.

With permission from other schools to conduct the study, the researchers accomplished different forms based on each school's requirements. The researchers filled out an application form for two universities, and the remaining three universities did not require any form to be accomplished and only submitted a letter of request to the respective deans to seek approval to conduct the study. Then the researchers coordinated with the schools' department heads regarding the schedule and list of names of potential respondents.

Four of the chosen private universities were able to provide their schedule and list of names. However, the Vice President of Academic Affairs in the remaining private university declined to send the class schedules and lists due to privacy concerns. Three universities provided lists of 3rd and 4th year nursing students per section who were only picked via simple random sampling (fishbowl technique). In the remaining universities, only the population per section was given so respondents were chosen according to the seating arrangement, counting from left to right per row via simple random sampling (fishbowl technique). The respondents were chosen following the inclusion criteria. The respondents were informed that their participation is voluntary. The study's purpose, objectives, risks and benefits were explained before consent was obtained. After obtaining their consent, they were asked to fill out the questionnaire. Then the researchers checked for the completeness of the submitted questionnaire. All gathered data was kept confidential.

Data Collection and Analysis

For research questions 1 and 2, descriptive statistics were utilized, specifically to determine the level of environmental literacy and awareness regarding global climate change. For research question 3, the Pearson Correlation Coefficient was utilized to determine the type and strength of the association between the two variables.

The mean score of the item in the 5-point Likert type scale of both environmental literacy and awareness about global climate change are interpreted as follows:

$$\text{Range of score} = \frac{High\ score - Low\ score}{Number\ of\ Categories} \qquad \frac{5-1}{3} = 1.33$$

Table 3
Interpretation of Means

Environmental Literacy of Nursing Students		
Mean Score	**Interpretation**	**Description**
1.00-2.33	Low Environmental Literacy	Nursing students in this category show limited knowledge about the environment. It indicates that there is a lack of willingness to engage and be aware of environmental issues, not anxious or concerned about the future, and does not recognize that good practices lead to sustainable development.
2.34-3.66	Moderate Environmental Literacy	Nursing students in this category show adequate knowledge about the environment. It indicates that there is a willingness to engage and be aware of environmental issues but lacks urgency and consistency in their attitude and actions.
3.67-5.00	High Environmental Literacy	Nursing students in this category show proficient knowledge about the environment. It indicates that there is a willingness to actively engage and be aware of environmental issues, exhibit concern about various issues and consistently recognize the role of good practices towards sustainable development.
Environmental Literacy of Nursing Students		
Mean Score	**Interpretation**	**Description**
1.00-2.33	Low Level of Awareness about Global Climate Change	Nursing students in this category are minimally aware of global climate change. It indicates that there is limited knowledge about the concept of global climate change to help mitigate climate change. There is little to no recognition of the role in addressing global climate change.
2.34-3.66	Moderate Level of Awareness about Global Climate Change	Nursing students in this category are moderately aware of global climate change. It indicates that there is a basic understanding of the concept of global climate change to help mitigate climate change. There is recognition of the role in addressing global climate change but lacks consistency.

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Ethical Consideration

The conduct of the study commenced only after securing approval from the Research Ethics Committee of Saint Louis University (Approval No. SLU-REC 2025-024) and the Director of the University Research and Innovation Center. Ethical approval was obtained from the appropriate ethics review committee prior to data collection.

Informed consent forms were provided which ensured that nursing students of the private universities fully comprehended their rights including voluntary participation, right to withdraw at any time without penalty. Respondents who are aged 18 years old and above with a sound mind were given enough time to ask questions and clarify any concerns regarding the study. The researchers explained the risks and benefits among the respondents, noting that some may experience mild psychological discomfort when answering questions or feel burdened by the time and effort required alongside personal and academic responsibilities. However, they were assured their right to skip questions or discontinue participation at any point. All collected data, along with personal information, were anonymized to protect the identities of respondents and were stored securely in a locked file cabinet and/or encrypted which was explained to the respondent and assure their privacy. Access to the collected data is restricted solely to members of the research team. The researchers ensured that the privacy of the respondents were protected. In accordance with RA 10173 or the Data Privacy Act of 2012, the researchers held full confidentiality of every information given by the respondents.

III. Results

This chapter presents the results and discussions on environmental literacy and awareness about global climate change among nursing students.

Table 4
Degree of Environmental Literacy among Nursing Students

Domains of Environmental Literacy	Mean	Interpretation
Environmental Consciousness	4.45	High Environmental Literacy
Environmental Anxiety	3.97	High Environmental Literacy
Environmental Awareness	4.07	High Environmental Literacy
Average Mean	**4.16**	**High Environmental Literacy**

Legend:
Low Environmental Literacy = 1.00-2.33
Moderate Environmental Literacy = 2.34-3.66
High Environmental Literacy = 3.67-5.00

Table 4 presents the degree of environmental literacy among nursing students, revealing a high level of environmental literacy across all three domains. Environmental Consciousness had the highest mean of 4.45, followed by Environmental Awareness at 4.07, and Environmental Anxiety at 3.97, with an overall average mean of 4.16, indicating a high level of environmental literacy. High environmental literacy suggests that nursing students show proficient knowledge about the environment and are consistently motivated to act responsibly to support sustainability (Incesu & Merve Altiner Yas, 2023).

The high level of environmental literacy demonstrated by nursing students may be attributed to a variety of factors. In a study by Baykara Mat & Yilmaz (2024), a heightened awareness of environmental issues are largely influenced by the accessibility of information through digital and social media platforms. In the Philippine context, environmental education (EE) is mandated by the Commission on Higher Education (CHED), the Department of Education (DepEd), and the Technical Education and Skills Development Authority (TESDA), in collaboration with the Department of Environment and Natural Resources (DENR) and other related agencies. According to Corpuz et al. (2022), environmental education is incorporated into mandated courses such as the National Service Training Program (NSTP) and General Education (GE) courses like Science, Technology, and Society (STS), with NSTP activities such as tree-planting and clean-up drives, and STS focusing on environmental innovations. Cevheroğlu & Fırat Kılıç (2025) identified that third-year students with higher overall environmental health literacy scores were those who lived with friends, advised others about pollution, and regarded nurses should be sensitive to environmental issues.

The results showed that environmental consciousness had the highest mean, indicating that students are highly aware of environmental issues, take action, and make sustainable choices driven by personal responsibility (Kim & Lee, 2023). Similarly, Anåker et al. (2021) found that nursing students understand the connection between climate change and health, and recognize their role in advancing sustainability in healthcare. This finding can also be explained by the results per item under this environmental domain. Item three in the questionnaire, which measures students' sense of responsibility for environmental protection, had the highest mean score of 4.80, indicating a strong sense of accountability and stewardship towards environmental sustainability (Rogoyan, 2019). Ello et al. (2024) also emphasized that environmental knowledge enhances students' capacity for protection and stewardship. Abdelrahman et al. (2025) state that nursing students' awareness of climate change reflects deeper environmental concerns and emphasizes the significance of recognizing climate issues in healthcare and education. Students' knowledge and views regarding climate issues are shaped by electronic mass media, which includes TV, social media, and internet news. The media has a crucial role in raising the perceived urgency of climate change by implicitly exposing people to extreme environmental crises through emotionally impactful content. Furthermore, item one had the second highest mean of 4.73. It highlights how nursing students believe that renewable energy sources should be supported by the government. In the Philippines, renewable energy is a key part of the country's low-emission development strategy, addressing climate change, energy security, and access issues (Department of Energy Philippines, 2021).

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The environmental awareness domain had a mean of 4.07, indicating a high environmental literacy among nursing students. According to Dönmez & Yardımcı (2024), the high environmental awareness among nursing students can be attributed to the nursing curriculum, which is based on the interrelated principles of humans, health, disease, and the environment. Education on the environment may significantly influence an individual's knowledge, attitudes, and overall competence in addressing environmental issues, and given the role of the environment in the nursing practice, it should be systematically embedded into the nursing curriculum in order for the nursing students to cultivate environmental competence at an early time (Fırat Kılıç, 2024). Item number 18 holds a mean of 4.42, making it the highest in this domain. According to Kocoglu-Tanyer et. al (2024), nurses are paying more attention to the environment as environmental issues have become one of the biggest challenges of the twenty-first century. Additionally, nurses frequently encounter situations that highlight the significance of the individual and their environment in their daily practice. This high environmental awareness among nursing students enhances their ability to address environmental determinants of health through informed clinical practice, advocacy, and implementation of sustainable healthcare initiatives (Incesu & Yas, 2023).

Lastly, a mean score of 3.97 in the environmental anxiety domain indicates a high level of environmental literacy. According to Li & Liu (2022), when considering global environmental issues related to climate change, the most commonly experienced emotions were anxiety, worry, and restlessness. Furthermore, Er et al. (2024) stated that climate change poses a real threat, and the participants' experiences of anxiety, depression, or stress indicate the weight with which they perceive and respond to this issue. Anent to this, the means is to channel this anxiety as a motivation for students to adopt more environmentally sustainable behaviors and choices (Feather & Williams, 2022). Additionally, environmental anxiety is recognized as a healthy response that has the potential to transform one's action in protecting the environment (Benoit et al. 2022). Item number 12, which assesses students' belief in the importance of preserving plant seeds for the future, yielded the highest mean score of 4.60 in the environmental anxiety domain, indicating a strong recognition of this issue. Previous studies have highlighted the prevalence and implications of environmental anxiety among nursing students. In a study of Anåker et al. (2021), the results identified a "mismatched discourse" among nursing students, wherein they recognized the adverse effects of climate change on health but felt constrained in their ability to enact meaningful change. This cognitive dissonance, exacerbated by frequent environmental crises such as floods and wildfires, contributes to heightened climate-related anxiety (Nagihan İlaslan & Nuray Şahin Orak, 2024). Additionally, Atta et al. (2024) found that nursing students with lower environmental attitudes exhibited higher levels of climate anxiety. Zacher and Rudolph (2023) reported an inverse relationship between climate-specific knowledge and climate change anxiety. Greaves et al. (2023) demonstrated that exposure to information about climate change heightened the intention among nursing students to engage in environmentally conscious behaviors. This indicates that informed awareness can translate into proactive actions, potentially alleviating feelings of helplessness associated with climate anxiety. Furthermore, item number 11 had a mean of 2.96, indicating a moderate level of environmental anxiety. This item focuses on how the students think that everybody should sow a tree in their lives. Tree plantation has a multifaceted role in preserving the environment and promoting life on Earth, as it is vital to maintaining ecological balance and supporting biodiversity, making it an essential aide to combat against climate change (Coleman et al., 2023 & Preece et al., 2023). This moderate score may reflect a positive anxiety of environmental action as most of the nursing students believe that individuals should plant a tree as an action to combat environmental issues and improve the quality of life (Department of Environment and Natural Resources, 2020).

The findings are strongly supported by the Norm Activation Model (NAM) by Schwartz and Howard (1981). It demonstrates that nursing students' high environmental literacy fosters the internalization of moral values that guide environmentally responsible actions. The high mean scores across all three domains indicate that nursing students have a strong cognitive understanding of the environmental issues, which corresponds to the concept of problem awareness in the Norm Activation Model (NAM). Additionally, their emotional involvement reflects the ascription of responsibility, while their belief in their capacity to contribute to environmental solutions corresponds to outcome efficacy. This implies that their environmental literacy successfully drives their personal norms, leading them to adopt a sense of responsibility and motivation to engage in sustainable and pro-environmental behaviors.

Student nurses, as future healthcare leaders, can lead sustainability efforts by promoting eco-friendly practices, educating communities, and supporting sustainable behaviors (Luque-Alcaraz et al., 2024). Although environmental sustainability concepts are integrated into nursing curricula, this finding highlights the critical need to uphold and strengthen these concepts within nursing education. Incorporating sustainability into nursing education equips them to influence healthcare practices and support green initiatives in both clinical and community settings (Abdelrahman et al., 2025). Furthermore, as an essential component of environmental literacy, awareness encourages individuals to observe the environment, accurately understand and evaluate its issues, and adopt their behaviors accordingly (Yusuf et al., 2022). This awareness can serve as a gateway for applying sustainability practices from one's personal life to their professional endeavor (Álvarez-Nieto et al., 2022). However, despite being highly aware of the environmental impact of their work, they struggle to apply sustainability principles in nursing due to limited confidence and resistance to change within the system

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(Álvarez-Nieto et al., 2022). Anåker et al. (2021) stated that while student nurses recognized the importance of nurses in fostering a more sustainable world, they perceived it as challenging to apply in practice and emphasized the need for further education.

Table 5
Degree of Awareness about Global Climate Change among Nursing Students

Degree of Awareness	Mean	Interpretation
Impacts on the Natural and Human Environment	3.99	High Level of Awareness about Global Climate Change
Awareness of Global Organizations and Agreements	2.72	Moderate Level of Awareness about Global Climate Change
Causes of Emergence	3.09	Moderate Level of Awareness about Global Climate Change
Energy Consumption Relationship	3.51	Moderate Level of Awareness about Global Climate Change
Average Mean	**3.26**	**Moderate Level of Awareness about Global Climate Change**

Legend:
Low Level of Awareness about Global Climate Change = 1.00-2.33
Moderate Level of Awareness about Global Climate Change = 2.34-3.66
High Level of Awareness about Global Climate Change = 3.67-5.00

Table 5 presents the degree of awareness about global climate change among nursing students with an average mean of 3.266, indicating a moderate level of awareness about global climate change. This suggests that students have sufficient knowledge and awareness about its concept but lack depth in order to consistently mitigate climate change. This findings aligns with Yeboah et al. (2024), who describes moderate awareness as adequate knowledge without consistent application, and Anaker et al. (2021), who emphasized gaps on climate change education within the nursing curricula.

Moderate levels of awareness of the respondents can be attributed to the Norm Activation Model (NAM), developed by Schwartz and Howard (1981), which states that acquisition of the components of environmental literacy will lead to the formation of personal norms. These personal norms will lead the individual to have awareness of global climate change. In this case, students may possess moderate awareness; however, this may not yet translate into an action-oriented understanding of global climate issues.

Impacts on the Natural and Human Environment was ranked the highest among the 4 domains with a mean of 3.99, signifying that nursing students are highly aware of global climate change and its impact on the natural and human environment which is in line with was in line with the study by Ryan et al. (2020), revealing that 94.6% of nursing students are concerned about the health impacts of climate change. This suggests that concrete and observable consequences in health and environmental changes are more easily understood by students. The high level of awareness of nursing students may be influenced by the adequacy of basic education related to climate change among Filipino students (Domantay et al., 2021). The inclusion of DRRM concepts contributed to the respondent to develop a good understanding of climate change, its causative factors, and its effects (Santos & Gumabay, 2024). Hernando-Malipot (2022) also stated that the Department of Education (DepEd) in the Philippines enhances climate education in the K to 12 curriculum by incorporating subjects, such as Science, Health, Araling Panlipunan (Social Studies), Edukasyon sa Pagpapakatao (Values Education), Mathematics, English, Filipino, Edukasyong Pantahanan at Pangkabuhayan, Technology and Livelihood Economics, and Music, Arts, Physical Education and Health (MAPEH). Thus, the findings indicate that nursing students are not only aware of climate change, but also understand its implications and are inclined towards sustainable practices in their profession (Anåker et al., 2021).

Energy Consumption Relationship was the second highest domain with a mean of 3.51, indicating moderate awareness about energy consumption which may be due to the student only relying on observation from their surroundings and searching the Internet for information (Lee, 2019). Aside from that, according to the finding Ilham et al. (2022), those students who show moderate awareness when it comes to energy conservation have the basic knowledge but lack consistency in their behavior. Furthermore, this implies that even a student with adequate awareness about energy consumption may still be selective in choosing which actions to take or avoid in conserving energy despite having sufficient knowledge and understanding of the importance in energy conservation (Jamaludin et al., 2022). However the lack of consistency leading to moderate awareness may be due to various concerns. According to Catubay et al. (2024), results show high literacy on the benefit of energy conservation in the environment but concern about it is also high due to the lack of availability, accessibility, and disadvantages which leads to hesitance in using Renewable Energy. Additionally, students have high knowledge on energy efficient appliances but most of them are hesitant to buy it due to the cost and availability (Jamaludin et al., 2022).

Causes of Emergence was ranked as the third highest domain with a mean of 3.09. According to Artime & Domenico (2022), moderate level awareness on the Causes of Emergence means that some are aware of the various factors that can lead to negative changes in the environment. This aligns with the study of Kilic et al. (2024), findings showing moderate awareness levels on the causes of global climate change, potentially limiting their ability to apply this knowledge in real life context. Furthermore, a study conducted in Egypt shows general awareness of the various causes of climate change but nursing students still lack sufficient depth of knowledge and sustainable habits in their daily practices which implies those who are moderately aware of the various factors and causes of climate change may lead to lack of application and measures to reduce it once crisis occurs (Mazzalai et al., 2022). This may be due to the lack of awareness campaigns, policies and environmental measures to promote it (Elsharkawy et al., 2023). Hence, this leads to the profession's lack of commitment, feelings of demotivation, and not

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knowing what to do (Schenk et al., 2021). Aside from that, meat and rice consumption is one of the causes of global climate change that is primarily mentioned. According to the study of Desabayla & Gueta (2023), students do have high awareness about climate change, but some are hesitant to change their practice due to lifestyle and diet. Based on the current findings, nursing students are moderately aware of the relation which may lead to no changes or improvements on the emitted carbon emission due to livestock farming and agriculture.

Awareness of Global Organizations and Agreements was the lowest among the four domains with a mean of 2.72 showing moderate level of awareness. Results show low awareness on official agreements and protocols, which suggest limited familiarity with these international organizations and frameworks. This supports the findings of Pandve et al. (2011), 60% of the respondents show poor awareness of various agreements and organizations due to lack of information dissemination to the public. Leal Filho et al. (2023) revealed that, although students are aware of climate change and its associated risks, their knowledge of specific international frameworks and policies is limited. Furthermore, this may be influenced by the limited integration of global health content within the curricula. This led to nurses performing irrelevant and unsustainable activities leading to failure of upholding global climate change protocols and agreements in the hospital (Incesu & Yas, 2024). Furthermore, since nursing students often rely on social media and the internet as their primary sources of information, enhancement of public information dissemination through these channels or targeted information campaigns can bridge current knowledge gaps (Giuseppe et al., 2020).

Table 6

The Relationship between Environmental Literacy and Awareness about Global Climate Change

		Degree of Environmental Literacy	Awareness about Global Climate Change
Environmental Literacy	Pearson Correlation	1	.372**
	Sig. (2 tailed)		0
	R^2		
	N	356	
Awareness about Global Climate Change	Pearson Correlation	.372	1
	Sig. (2 tailed)	0	
	R^2		
	N	356	356

Legend:
Low Level of Awareness about Global Climate Change = 1.00-2.33
Moderate Level of Awareness about Global Climate Change = 2.34-3.66
High Level of Awareness about Global Climate Change = 3.67-5.00

Table 6 illustrates the statistical relationship between environmental literacy and awareness of global climate change among nursing students. The findings revealed a weak positive correlation, with a correlation coefficient of $r = 0.372$. The correlation is significant at the 0.01 level, with $p < .001$, indicating that the relationship is unlikely due to chance. Therefore, the null hypothesis which states that there is no significant relationship between environmental literacy and awareness on global climate change among nursing students is rejected.

A weak positive correlation indicates that as environmental literacy increases, awareness of global climate change among nursing students also increases, though the relationship is not strong. This suggests that environmentally literate students are generally more aware of climate issues, but the connection lacks strength and consistency. In nursing education, the weak yet significant correlation suggests that as students' understanding of environmental concepts grows, their awareness of climate issues also increases, though moderately. Kılıç et al. (2024) found that students with higher environmental literacy also showed greater sensitivity and awareness, influenced by eco-friendly activities, access to information, and formal education. Similarly, İncesu and Yaş (2024) reported high levels of climate change awareness are shaped by both academic and external factors like social media, global movements, and personal experiences. Domantay et al. (2021) further emphasized that real-life exposure to environmental issues enhances awareness, particularly when an individual directly experiences climate change issues. This supports our findings that beyond formal literacy, real-life exposure and relevance of climate events can enhance awareness. Experiential and contextual factors may reinforce or amplify the effects of environmental literacy, especially in communities directly impacted by climate change like the Philippines. Conversely, Santos et al. (2024) identified several barriers including social norms and limited engagement, which may weaken the connection between environmental knowledge and nursing practice. This explains that while a relationship between the two variables exists, contextual factors may influence the strength and expression across different populations or settings.

The study's findings are further supported by the Norm Activation Model (NAM), developed by Schwartz and Howard (1981), which emphasizes that personal norms such as feelings of moral obligation are triggered by specific factors: problem awareness, ascription of responsibility, outcome efficacy and self-efficacy. Environmental literacy, which encompasses knowledge (environmental awareness), concern (environmental anxiety), and values (environmental consciousness), serves as the internal foundation for these norm-activating components. Global climate change awareness, on the other hand, reflects a deeper comprehension of the effects, individuals, and processes of the global environment. The weak correlation suggests that although environmental literacy helps to increase personal concern and understanding, it might not always result in a greater awareness of global systems unless all of the necessary components, especially problem awareness and moral responsibility, are fully engaged. A moderate correlation between these variables indicates that personal environmental knowledge and concern does not necessarily translate into global awareness unless people also feel a sense of moral obligation and think their actions can have a significant impact. Although

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environmental literacy and problem knowledge may be present in NAM, substantial attribution of responsibility and perceived outcome efficacy are also necessary to completely activate personal norms. This explains why some students may have a basic understanding of environmental literacy but only have a moderate awareness of the problems of climate as they may not see these concerns as personally important or feel motivated to take action.

Limitations

One significant limitation of this study was the decline of participation from a particular school, which reduced the diversity of the sample. This limitation potentially affected the representation of the broader nursing student population, as different institutions may offer varying levels of exposure to environmental literacy and global climate change awareness. To ensure accurate representation and account for the non-participating school's population, the researchers recalculated each participating school's sample size by updating its population and applied stratified random sampling using Yamane formula determining sample size per stratum. Another limitation is its geographical scope, since it is inclusive to participants studying in private universities within the city of Baguio, Benguet. Additional limitation is the limited representation of respondents from Level 3 and 4, which may not fully represent the perspectives and experiences of those in levels 1 and 2.

IV. Conclusion

Nursing students show proficient knowledge about environmental issues, with a strong emphasis on environmental consciousness, indicating that students feel a strong personal responsibility to act sustainably. Nursing students are uniquely positioned to lead the shift toward a more sustainable healthcare system by actively promoting environmentally responsible practices.

Nursing students show adequate knowledge about global climate change, its impact on the natural and human environment, causes, energy consumption, and various global organizations and agreements. It indicates that there is a willingness to engage and be aware of environmental issues but lacks urgency and consistency in their attitude and actions.

Lastly, the findings suggest a positive relationship between environmental literacy and awareness about global climate change among nursing students. Although the correlation is weak, it indicates that higher environmental literacy may be associated with greater awareness of climate-related issues.

V. Recommendation

Higher education institutions should integrate environmental education into BSN curricula to boost students' environmental literacy and promote sustainable practices. Curricula should include focused content on environmental health, climate change impacts, energy efficiency in healthcare, and the nurse's role in sustainability. Additionally, educational modules or pamphlets that link broader climate change concepts to health impacts and healthcare practices. Hands-on sustainability projects and partnerships with nursing schools, healthcare facilities, and environmental groups, are recommended to provide practical experience through workshops, seminars, and events.

Policymakers play an important role in supporting nurses' involvement and addressing gobal climate change. This can be achieved by incorporating relevant education into nursing curricula, enhancing support for sustainable hospital practices, and reinforcing the implementation of existing policies that promote environmental sustainability.

Nurse leaders are encouraged to promote climate change awareness and sustainable practices in nursing curricula, practice, and research by promoting literacy of nurses on climate change, advocating their involvement in climate issues, and engaging media and communities to raise awareness. Supporting sustainability initiatives, organizing faculty workshops, and aligning institutional goals with environmental health are also crucial steps in ensuring environmental considerations are embedded in both educational and practical settings.

Nurse practitioners should integrate climate change education and advocate on the health impacts to encourage conservation behaviors. Applying their knowledge to inform communities and patients about the negative health impact of climate change can empower individuals to make environmentally conscious decisions that promote personal and public health.

Nurse researchers are encouraged to include all levels from 1st to 4th year as their respondents to examine differences in hospital exposure and consider including professional nurses as their respondents to assess their environmental literacy and global climate change awareness. Future researchers may investigate the regional or cultural difference among nursing students and investigate various educational approaches, intervention programs, and long-term behavioral changes. These findings will help nursing institutions improve education and practice in environmental literacy and climate change awareness.

Contribution of Authors

The authors confirm that they meet the international criteria for authorship. Each author has made substantial contributions to the conception or design of the work; the acquisition, analysis, or interpretation of data; and the drafting or critical revision of the manuscript. All authors have approved the final version for publication and agree to be accountable for all aspects of the work.

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CONFLICT OF INTEREST

The researchers declared that there are no personal, financial, or professional relationships that influenced the conduct and outcomes of this study.

DISCLOSURE OF USE OF GENERATIVE AI

The researchers used Quillbot for paraphrasing and Grammarly for checking grammar and spelling. Researchers verified the publication and content and revised all the necessary aspects. Moreover, the researchers of this publication take full responsibility for the content of this publication.

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The authors are fourth-year Bachelor of Science in Nursing students from Saint Louis University, Baguio City. They conducted their research titled "Environmental Literacy and Awareness about Global Climate Change among Nursing Students Towards Sustainable Development" during their third year (Academic Year 2024-2025) as part of their academic requirements.

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RESEARCH ARTICLE

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Lived Experience of Carers of Children with Cerebral Palsy

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ABSTRACT

Introduction: Cerebral palsy remains a leading cause of childhood disability, yet research and healthcare systems have largely centered on the child, often overlooking the lived realities of carers who provide sustained, complex care. In the Philippine context, despite existing policies supporting persons with disabilities, gaps in implementation leave many carers navigating significant emotional, physical, and financial burdens with limited institutional support. This study is grounded in the need to move beyond quantitative measures of caregiver burden and instead capture the depth, meaning, and human experience of caregiving through a qualitative lens. Notably, there is a lack of local qualitative studies that deeply explore the lived experiences of carers, creating a critical gap in understanding their realities, challenges, and coping mechanisms. By addressing this gap, the study highlights how carers adapt, endure, and find meaning in their roles, offering a more holistic perspective of caregiving. Ultimately, it aims to inform more responsive, culturally relevant, and family-centered nursing care, while advocating for policies and support systems that recognize carers not merely as extensions of the patient, but as individuals whose well-being is essential to holistic health outcomes.

Aim: This study sought to explore the lived experiences of carers of children with CP and identify the challenges they encounter.

Methods: A descriptive phenomenological approach underpinned by a constructivist perspective was employed. Purposive and snowball sampling were used to recruit 13 participants from four institutional care facilities in Baguio City, Philippines. Data were collected through semi-structured interviews and analyzed using Colaizzi's method. Ethical approval was obtained from the Saint Louis University Research Ethics Committee, and ethical considerations were ensured in accordance with the Philippine Health Research Ethics Board (PHREB) guidelines.

Results: Four major themes emerged from the analysis. First, "Odyssey of Caring," highlights the emotional journey carers undergo, from the initial diagnosis shock to ongoing adaptation. "Encountering Endeavors" describes the adjustments carers make in their careers, social lives, and daily routines, alongside the emotional, physical, and financial hardships they endure. "Courage in the Surge," reveals coping strategies such as seeking strength in solace, family, faith, and digital platforms. Lastly, "Living with Purpose" reflects how carers find meaning and resilience through love, personal passion, and hope for their children's progress.

Conclusion: In conclusion, caring for children with CP is a demanding, complex journey. To alleviate carers' burdens, government agencies must ensure accessible, consistent support services such as respite care and rehabilitation, complementing existing policies to better meet carers' needs.

Keywords: *experiences, challenges, carers, cerebral palsy*

I. Introduction

Children with special needs include those who experience developmental delays and complex medical conditions that limit their ability to perform activities considered typical for their age due to mental, sensory, or physical disabilities (McGranne, 2021; National Council on Disability Affairs). Among these conditions, cerebral palsy (CP) remains one of the most common causes of childhood impairment. Cerebral palsy is a non-progressive neurological disorder that develops during brain formation and is characterized by upper motor neuron damage leading to motor dysfunction (Pillitteri, 2014; Sadowska et al., 2020). Beyond movement limitations, CP is frequently associated with difficulties in speech, cognition, vision, seizures, and hyperactivity, affecting body movement, coordination, muscle tone, and

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balance (Aal-Blowi et al., 2020; Panda et al., 2024; Pillitteri, 2014). CP presents in different forms—spastic, dyskinetic, and ataxic—with spastic CP accounting for more than 80% of cases and often requiring long-term, individualized care (Victorio, 2025).

Globally, disability affects approximately 1.3 billion individuals, representing about 16% of the population, and the prevalence of CP is estimated at 2.11 per 1,000 live births (Fafolahan et al., 2024; Potcovaru et al., 2022). In the Philippines, disability rights are supported by legislation such as the Magna Carta of Disabled Persons (Republic Act No. 7277) and Republic Act No. 10754; however, challenges in implementation persist, leaving many carers feeling inadequately supported (Nasir et al., 2021). Qualitative literature highlights how families of children with CP navigate healthcare systems, social stigma, and accessibility barriers, particularly in low-income settings where limited resources and support networks remain common (Kumar et al., 2024; Smith & Jones, 2023). Local reports also reveal gaps in awareness and services in the Philippines, emphasizing the need for culturally relevant and community-based interventions (Reyes & Santos, 2022).

Within this context, carers play a central role in the daily lives of children with CP. Carers—often parents or close relatives—manage therapy, medical appointments, and daily activities while providing long-term rehabilitation support (Kelly, 2010; Ni et al., 2023). A persistent issue in caregiving is the disproportionate burden placed on women, particularly mothers, who frequently assume the role of primary carers and carry the majority of caregiving responsibilities. Additionally, the International Labour Organization (ILO) stated that 708 million women undertake unpaid care work worldwide. This unequal distribution of care highlights a gender gap in caregiving that may intensify the emotional, physical, and financial burden experienced by carers. Research shows that many carers experience substantial caregiver burden, including high parental stress, emotional strain, sleep disturbances, fatigue, and financial challenges (Lima et al., 2021; Ni et al., 2023). Despite these difficulties, carers frequently demonstrate resilience, drawing strength from acceptance, optimism, faith, and social support networks (Bamber et al., 2023; Lasco et al., 2020; Muzayyanah & Huda, 2023). Some caregivers also report positive experiences, including strengthened relationships, increased knowledge and skills, and a deep sense of pride and fulfillment in their children (Maronga-Feshete et al., 2024). These experiences shape carers' perceptions of caregiving and influence their relationships with healthcare systems (Cook et al., 2021).

Understanding carers' experiences is essential for nursing practice, administration, education, and research. Insights from carers can support the development of holistic and family-centered nursing interventions, inform healthcare policies that strengthen support systems, and guide curriculum development in maternal and child, medical-surgical, and psychiatric nursing. Also, by documenting the lived experiences of carers of children with cerebral palsy, this study also has the potential to contribute to efforts aimed at reducing the gender care gap. Generating evidence on caregiving realities can inform the development of family-centered nursing interventions, support services, and policies that recognize caregiving as a shared responsibility. Such insights may help promote more equitable distribution of caregiving roles, improve access to support systems for both women and men, and enhance the overall well-being of families caring for children with cerebral palsy. Furthermore, documenting carers' experiences contributes to addressing gaps in the literature and strengthening evidence-based care for children with CP.

Despite existing studies on caregiver burden and resilience, few qualitative investigations have explored the lived experiences of carers of children with cerebral palsy within the local setting. This gap is particularly evident in Baguio City, where limited research has examined carers' perspectives and the adequacy of available support systems. This study therefore explored the lived experiences of carers caring for children with cerebral palsy in Baguio City, with the aim of understanding their caregiving journey and identifying the challenges they encounter.

Lastly, this study is grounded in a constructivist phenomenological perspective, which views reality as socially and individually constructed. From this lens, caregiving is understood as a lived and meaning-making experience shaped by the daily realities of carers of children with cerebral palsy. Knowledge is generated through carers' personal narratives, recognizing that each caregiving experience represents a unique reality. Guided by a commitment to social responsibility, the study values carers' perspectives and aims to highlight both the challenges and resilience found in caregiving while ensuring ethical principles of respect, voluntary participation, and confidentiality throughout the research process.

II. Methods

Research Design

This study used a descriptive phenomenological qualitative design to explore the lived experiences of carers of children with cerebral palsy. Phenomenology describes the essence of a phenomenon through individuals' first-person perspectives (Lim, 2024) and enables in-depth exploration of caregiving experiences (Tenny, 2022; Oranga & Matere, 2023).

Settings and Participants

The study was conducted in four different institutional care facilities. An office room for the conduct of the interview was provided for each agency, ensuring a private setting and minimized external disturbances to facilitate focused and undisturbed interviews thereby enabling an in-depth exploration of the carers' experiences. Additionally, the interviews were conducted in person.

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The researchers utilized purposive and snowball sampling, a technique that involves selecting participants based on specific characteristics relevant to the research question (Rana et al., 2023). Through this method, carers who met the study's inclusion criteria were identified and recruited.

Inclusion criteria were the following: a carer who assume primary responsibility for the child's daily needs and well-being; male or female; can be either related or not related by blood to a child with a confirmed diagnosis of cerebral palsy; and who are able to speak and understand English, Tagalog or Ilocano. The age range of carers of children with cerebral palsy (CP) was 18 to 65 years old to ensure participants were legal adults with sufficient caregiving responsibility and lived experience, while the child age range of 5–18 years was selected to capture stable, long-term caregiving during the school-age and adolescent period and to exclude infancy and early childhood, where caregiving is primarily focused on diagnosis, early adjustment, and rapid developmental changes, and were providing care for at least six months. Carers were excluded from participation if they have provided care for less than six months, are not the primary carers of a child with a confirmed diagnosis of cerebral palsy, or are the primary carers of a child without a confirmed diagnosis of cerebral palsy, and those who cannot

understand and speak either English, Tagalog, or Ilocano. Also, carers were excluded if they are caring for someone with cerebral palsy who falls outside the 5-18 age range or if they themselves falls outside the 18-65 age range and if they are involved in a similar research study at the same time that this study was being conducted.

The study included thirteen (13) carers who were purposively selected based on the inclusion criteria. Distribution is eight from the first institutional care facility, two from the second, one from the third, and two from the fourth. To maintain anonymity, participants were assigned pseudonyms represented by different shades of the color green, which symbolizes cerebral palsy

Table 1 presents the demographic profile of the participants, including their pseudonyms, age, category of carer (blood-related or non-blood-related), and the length of time they have been providing care.

Data Gathering Tools

The study employed semi-structured interviews for data collection. Semi-structured interviews allowed carers to share their unique experiences while ensuring key topics are covered. The recommended data collection method in descriptive phenomenological design is in-depth interview with semi-structured questions. The interview guide consisted of the questions, "What are your experiences in caring for children with cerebral palsy?" and "What are the challenges that you encountered in your role as a carer?" with follow-up questions formulated based on the participant's responses.

The semi-structured interview guide was researcher-developed based on the study objectives. The questions were reviewed and refined with the assistance of the research adviser and four expert panelists, who have previous qualitative research knowledge, to ensure content validity and clarity, consistent with recommended practices for qualitative instrument development (Creswell & Poth, 2018; Polit & Beck, 2021).

Data Gathering Procedure

Data collection commenced after obtaining ethical approval from the Research Ethics Committee (REC) of Saint Louis University. While awaiting approval, the researchers enrolled in an open university training program on psychological first aid and emotional preparedness, which included strategies for handling participants' emotional reactions and self-awareness exercises to maintain objectivity during interviews.

To prepare for the actual interviews, the researchers conducted ten mock interviews within the research group and guidance from the research promoter, who provided mentorship on interviewing techniques, active listening, and probing questions. The research promoter supervised the process, offering feedback to ensure consistency, neutrality, and adherence to ethical standards.

Table 1

Participants' Demographics

Pseudonym	Age	Category of Carer	Number of Month/ Years as a Carer	Sex
Chartreuse	28 y/o	Non-blood Related	1 year and 9 months	Female
Juniper	41 y/o	Non-blood Related	3 years	Female
Sage	40 y/o	Blood Related	7 years	Female
Lime	31 y/o	Blood Related	5 years	Female
Fern	31 y/o	Blood Related	6 years	Female
Olive	23 y/o	Blood Related	2 years	Female
Emerald	48 y/o	Non-blood Related	12 years	Female
Pear	28 y/o	Blood Related	6 years	Female
Moss	40 y/o	Non-blood Related	5 years	Female
Shamrock	48 y/o	Blood Related	9 years	Female
Parakeet	26 y/o	Non-blood Related	3 years	Female
Viridian	46 y/o	Blood Related	5 years	Female
Cadmium	25 y/o	Blood Related	4 years	Female

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Following REC approval, the researchers coordinated with the heads of four institutional care facilities to facilitate participant recruitment. Potential participants were approached personally, and the study's purpose, confidentiality measures, and participant rights were clearly explained. Eligibility was confirmed based on the established inclusion criteria. Written informed consent was obtained in person by the authors, with communication conducted in Tagalog, English, or Ilocano to ensure participants' comfort and understanding, and was facilitated directly by the researchers.

Interviews were scheduled at locations chosen by participants to ensure comfort and privacy. Before each interview, verbal consent for audio recording was obtained, reiterating the consent previously signed. Interviews lasted 45–60 minutes and were conducted in subgroups, with designated roles for each member: interviewer, note-taker, and recorder.

After each interview, participants were informed they might be contacted later for validation of the transcribed data. Audio recordings were transcribed into encrypted Google Documents, with pseudonyms used to protect participant identity. Transcriptions included verbatim dialogues, nonverbal cues, and initial thematic notes, and were validated through multiple reviews and comparisons with the original audio. All data were securely stored on password-protected devices and Google Drive folders, accessible only to the research team, and will be retained for a minimum of five years. Data collection continued until saturation was achieved.

Data Management Analysis

Data were analyzed using Colaizzi's seven-step phenomenological method to systematically capture the essence of carers' lived experiences. All interview transcripts, field notes, and audio recordings were read and re-read to achieve immersion in the data. Significant statements related to caring for a child with cerebral palsy were identified and extracted, after which meanings were formulated through collaborative coding and team discussions to ensure fidelity to participants' accounts. Similar meanings were grouped into theme clusters, resulting in twelve subthemes that were synthesized into four major themes. These themes were integrated into an exhaustive description of the caregiving experience and distilled into a concise statement representing its fundamental structure. The findings were returned to participants for member checking (April 22–27, 2025) to confirm accuracy and resonance, and feedback was incorporated into the final analysis.

To enhance rigor, inter-coder reliability was established through independent coding, comparison of interpretations, and consensus-building discussions among the research team, without the use of statistical computation. An external qualitative research expert further reviewed and validated the developed themes. These procedures strengthened the credibility, dependability, and confirmability of the findings.

Establishing Trustworthiness

The research's trustworthiness was highlighted by following Lincoln and Guba's (1985) standards, which covered confirmability, credibility, transferability, and dependability. Furthermore, we referred to Polit and Beck (2021) to guarantee methodological rigor, highlighting the significance of creating reliable, high-quality research that truthfully represented participants' experiences and reduced the chances of misinterpretation.

To ensure confirmability the research incorporated a detailed record of the research process and decision-making steps. Similarly, reflexivity in this research encouraged the researchers to critically reflect on their actions, decisions, and assumptions throughout the study. Triangulation and member checking enhanced the confirmability of data interpretations by enabling participants to confirm the accuracy and relevance of the findings.

To ensure credibility the researchers utilized member checking to verify and validate the accuracy of their stories and interpretations. In this process the researchers used a neutral colleague who was part of the research team but not directly involved in a particular interview reviewed, read, and reacted to field notes.

Detailed contextual information about the study's location in Baguio City was provided to improve transferability since Baguio city is a diverse community. Data collection involved participants from various environments, including special education schools and community organizations, representing a range of carers' experiences.

Dependability focused on the reliability and steadiness of results throughout the research journey. During the study, the research utilized the six categories of the audit trail proposed by Halpern, as described by Lincoln and Guba (1985). In this process the researchers were divided into three independent groups, each group was responsible for conducting a comprehensive review and analysis of the data. After an independent coding and analysis of the data, the group reconvened to compare their codes, themes, and interpretations. This process ensured consistency and allowed the researchers to cross-validate their findings, thereby enhancing the credibility and trustworthiness of the study.

Incorporating the aspects of credibility, transferability, dependability, and confirmability into the research significantly improved the quality and reliability of the findings. This study aimed to provide valuable insights into the field by thoroughly examining the challenges that carers of children with cerebral palsy faced.

Ethical Consideration

The study followed ethical guidelines established by the Philippine Health Research Ethics Board (PHREB) to ensure the protection and dignity of research participants. It aimed to provide social value by exploring the lived experiences of carers of children

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with cerebral palsy to better understand their challenges, coping mechanisms, and support needs, which could inform interventions and education for healthcare professionals. Informed consent was obtained from participants aged 18–65, ensuring voluntary participation and the right to withdraw at any time. The study minimized potential risks by conducting interviews in a supportive environment and providing psychological support or referrals if needed. Confidentiality and privacy were protected through anonymized data and secure storage in compliance with the Data Privacy Act of 2012 (RA 10173). Principles of justice, transparency, and scientific validity were upheld through fair participant selection, open communication, and a rigorous research design to ensure credible and meaningful findings.

III. Findings and Discussion

Figure 1:
Illustration of the Experiences of Carers of Children with Cerebral Palsy

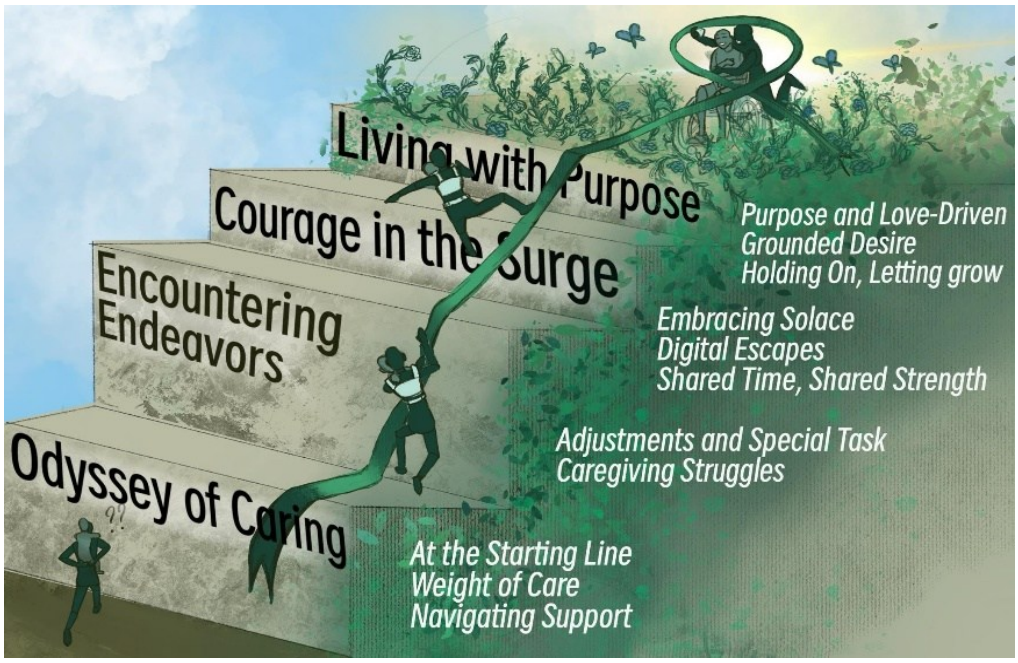

Figure 1 presents the journey of carers of children with CP; shown as a staircase filled with evolving narratives. At the base, "Odyssey in Caring" reflects the initial responses, everyday roles they fulfill as primary carers, and their needed support. As they ascend to "Encountering Endeavors," varying challenges emerge. "Courage in the Surge" presents solutions in overcoming the hurdles encountered. At the top, "Living with Purpose" symbolizes how carers find meaning through their children's every little step filled with love and commitment. The green ribbon threading through the steps represents the course the carers go through, the hope and the unbreakable bond with their child. The final embrace at the summit reflects acceptance and meaning into transforming hardship into a life of greater purpose and connection.

Figure 2 presents the concept map of the study, which shows the 4 main themes identified: 1) The Odyssey of Caring; 2) Encountering Endeavors; 3) Courage in the Surge; and 4) Living with Purpose. Below the main themes are the subthemes identified.

1. *Odyssey of Caring*

This theme, "Odyssey of Caring" highlights the experiences that carers faced. The following are presented as subthemes:

1.1. At the Starting Line

This subtheme captures the carers' first experiences following their child's diagnosis of cerebral palsy. It reflects the experiences that they faced at the beginning of their journey, marking the starting line of their odyssey.

Sage shared:

"After niya madiagnose, lagi siyang naho-hospitalize nun after ng pag-stay namin ng more than 1 month sa hospital after nun prone siya magkaroon ng pneumonia so parang every 2 to 3 months nasa hospital kami ganun tapos nag-woworry pa rin… pag nakatulog kami elevated yung bed namin yung kamay ko nakalagay lang sa kanya para pag kunware parang pinipilit ko na wag akong makatulog pero kapag makatulog man ako at least mafifieel ko siya na pag gumising siya so ayun… bilang mother, nakakaweaken… kapag nasasaktan siya feel ko nasasaktan rin ako." (*"After the diagnosis, my child was frequently hospitalized. After we stayed in the hospital for more than a month, they became prone to pneumonia, so we ended up in the hospital every 2 to 3 months. I still worry a lot. When we sleep, the bed is elevated, and I keep my hand on them so I can feel it if they wake up. I try to stay awake, but if I do fall asleep, at least I'll know right away. As a mother, it's really weakening. When my child is in pain, I feel that pain too.*")

Viridian recalled:

"Nung una na sinabi ng doktor na ganito yung findings doon sa MRI, nagtanong pa ako kasi hindi ko nga alam. Wala akong kalam-alam sa cerebral palsy. Tinanong ko kung may gamot po ba? Kasi atleast may pag-asa pa ako. Pero nung sinabi na niya na "hindi ko masabi kasi may patient na gumaling, meron din hindi", sabi niya… iyak ako nang iyak. umiyak ako, parang hindi ko tanggap. Umuwi kami na wala ako sa isip." (*"When the doctor first explained the MRI findings, I asked questions because I didn't understand—I had no idea what cerebral palsy was. I asked if there was any*

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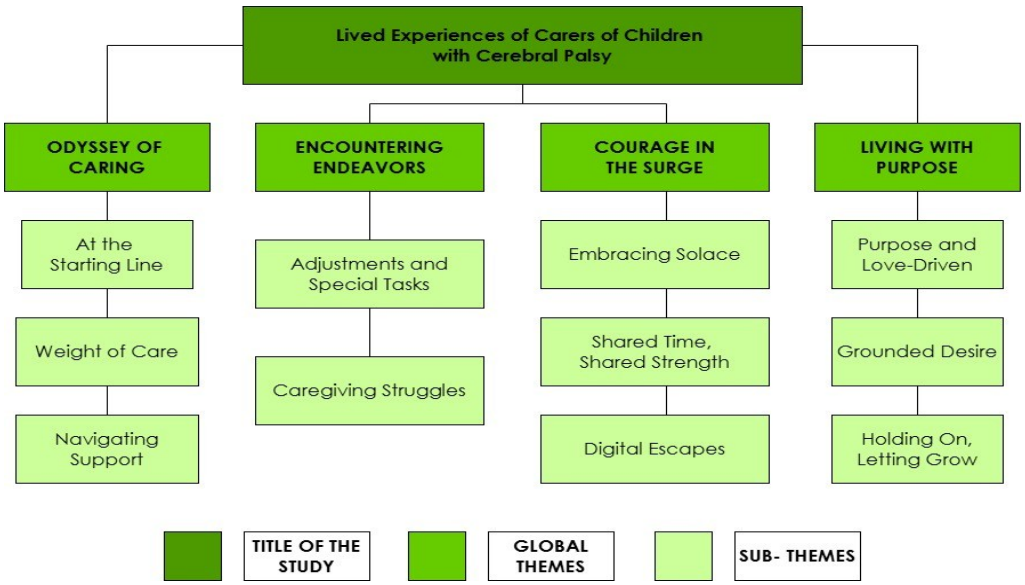

Figure 2. *Concept Map of the Study*

medicine for it, hoping there was still a chance. But when the doctor said, "I can't say for sure—some patients recover, some don't," I just broke down. I cried and cried. I couldn't accept it. We went home, but I felt completely lost and out of it.")

These stories make clear that the shock of diagnosis is not a fleeting moment but an ongoing emotional process, shaped by both the clinical reality and daily demands of caregiving. Aligning with this, Ni et al. (2023) found that carers of children with CP experience higher rates of mental health issues, such as anxiety and depression, compared to the general population, along with physical health struggles including sleep problems, fatigue, and weight loss.

These initial responses experienced by these carers upon understanding their child's CP diagnosis reveals a deep emotional and psychological disruption marked by confusion, denial, exhaustion and profound grief. Some carers reacted with immediate emotional collapse, overwhelmed by unfamiliar medical terms and the uncertainty of their child's future. These narratives show that initial shock is shown not as a single moment, but as a continuing emotional journey shaped by both the diagnosis and the lived reality of caring for a child with CP.

1.2. Weight of Care

This subtheme encapsulates the everyday lives that carers experience in their roles. This narrative vividly shows the experiences inherent in caring and the need for continuous care.

Juniper explained:

"48 hours kang nandito, tapos lalabas ka.. Babalik ka nanaman... So yung everyday life namin dito, we are like a parent to them.. Kasi some of them don't have parents... We are in a disciplined-side, we are in immediate need of help nila. changing their diapers, giving them kung ano yung mga kailangan nila... As a parent din diba alam ninyo kung paano... Hindi lang kasi kami caregiver." (*"You're here for 48 hours, then you go out... then you come back again. So, in our everyday life here, we are like parents to them. Because some of them don't have parents. We are on the disciplined side, we are in immediate need of their help. Changing their diapers, giving them what they need... As a parent, you know how it is. We're not just caregivers."*)

This narrative emphasizes the complex loads that carers face, and these include emotional, physical and practical demands of everyday caregiving. Aligning with this, McGranne (2021) and Sadowska et al. (2020) show that care goes beyond motor issues, requiring constant, hands-on attention, as reflected in Juniper's experience of acting as both caregiver and parent.

The experiences shared underscore the deep and complex burden of care that carers bear on a daily basis, capturing the emotional, physical, and time-consuming demands built into their work. The carer emphasizes that their role goes beyond basic caregiving tasks, describing themselves as a parental figure who provides not only physical care but also emotional presence and discipline, especially for those who lack parents.

1.3. Navigating Support

"Navigating Support" explores the various forms of support experienced by carers of children with cerebral palsy.

1.3.1. Family and Community Support

Cadmium mentioned:

"Meron akong emotional support ng parents, family, and husband… " (*"I get emotional support from my parents, family, and my husband.'*)

Juniper expressed:

"Ang ganda ng organization namin. Sama-sama kaming umiiyak, nagpapakatatag. Kapag may nawala, we grieve together. We embrace each other's pain." (*"Our organization is amazing. We cry together, we*

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stay strong together. When someone is lost, we grieve together. We embrace each other's pain.")

Both Cadmium and Juniper highlight the essential role of support systems in their caregiving journeys, with Cadmium emphasizing emotional support from immediate family which aligns with Larasati and Affandi's (2020) findings on the resilience drawn from close family ties among mothers of children with cerebral palsy. In contrast, Juniper appreciates peer and community support, defining shared mourning and peer support in line with Mwinbam et al. (2023), in which everyday experiences within community groups alleviate caregiver stress in limited resource environments, and McGrane, Masson, and Martins (2021), which demonstrated that group respite programs facilitate healing through peer contact. Both of these experiences show that individual and collective support systems are essential to carers' endurance and emotional health, as Kelly (2010) also describes.

1.3.2. Government Support

Government support is essential in implementing plans that benefit people, including carers. Some believe the government gives enough help through financial aid, health services, and support programs that make the carers' jobs easier. However, others think the support is not consistent. They say it can be hard to access, doesn't last long, or doesn't cover what carers need.

Pear stated:

"Pagdating naman sa pinansyal, sa Neuro, every 3 months, lahat ng gamot niya doon, sabi nung naka assign sa BGH na, sa DSWD, papresyuhan mo sa pharmacy bago mo ipila at dalhin sa DSWD region, kung magkano nakalagay dun, yung ang ibibigay sa DSWD…" (*"Regarding financial matters, for neurology, every three months, all of his medications there, according to the person assigned at BGH, at DSWD, you need to have them priced at the pharmacy before you queue and bring them to the DSWD regional office. The amount indicated there is what will be given to DSWD…"*)

The narrative of Pear provided support that the government gives access to necessary healthcare services. However, despite these moments of support, a participant also voiced discontent with the lack of government support.

Juniper shared:

"Honestly, wala talaga akong na-feel na support from the government. Kahit SPED schools kulang ang suporta, paano pa kaya kaming carers? Sa tingin nila trabaho lang to, pero they don't see the full responsibility we carry– parang magulang na rin kami. Kung ang PWD kulang ang tulong, paano pa kaming nag-aalaga sa kanila? Sabi ko nga, hindi nila naiintindihan 'yung tunay na pangangailangan ng mga tulad namin." (*"Honestly, I didn't feel any support from the government. Even SPED schools lack support, so how much more for us carers? They think it's just a job, but they don't see the full responsibility we carry — it's like being parents too. If PWDs don't get enough help, how much more for us who are taking care of them? Like I said, they don't understand the real needs of people like us."*)

While legislation such as the Magna Carta for Disabled Persons exists, implementation falls short. Nasir et al. (2021) similarly identified weak governmental follow-through on disability services in the Philippines, leaving many carers feeling neglected. The narratives highlight the disconnect between government policies. The experience of Juniper reflects a frustration with the government. Juniper's question "Kung ang PWD kulang ang tulong, paano pa kaming nag-aalaga sa kanila?" shows how carers are marginalized. These findings are discussed in Namasaba et al. (2022) and Nasir et al. (2021), which highlight how inefficiencies and neglect in the Philippines contribute to carer burnout and deteriorate trust in government's management and services. Dlamini et al. (2023) further explain that carers of children with CP often experience dissatisfaction with rehabilitation services due to shortage and inaccessibility, which only deepens the carers' burden. The narratives show that carers live in different realities, comforted by the community but challenged by the burdensome government. The support they receive is often conditional or based on personal connections.

2. Encountering Endeavors

Encountering endeavors entails the challenges carers face. This includes the following as subthemes:

2.1. Adjustments and Special Tasks

Carers of children with cerebral palsy gradually learn to accept and adapt to differences. When it comes to taking care of a child with cerebral palsy, the participants have adjustments to go through and special tasks.

2.1.1. Adjustments

Career Adjustments

Olive expressed:

"Kakatapos ko lang sa boards tapos imbes na magwork po sana ako, hindi po ako nakapagwork…. frustrated po kasi balak ko po sana magmedical VA (virtual assistant) nalang po para sa bahay nalang din ganyan. Nakakafrustrate lang na walang work ganun po, like gustong gusto ko na pong magwork, naghahanap po ako ng pwedeng magbantay sa kanya pero wala pang may kaya kase everyday ilalabas mo siya." (*"I had just finished the board exams and was supposed to start working, but I couldn't. It's frustrating because I was planning to work as a medical virtual assistant so I could stay at home. It's just really frustrating not having a job. I really want to work, and I've been looking for someone who can take care of the child, but there's no one who can handle it yet because you have to take go out every day."*)

The statement of the primary carer shows how caregiving responsibilities significantly restrict career opportunities. The informants described how complex

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the nature of caregiving is, whether due to constant supervision or responding to the child's different needs, which limits their ability to find or maintain employment (Smith and Blamires, 2022). The emotional toll due to career disruption is also evident, expressing frustration over not being able to work. As noted by Habib et al. (2025), unemployment brings feelings of frustration.

Olive's statement demonstrates how caregiving responsibilities limit her ability to work, despite having completed her board exam... The frustration stated reflects the emotional pressure imposed by unemployment, as well as the difficulties of reconciling caregiving and career goals. The requirement for constant monitoring are clear impediments to employment. This example exemplifies the difficult interplay between caregiving responsibilities and professional changes.

Social Life Adjustments

Moreover, the demands extend beyond physical tasks as carers also sacrifice their social lives and personal time.

Olive stated:

"Ako, hindi na masyado nakakapagmeet with friends kase syempre kailangan niya po ako sa bahay. Wala pong mag-aalagang iba sa kaniya." (*"I can't really meet with friends anymore because, of course, she needs me at home. There's no one else who can look after her..."*)

The informant's experience of being unable to meet with friends and feeling a deep sense of obligation to provide daily therapy at home reveals the emotional and social sacrifices commonly endured by carers. This aligns with the findings of Dlamini et al. (2023), stating that caregivers of children with CP frequently face profound feelings of loneliness, isolation, and the loss of personal opportunities as a result of their caregiving responsibilities. They've further noted that carers are often unable to participate in social events or gatherings, as the demands of full-time care leave little room for personal or social engagement.

2.1.2. Special Tasks

Carers have to do special tasks to continue care at home, ensuring that the child's special needs are met daily.

Olive described:

"Kailangan everyday ithe-therapy mo din siya. Yung parang tinuturo nila dun sa therapy center, kailangan gawin mo din sakaniya sa bahay... Everyday kailangan mong gumising para gawin yung therapies niya." (*"You need to do therapy for her every day. What they teach at the therapy center, you also need to do at home. Every day, you have to wake up to do her therapies."*)

The informant's statement reflects the intense dependence of children with cerebral palsy on their carers. As stated by Dlamini et al. (2023), caring for a child with CP demands constant planning and attention, often forcing carers into rigid routines and leaving little room for spontaneity (Cook et al., 2021). And while home-based therapy offers benefits (Beckers et al., 2020), it also adds to the carer's already heavy workload (Dlamini et al., 2023). Carers undertake a multifaceted role that encompasses personal care, health management, emotional support, and developmental assistance. Carers have to become adept with the different caregiving tasks to effectively and efficiently care for the children with CP.

2.2. Caregiving Struggles

Taking care of a child with cerebral palsy can be a fulfilling experience, but it is also a difficult one. This theme explores physical, emotional, and financial struggles that carers exert.

2.2.1. Emotional and Physical Struggles

Chartreuse expressed:

"Depress na depress talaga parang ngayon. So, kagabi kasi may mga nangyari nanaman nakapagpa-puyat sa amin. Ang goal namin kagabi since duty kaming lahat kahapon is dapat maaga kaming matulog, kaso may nangyari. So, yun parang puyat ulit kami… deprived talaga sa tulog… nagiging emotional ako pag nagkakasakit talaga sila." (*"It's really depressing now. Just like last night—something happened again that kept us all up. Our goal was to sleep early since we were all on duty yesterday, but things didn't go as planned. We ended up sleep-deprived again. I get really emotional when the kids get sick."*)

Cadmium reflected:

"Puyat, pagod, the sleepless nights and jay ngay kaslaka nga mabutbuteng (natatakot) nga maturog ta baka ag saket manen. Sipag at tiyaga lang, patience and then panang aawat (understanding) (*"The exhaustion, the fatigue, the sleepless nights… and then there's that fear, like you're scared to fall asleep because the child might get sick again. It takes hard work and perseverance, patience, and understanding."*)

These narratives show the experiences of caring for children with CP of both non-blood and biological carers reflect a journey that is shaped by patience, love and unconditional dedication in which despite the emotional and physical exhaustion, they remain committed to their responsibilities. Chartreuse' statement aligns with Ni et al. (2023), who found that carers of children with cerebral palsy often experience disrupted sleep, fatigue, and emotional strain. The statement from non-blood carer of children with CP emphasizes the strong emotional connection that is possible even without a biological link. On the other hand, Cadmium's statement aligns with the findings of Lima et al. (2021), highlighting how emotional exhaustion is common among carers, especially when opportunities for self-recovery are limited. These heavy emotional responses that the participant felt align with the findings from Muzayyanah and Huda (2023), who noted that the psychological toll of caregiving is intensified by fear, uncertainty, and grief.

In line with the physical struggles, a participant shared about maintaining health.

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Emerald stated:

"Healthy ang sarili ko. Dapat malakas ako palagi, kasi pag tinetherapy ko sila, napakabigat lalo na yung mga mas malalaki sa akin. Ang ginagawa ko, walking na yung pinaka-exercise ko. Walking every morning, then, healthy diet, balanced diet." (*"I'm healthy. I need to always be strong because when I do therapy with them, it's really heavy, especially those who are bigger than me. What I do is walking as my main form of exercise. I walk every morning, then follow a healthy diet, a balanced diet."*)

The participant showed how the continuous cycle of physical exhaustion creates the risk of deteriorating health outcomes if adequate support is not provided. As emphasized by Dlamini et al. (2023) and Ni et al. (2023), carers experienced generalized pain due to their everyday caring roles, having experienced pain in their shoulder, wrist, and backaches that resulted from lifting the children.

2.2.2. Financial Struggles

Moreover, carers also experience significant financial difficulties that stem from the demands of their caregiving role. These struggles are not always visible but have a substantial impact on their well-being.

Sage revealed:

"Actually mahirap minsan parang bahala na lang kumbaga, pag malapit na kinocompute ko, kunware nagbigay ng 100k, yung husband ko, good for 1 and a half months. Ineestimate ko na lang kunware kapag malapit na yung 1 and a half or 1 month na or and 1 week sinasabi ko na paubos na yung pera o kaya minsan humihiram ako sa kapatid ko na lang muna bago siya makapag padala yung husband ko." (*"Actually, it's hard sometimes, it's like I just leave it to fate. When it's getting close, I compute it. For example, if my husband sends 100k, that should last for about one and a half months. I just estimate it, like when it's getting close to one and a half months, or one month, or even one week, I tell him that the money is almost gone. Sometimes, I even borrow from my sibling first before my husband is able to send money again"*)

Sage's narrative reflects the financial difficulties that carers often face, consistent with existing research on the economic challenges associated with caregiving. This aligns with the findings of Kandasamy et al. (2024), who emphasized that budgeting is a crucial strategy for families engaged in long-term caregiving, as reflected in Sage's careful expense estimation and her reliance on sibling support when funds run low. These insights reveal that the financial burden that carers face is often hidden, but it affects how they manage their day-to-day lives. This financial burden, particularly with unstable incomes, makes it difficult for carers to plan or secure financial stability. This kind of burden affects their well-being and the quality of care they can offer.

3. Courage in the Surge

"Courage in the Surge" is about the different coping mechanisms the carers employ in order to rediscover strength to continue their tasks. The following subthemes are presented:

3.1. Embracing Solace

3.1.1. Facing Alone Time

For some carers of children with cerebral palsy, solace becomes a space within which to reflect on themselves, heal, and regain emotional stability. Solitude provides peace away from the never-ending demands of caregiving, allowing them time to reconnect with themselves and process challenging emotions. In those silent moments, carers discover strength and insight that empower them to tackle another day with renewed determination.

Juniper shared:

"After 48 hours of duty, I rest. I sleep a lot, I reflect, and sometimes I just enjoy my quiet time. During college, I loved the crowd, but now, I've learned to love my alone time. I help my family, I go out when I can, but I make sure I recharge. Hindi ko pwedeng dalhin ang work ko sa bahay. When I'm off-duty, I rest my mind and body, because that's how I can keep going." (*"After 48 hours of duty, I rest. I sleep a lot, reflect, and sometimes I just enjoy my quiet time. During college, I loved being around people, but now, I've learned to love my alone time. I help my family, I go out when I can, but I make sure I recharge. I can't bring my work home. When I'm off-duty, I rest my mind and body because that's how I can keep going."*)

Alone time becomes essential here, not just for the physical aspect, but also for recharging emotionally. Carers discover peace in solace, using this time to reconnect with themselves and recover from overwhelming responsibilities. These moments of separation from caring roles give them clarity and renewed strength. Metin Karaaslan and Altay (2024) found that carers of children with special needs who incorporated personal downtime into their routines reported lower levels of care burden and higher emotional regulation. This highlights the therapeutic role of rest and quiet in sustaining long-term caregiving capacity.

Fern shared:

"...kapag overwhelmed na'ko, either nagkukulong ako sa banyo or sa kwarto, hihinga lang ako ganun. Tapos yun lang, after nun okay naman." (*"...when I feel overwhelmed, I either lock myself in the bathroom or in the room, just to breathe for a while. That is all, and after that, I feel okay."*)

These moments of quiet become powerful weapons for regaining composure amidst the unpredictable nature of caring. These brief pauses help carers reset, allowing them to re-engage with their responsibilities more calmly and mindfully. Such strategies, though simple, are vital for reducing the risk of burnout and emotional fatigue. A study by Galal Abdelrahman et al. (2022) found that micro-breaks and intentional time-

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outs greatly improved emotional stability among carers of children with disabilities. This supports the idea that even short-lived escapes play a vital role in maintaining mental well-being.

3.1.2. Anchored in Faith

Additionally, for other carers, faith serves as an anchor in the ever-shifting tides of caregiving. It becomes a source of hope, comfort, and guidance when everything else feels uncertain.

Juniper expressed:

"When things get hard—physically, emotionally, mentally—I thank the Lord because He strengthens me spiritually. Yun yung humihila sa lahat ng aspect ko. Kapag malakas spiritual life ko, everything else follows. We even have devotions here, we pray together. I know the Lord has a purpose for everything, even the pain. That's why I continue to obey and serve. Sabi ko nga, "Everything has its time, wag pilitin pag hindi pa para sa'yo." (*"When things get hard—physically, emotionally, mentally—I thank the Lord because He strengthens me spiritually. That's what pulls me through in all aspects. When my spiritual life is strong, everything else follows. We even have devotions here, we pray together. I know the Lord has a purpose for everything, even the pain. That's why I continue to obey and serve. As I always say, 'Everything has its time, don't force it if it's not meant for you."*)

Viridian stated:

"Yung Panginoon, Siya talaga nilalapitan ko kapag may problema ako." (*"The Lord, He is the one I turn to whenever I have a problem."*)

These words reflect how spiritual belief provides emotional balance. Faith becomes a framework that helps carers understand and carry the weight of their role, especially during moments of fatigue or uncertainty. It creates a sense of purpose, helping them reframe challenges as part of a deeper mission or calling. According to Rohmi et al. (2023), spiritual coping remains a powerful emotional resource for carers, offering meaning and resilience during prolonged stress.

In their narratives, it is clear that faith has a substantial personal role as carers attempt to mitigate the difficulty of their daily labors. Juniper shows how her spiritual life keeps everything in balance, providing her the strength not only to get through physical tasks, but also the emotional and mental strain of caregiving. Her faith is something she engages in actively, in her prayers and shared devotions, and it is something she integrates into her everyday life. Viridian's statement also shows a strong reliance on faith, especially during times of difficulty. For both carers, faith offers comfort, meaning, and a sense of direction, helping them carry out their roles with persistence and peace.

3.2. Shared Time, Shared Strength

The presence of a strong support system, whether through family or friends, greatly influences a carer's emotional well-being and stamina. Spending time with people who understand, listen, and support them provides more than just companionship; it reinforces their sense of value and belonging. These shared moments, even when brief, bring relief and offer emotional reinforcement in the midst of exhausting days. Carers draw collective strength from these relationships, which helps them endure the challenges of caregiving with greater hope and motivation. Through shared time, the weight of responsibility becomes more bearable, reminding them that they are not alone in their journey.

Fern shared:

"Managing stress… paano ba? Uh, kinakausap ko yung papa niya. Yun naman ang ano eh… ang importante eh, yung nagcocommunicate kayong dalawa kasi kayo lang dalawa eh." (*"Managing stress… How do I do it? Uh, I talk to his father. That's what's important, that the two of you communicate, because it's just the two of you in this."*)

Viridian stated:

"Kinakausap ko yung papa niya. Kayong dalawa kasi, ang importante, na nagtutulungan…: (*"I talk to his father. Because what's important is that the two of you are helping each other..."*)

These statements show how vital communication with a partner becomes, especially when they're navigating challenges together. It fosters emotional support, shared understanding, and a stronger sense of unity in decision-making. Strong communication provides a safe space to vent, reflect, and plan, which is critical for couples raising children with disabilities. Findings by Bujnowska et al. (2021) show that open partner communication improves emotional regulation and decreases relationship strain among caregiving couples.

Emerald described:

"I make sure na may one day family bonding kami nung mga anak ko. So that is Sunday. Lagi yan. Sunday is family day. Hindi ako pwedeng mag-tanggap ng appointment sa iba nung home care. Minsan, if merong friends out of town. Kung mayroon mag-invite. Pero kung wala, ayan friends lang. Kape-kape dyan sa tabi. Chika-chika lang. Kung wala, sa bahay lang with the kids. Nanunuod ng TV. Pakikipag-harutan sa bunso ko kasi playful yun kasi nine years old lang siya. Kasi yung kuya, meron nang ibang mundo na yun. So yun, yan ang bonding ko. Kain ng fishball sa labas. Pag Sunday, hindi man ako pumunta sa church. Nandyan lang kami sa Session" (*"I make sure that we have one day for family bonding with my kids. So that's Sunday. It's always Sunday—family day. I can't accept appointments from others on Sundays for home care. With friends, out of town if someone invites. But if not, just friends here, having coffee, chatting. If not, at home with the kids, watching TV, playing around with my youngest because he's playful, he's only nine years old. The older one has his own world now. So that's my bonding. Eating fishballs outside. On Sundays, even if I don't go to church, we're just in Session"*)

Setting aside scheduled, specific days for loved ones displays a boundary-setting habit that safeguards

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emotional well-being. This allows carers to temporarily shift focus and recharge in meaningful ways through relationships that bring joy and connection. These intentional routines provide structure in a life often filled with unpredictability. Consistent with this, a study by Romano et al. (2022) found that family routines and scheduled bonding time helped reduce parental stress in individuals who are caring for children with special needs.

The emphasis on family bonding and communication underscores the role of strong interpersonal relationships in carers coping strategies. Engaging in shared activities and open communication with family members provides emotional support and a sense of normalcy. This is corroborated by the study of Alsamiri et al. (2024), which found that family support significantly alleviates the emotional and financial burdens of caregiving. Also, the importance of social interactions in enhancing carers' well-being is highlighted by Kelly (2010), emphasizing the need for a robust support system.

These accounts show how vital shared time and communication are in maintaining a carer's emotional strength. Fern and Viridian both highlight the importance of speaking openly with a partner, showing that mutual support and understanding help lighten the emotional weight of caregiving. Their experiences point to how teamwork within the family unit builds resilience and reduces feelings of isolation. Emerald's story expands this idea by showing how time spent with children and friends creates moments of joy and relaxation, allowing carers to step back from daily stresses and recharge emotionally. Setting aside regular time for bonding gives structure and emotional relief, helping carers balance their responsibilities with their personal need for connection. Together, these narratives show that strong relationships and consistent communication are essential for sustaining carers through the demands of their role.

3.3. Digital Escapes

In the midst of the daily challenges of caregiving, many carers find joy through digital platforms, offering a temporary but meaningful escape from their routines. Whether it's engaging with media fandoms, watching videos, or following favorite celebrities, these digital interactions provide a momentary break from the weight of caregiving responsibilities.

Chartreuse joked:

"Support nalang kay Jungkook, charot. Alam mo, yun na lang talaga yung mga nagpapaligaya sa akin,yung mga kadeluluhan, para at least, para maging lighter yung duty." (*"Just support Jungkook, haha. You know, those silly things are really the only things that make me happy nowadays—at least they help lighten the burden of work."*)

Though playful, this quote shows how media fandoms or pop culture can offer a fun escape from stress. Immersing oneself in fictional worlds or following beloved celebrities can provide temporary relief from caregiving duties. These parasocial interactions can become meaningful emotional resources that help buffer daily exhaustion. Larasati and Affandi (2020) affirm that media fandoms offer psychological comfort and reduce perceived loneliness among individuals caregiving.

Lime shared:

Ah… wala lang. Masaya lang talaga ako. Nagtitiktok ako" (*"Ah… nothing. I'm just really happy. I use TikTok."*)

Viridian mentioned:

"... through media. Kami, nagvlo-vlog kami, gumagawa kami ng content." (*"... through media. We vlog, we create content."*)

With this, we see how digital platforms become creative outlets. These platforms allow users to momentarily detach from caregiving routines while sharing relatable content and humor. For carers, this engagement is both a stress reliever and a form of community building. Sharma et al. (2022) explain that digital leisure helps carers manage stress while offering self-expression and joy.

4. Living with Purpose

This theme enlightens us on how carers find meaning, direction, and fulfillment in their everyday lives. The following subthemes are:

4.1. Purpose and Love - Driven

Living with purpose means being guided by meaning and intention, especially in the face of hardship. For carers of children with cerebral palsy, caregiving is more than a responsibility, it also becomes a deeply rooted mission shaped by love, resilience, and commitment. This purpose-driven mindset empowers carers to face emotional, physical, and financial challenges with strength and hope.

Lime stated:

"Aside sa pag-aalaga, nagbebenta ako ng mga meryenda dito. Dinadala ko dito. Yun talaga yung passion ko… cooking talaga. Kasi tapos ako ng culinary" (*"I'm selling snacks here. I bring them here. That's really my passion… it's really cooking. Because I graduated from culinary school."*)

Despite the demands of caring for a child with cerebral palsy, the carer continues to pursue their love for cooking—something they studied formally—by selling snacks. This not only serves as a livelihood but also as a source of joy and self-fulfillment, helping them maintain a sense of identity beyond their caregiving role. Their commitment to integrating this passion into their daily life demonstrates resilience and a purposeful drive, rooted in love for their child and a desire to contribute meaningfully to their family's well-being. According to Maronga-Feshete et al. (2024), carers often report positive experiences when they are able to integrate personal interests and values into their routine, which supports emotional well-being and resilience. Furthermore, Cook et al. (2021) emphasize that the act

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of caregiving becomes more sustainable when carers perceive their roles as purposeful and grounded in love.

Juniper emphasized:

"We are not just caregivers; we take on the responsibility of being like parents. Hindi lang kasi kami caregiver, parang kami na rin ang nanay at tatay nila. We cuddle them, check their hygiene, change their diapers, fix their hair… We give them what they need. We give extra love because they are abandoned, neglected, and poor. If you don't have a heart for the person you are caring for, you won't last here. You need a good and compassionate heart to be here." (*"We are not just caregivers; we take on the responsibility of being like parents. We're not just caregivers, we become their mothers and fathers too. We cuddle them, check their hygiene, change their diapers, fix their hair… We give them what they need. We give extra love because they are abandoned, neglected, and poor. If you don't have a heart for the person you are caring for, you won't last here. You need a good and compassionate heart to be here."*)

The participants reveal that caregiving grounded in love becomes a transformative force, turning hardship into purpose. Juniper exemplifies how carers, driven by compassion, transcend traditional roles to become parental figures, offering not just physical care but emotional and moral support, especially for abandoned or neglected children. This aligns with Lasco et al. (2020), who note that carers draw strength from emotional connections and inner values. Karaaslan et al. (2024) further define compassionate love as a conscious blend of emotion and behavior aimed at promoting others' well-being. Among the participants, this love is evident not only in their actions but in their enduring sense of purpose, which fuels resilience and redefines caregiving as a life-affirming, service-oriented journey.

4.2. Grounded Desire

Anchored in the reality of their experiences are the motivations, aspirations, and longing of each carer. Rather than far off dreams, their desires are shaped by what is possible within their context; their child's condition, the healthcare system established by the government, and the community and support around them. These hopes are their tangible goals rooted in love, responsibility, and a deep understanding of their situation. This empowers them to become a quiet revolution and pushes them to strive and yearn for those small victories, from simple goals such as sitting, walking unaided, to having access to therapy.

Olive mentioned:

"Pinapatherapy ko talaga siya para makapagcope sa life para hindi po siya dependent sa akin hanggang sa pagtanda niya, para kahit pagtanda niya kahit alam lang niyang magwalk, makipagcommunicate, magbilang, magbasa." (*"I'm really having him go through therapy so he can cope with life, so he won't be dependent on me as he grows older. I want him to at least be able to walk, communicate, count, and read on his own when he's older"*)

The carers expressed a desire for their children to achieve what they consider "little wins" that contribute to a sense of functional independence in the daily life of their children. Among the three, Olive's narrative particularly underscores this theme, revealing the intentional focus on preparing the child for a future, an unfortunate but real circumstance where they may no longer be present, and the child must navigate life with as much independence as possible through available resources. This ties into Lasco et al. (2020), that highlights how carers often respond to difficult realities with long-term planning and resource-seeking behavior. Their experiences highlight not only the emotional depth of caregiving but also the critical need for a supportive community and healthcare system that empowers carers to sustain hope and build resilience.

Furthermore, as much as their hopes are bound to reality, there are barriers linked to their access to essential resources and support services.

Olive stated:

"Sana may day care center para sa kanila po especially sa… sa level po nila ngayon, yung mga maliliit na bata pa po, ganun po. Tapos pwede po silang iwan since yung mga parents marami po silang kailangan gawin sa labas din, asikasuhin, ganyan na dapat safe sila. Kase wala pa po akong makitang ganun ngayon." (*"Like a daycare center specifically for them, especially for kids at their level—those who are still really young. A place where they can be left safely because their parents also have a lot of things to do outside, errands to run and all that. There should be a safe space for them. Because right now, I haven't really seen anything like that yet."*)

Moreover, Emerald expressed:

"Siyempre, sana may free therapy para sa mga bata. Lalo na yung mga indigent. Meron ba dito sa Baguio? Sa Trinidad meron kasi, pero dito sa Baguio wala. Sana laging may support yung mga yan. Lalo na yung financial para lagi sila makapunta sa therapy…" (*"Of course, I hope there's free therapy for the children, especially those who are indigent. I hope that was the case. Is there one here in Baguio? In Trinidad, there is. But here in Baguio, there is none. So I hope they always have support, especially financially so they can regularly go to therapy."*)

These narratives provide insight into how resource availability or its lack thereof can either empower or limit their ability to provide care for the children. Olive represents carers who are able to act on their grounded desire, transforming hope into progress through resource availability. They pursue therapy for the child to not only improve the child's functional abilities but mitigate their worries and form their own emotional resilience. If left unchecked, this aligns with Ni et al. (2023), who emphasize that without access to appropriate services, carers often experience increased stress, anxiety, and fatigue, making it difficult to sustain caregiving. Emerald and Viridian's statements highlight this gap. Access, particularly in remote areas, is hindered by structural limitations. While support may exist in theory, geographic and economic barriers leave

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it ineffective for many families. Thus, this disconnect between policy and practice is where many of the carers are left behind. Bamber et al. (2023), who observed that carers in underserved areas often rely heavily on personal coping mechanisms due to gaps in institutional support. Kelly (2010) further supports this in discussion of how carers often assume full-time roles out of necessity, not choice. This labor, combined with limited infrastructure, places them at a disadvantage in terms of both their emotional endurance and progress. Emerald's statements greatly reflect that while they are willing and able, they are unsupported by the very systems that should assist them.

4.3. Holding On, Letting Grow

This theme encompasses the resilience that carers have developed throughout their journey. Resilience is the ability to stay strong and keep going even when things get hard. In caregiving, this means continuing to care and give support, even when you're tired, stressed, or facing challenges.

Lime shared:

"Oo. Kahit anong itapon sa amin, kaya naman… dahil din sa mga pinagdaanan noon" (*"Yes. Whatever challenges are thrown at us, we can handle them… because of what we've been through in the past"*)

The use of "pinagdaanan" suggests that their resilience is cumulative. It has been built step by step, through repeated exposure to difficulty-perhaps medical issues, behavioral challenges, or societal stigma. These past trials have become a foundation. Carers develop resilience through repeated exposure to challenges, such as medical issues and behavioral difficulties faced by their children (Larasati & Affandi, 2020). Now, when new challenges arise, Lime draws upon that emotional archive of survival, knowing that they've faced worse-or at the very least, they've faced something, and made it through. This shows how blood ties, coupled with lived experience, can serve as a source of grounded strength and continuity.

Emerald explained:

"Yung ano? Macha- challenge ako. Lalo na pag... Pag may pinakita yung bata na new ability, mas iigihan ko pa na mag-formulate ulit. Mag-isip ulit ako ng isa pang activity na pwede niyang kayanin na nagbabakasakali ako na pwede niyang gawin. So macha-challenge na naman ako na mag-isip na another type of exercise ganun" (*"Which? I get challenged. Especially when... when the child shows a new ability, I try even harder to formulate it again. I think of another activity that they might be able to do, hoping that they can actually do it. So I get challenged again to think of another type of exercise, something like that."*)

This version of resilience is adaptive and fueled by hope. Emerald's approach is future-oriented. The strength comes from seeing progress, no matter how small, and using it as fuel to keep going. What's significant here is the willingness to be challenged again and again. Rather than becoming tired or frustrated, Emerald sees each new development as an opportunity to elevate the effort. The resilience isn't passive-it's proactive, constantly adjusting and reaching to meet the child where they are. Experienced significant caregiver burden, negatively impacting their quality of life; however, many exhibit remarkable resilience through acceptance and adaptive coping strategies, such as optimism and resourcefulness (Bamber et al., 2023)

Together, the participants offer a full picture of what resilience can look like in caregiving. The journey is undeniably challenging, yet positive coping emerges as a powerful response. Lime, being blood-related, brings a foundation of history, pain, and perseverance-proof that strength is built through time and shared trials. Resilience here is grounded in lived experience, using past hardships to navigate present struggles. Emerald, not blood-related, shows a forward-looking form of resilience, rooted in adaptability and hope. Progress in the child's development becomes motivation to keep going, energized by belief in what is still possible. Their narratives show that resilience is not one-size-fits-all. Whether shaped by blood or bond, it grows through connection, commitment, and compassion-rising each time, not just for the self, but for the one being cared for.

Limitation of the Study

The limitations of the study are acknowledged. The researchers are relatively novice in qualitative research, with only three members of the team having prior experience in conducting qualitative studies. Additionally, all 13 participants were female, which presents a gender imbalance and limits the applicability of the findings to male caregivers of children with cerebral palsy. The small sample size, drawn from four institutional care facilities, may further constrain the depth and breadth of insights into caregivers' lived experiences. Moreover, organizational variance exists, as participants from the different institutions were not equally represented, which may have influenced the range of perspectives captured.

IV. Conclusion

The study reveals a multifaceted journey faced by the carers characterized by initial shock and significant sacrifices. Carers face substantial physical, emotional, and financial struggles, often prioritizing their child's needs over their own well-being. The carers find strength through family, community, personal coping mechanisms such as solace, relationships, and digital engagement. Their resilience is deeply rooted in past hardships and a hopeful outlook for their children's development, enabling them to navigate the continuous demands of caregiving with purpose and love.

Notably, all participants in this study were women, highlighting how caregiving and carative roles for children with cerebral palsy are deeply rooted in women's lived experiences. This underscores the continuing gendered nature of caregiving and the disproportionate burden carried by mothers and female carers. The findings therefore emphasize the need for

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stronger support systems and shared caregiving responsibilities to promote the well-being of both carers and families.

V. Recommendations

Through the findings of the study, we therefore recommend the following:

For the carers of children with cerebral palsy:

1. Prioritize self-care by setting aside regular moments for solace or activities that help restore emotional balance, whether through hobbies, relaxation, or quiet time, and stress management techniques.
2. Seek out physical and emotional support through family and/or friends to reduce feelings of stress, delegating tasks to other family members, and provide a network for sharing experiences or an anonymous family group.

For nursing practice and health institutions:

1. Develop family-centered and gender-responsive nursing interventions that actively encourage shared caregiving responsibilities among family members, including fathers and male relatives.
2. Establish caregiver education and support programs that provide training on caregiving skills, coping strategies, and available community resources.

For the National and Local Government:

1. Strengthen monitoring and provision of financial assistance and access to government-funded services such as therapy, rehabilitation, respite care, and psychosocial support.
2. Develop and implement gender-sensitive and gender-responsive programs, projects, and policies aimed at reducing the gender care gap, including initiatives that promote the redistribution of caregiving roles and increased involvement of boys and men in caregiving responsibilities.

For Future Research:

1. Increase sample diversity and generalizability by including a more balanced representation of male and female carers to explore potential gender differences, if any, in caregiving experiences and enhance the generalizability of the findings across different carer groups.
2. Broaden participant sources by involving a more diverse range of institutions and caregiving settings, such as involvement of more therapy centers, support groups, and other caregiving networks to capture a wider spectrum of caregiving experiences.
3. Explore longitudinal studies to track carers' experiences over time, offering insights into the long-term emotional, physical, and financial impacts of caregiving.

Contribution of Authors

The authors confirm that they meet the international criteria for authorship. Each author has made substantial contributions to the conception or design of the work; the acquisition, analysis, or interpretation of data; and the drafting or critical revision of the manuscript. All authors have approved the final version for publication and agree to be accountable for all aspects of the work.

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Conflict of Interest

The researchers declare that there are no conflicts of interest, financial, personal, professional, or institutional, that may have inappropriately influenced the conduct, interpretation, or presentation of this study. The research was carried out with integrity, objectivity, and full transparency to ensure the credibility and ethical soundness of its findings.

Disclosure of Use of Generative AI

To enhance clarity, organization, and overall readability, generative artificial intelligence tools such as ChatGPT and Grammarly were utilized strictly as supportive instruments for refining language structure and improving the presentation of ideas within this manuscript. The development of the study's concepts, analysis, interpretations, and conclusions remains entirely the work of the authors. No research data, findings, or substantive content were generated or modified by artificial intelligence, ensuring that the intellectual contributions presented are solely those of the researchers.

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About the Author

THEA ANGELINE B. BARGAS, KARYL MAE T. CHANCOCO, LOVELY JOY A. DULAY, IRISH DAWN D. ESPIRITU, GABRIELA A. GALANG, ASH F. SOBREVILLA, JESSICA F. VALENZUELA, GENESIS AHDA L. VENTURA, LEONARD MART P. VICTORIA, and MARK XAVIER P. VIDUYA are fourth-year Bachelor of Science in Nursing students. As co-authors of this qualitative study on the lived experiences of carers of children with cerebral palsy, they explored the emotional, physical, and socio-economic dimensions of caregiving through an in-depth and empathetic lens, Their work underscores the resilience, challenges, and adaptive strategies of carers, while highlighting gaps in healthcare support systems and community resources. Through this research, they advocate for strengthened caregiver support, inclusive health policies, and holistic nursing interventions that recognize both the needs of children with cerebral palsy and the well-being of their carers.

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Sociodemographic Characteristics, Parenting Styles, and Feeding Practices of Primary Caregivers of Malnourished Children

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ABSTRACT

Introduction: Malnutrition, encompassing both undernutrition and overnutrition, remains a significant public health concern for children aged two to five. Urban malnutrition persists despite current interventions, underscoring the need to investigate underexplored factors, such as caregiving and nutritional dynamics.

Aim: This study aimed to investigate the multifaceted interplay of parenting styles, feeding practices, and sociodemographic characteristics among primary caregivers of malnourished children.

Methods: This quantitative descriptive study collected data from 220 primary caregivers of malnourished children aged 2-5 years in Baguio City using adopted questionnaires: the Parenting Style Four Factor Questionnaire (PS-FFQ, $\alpha = 0.92$) and the Feeding Practices and Structure Questionnaire (FPSQ-28, RMSEA < 0.08, CFI > 0.90, TLI > 0.90, $\alpha > 0.70$). Sociodemographic data and BMI-for-age z-scores for nutritional status were analyzed using descriptive statistics and Fisher's exact test.

Results: The study revealed that moderate acute malnutrition was the most prevalent type among children in Baguio City (72.7%). Most primary caregivers demonstrated an authoritative parenting style (77.7%), with persuasive feeding identified as the most common feeding practice (31.4%). Parenting style showed a statistically significant difference in the nutritional status of children ($p = 0.05$), whereas feeding practice did not yield a significant difference ($p = 0.327$). Among the sociodemographic factors, caregiver age ($p = 0.019$), highest educational attainment ($p = 0.008$), type of working arrangement ($p = 0.019$), and family structure ($p = 0.025$) showed statistically significant differences. Conversely, the primary caregiver's role ($p = 0.608$) and household size ($p = 0.802$) did not yield statistically significant differences.

Conclusion: Findings highlight the dynamic nature of child malnutrition in Baguio City, emphasizing the role of broader household dynamics and caregiver behaviors in shaping nutritional outcomes. Health sectors and policymakers should consider these concepts to drive the development of nutrition programs and policies that reflect caregivers' unique realities, fostering supportive environments for children.

Keywords: *child nutrition; feeding practices; parenting styles; sociodemographic factors*

I. Introduction

Malnutrition remains a significant public health concern, particularly for children under five, whose development is closely tied to adequate nutrition. The World Health Organization (WHO, 2024) defines malnutrition as a deficiency, excess, or imbalance of energy or nutrient intake. It includes undernutrition, which includes wasting, stunting, underweight, micronutrient deficiencies, and overnutrition, which involves overweight and obesity (WHO, 2024, 2025). These conditions often impair immunity, cognition, and increase children's susceptibility to infections (Gombart et al., 2020; Ibrahim et al., 2017; Morales et al., 2023; United Nations Children's Fund [UNICEF], 2024).

Globally, 149 million children are stunted, 45 million are wasted, and 37 million are overweight. Nearly half of all overweight children live in Asia (Colozza et al., 2023; WHO, 2024). This coexistence of undernutrition and overnutrition, termed the "double burden," is increasingly evident in countries like the Philippines. In 2023 alone, malnutrition was linked to 5,009 child deaths, ranking it the 23rd leading cause of mortality (Philippine Statistics Authority [PSA], 2024). National strategies such as the Philippine Plan of Action for

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Nutrition (PPAN) and Operation Timbang (OPT) aim to combat this crisis but may often fall short at the household level due to behavioral and contextual barriers (Candelario, 2023; Viajar et al., 2020).

The Cordillera Administrative Region (CAR) reflects both progress and ongoing challenges. From 2018 to 2022, stunting rates decreased from 10.55% to 7.35% (Cruz, 2024); however, municipalities like Kapangan reported above-average stunting rates (15.8%) (Cawis, 2023). Overnutrition is also increasing in areas like Abra and Kalinga, where 4–5% of children are overweight (See, 2022). In Baguio City, 2024 OPT data show a mix of issues: 63 children stunted, 256 underweight, 402 wasted, 71 overweight, and 58 obese, all aged 24–59 months (Baguio City Health Services Office, 2024). These statistics highlight biological and environmental determinants, as well as caregiving factors, specifically feeding practices and parenting styles.

Dietary diversity and consistency are considered crucial during the complementary feeding period of 6 to 23 months. Inappropriate feeding practices, whether due to a lack of knowledge or time constraints, can lead to picky eating, food aversions, or chronic malnutrition (Estrem et al., 2016; Mitchodigni et al., 2017; Sdravou et al., 2021). In this regard, Jansen et al. (2021) clustered various feeding practices into Reward for Behavior, Reward for Eating, Persuasive Feeding, Overt Restriction, Covert Restriction, Structured Meal Setting, and Structured Meal Timing, which are deemed to influence children's relationships with food.

Parenting style also plays a critical role. Based on Baumrind (1968) and Maccoby and Martin (1983), parenting is often categorized as authoritative, authoritarian, permissive, or neglectful. Authoritative parenting, marked by warmth and structure, has been positively linked to healthier eating and physical development (Ventura & Birch, 2008). On the other hand, authoritarian or permissive parenting may lead to inconsistent routines or indulgent feeding patterns (Sanvictores & Mendez, 2022).

Generational factors are then relevant to shaping parenting patterns. Baby Boomers often value discipline and order (Bee, 2017); Gen X encourages autonomy (Slepian et al., 2024); Millennials emphasize emotional awareness (Alsagon et al., 2023); and Gen Z, many of whom are young caregivers today, focus on mental health and child autonomy, though digital trends and economic constraints heavily influence them in different facets of life (Doronila et al., 2024; Leyts, 2024).

Sociodemographic characteristics also mediate how caregivers parent and feed their children. Research suggests maternal education increases the likelihood of optimal feeding and healthcare-seeking behaviors (Prasetyo et al., 2023; Rezaeizadeh et al., 2024). However, even educated caregivers may struggle to implement best practices due to inflexible job schedules or household demands. Employed caregivers, especially those in demanding jobs, may rely on convenience foods, while larger or single-parent households often face financial or emotional constraints that disrupt consistent routines (Ahmad et al., 2020; Mishra & Sharma, 2023).

Urban malnutrition, like in Baguio City, persists despite existing programs and resources in cities due to complex, underexplored factors beyond poverty, including evolving feeding norms, caregiver education, and household dynamics. Existing literature inadequately captures these shifts; hence, this study examined how such influences contribute to ongoing child malnutrition in such settings.

Research Objectives

The primary objective of this study was to assess the nutritional status of malnourished children and to determine whether differences exist in relation to parenting styles, feeding practices, and sociodemographic profiles. Specifically, the study sought to answer the following research questions:

1. What are the nutritional status of malnourished children in Baguio City?
2. What are the parenting styles employed by the primary caregivers of malnourished children?
3. What are the feeding practices employed by the primary caregivers of malnourished children?
4. Is there a significant difference in the nutritional status of malnourished children according to:
    a. Parenting Style,
    b. Feeding Practices, and
    c. Sociodemographic Profile
        c.1. Primary Caregiver Role
        c.2. Age
        c.3. Highest Educational Attainment
        c.4. Type of Working Arrangement
        c.5. Type of Family Structure
        c.6. Household Size

Conceptual Framework

This study integrates the Socio-Ecological Model (SEM) and Family Systems Theory (FST) to guide its analysis. SEM explains how behavior is influenced at multiple levels: individual level (e.g., parenting styles and feeding practices) considering the internal components of the behavior with prevention strategies that seek to increase the skills and knowledge necessary to change behavior; interpersonal level (e.g., caregiver age, role, and family structure) considering its influence on household routines and authority dynamics; organizational level (e.g., employment arrangements) which involves primary caregivers' time, energy, and child care along with feeding resources; community level (e.g., household size) reflecting the broader living arrangement and resource-sharing context within which the family operates; and lastly, policy (e.g., education) as a key determinant of caregiver decision-making and where community standards were enforced (William & Mary, n.d.). It helps frame malnutrition as a personal issue rooted in broader systems (William & Mary, n.d.).

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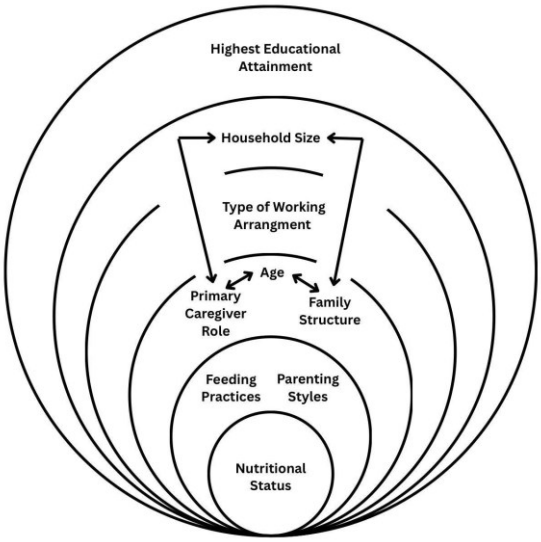

Figure 1
Conceptual Framework integrating Socio-Ecological Model and Family Systems Theory

Complementing this, the FST views the family as a dynamic system where changes in one member or subsystem impact the entire unit (Lang, 2020). This theory highlights how multigenerational caregiving, shared responsibilities, or conflict patterns impact feeding consistency and the overall household health culture (Jongenelis & Budden, 2023).

Using SEM and FST together allows a holistic view of child nutrition, bridging personal behaviors and structural realities.

Significance of the Study

For Nursing Practice

The findings highlighted the need for more family-centered nutritional support. Nurses can use these results to guide primary caregivers through nutritional counseling, parenting education, meal planning, and referrals to nutritionists or support groups. By integrating these personalized interventions, nurses can address each family's unique needs, promote healthier eating habits, and ultimately improve children's overall health and well-being (Mogre et al., 2017). Educational resources, such as posters, flyers, and infographics, can also be derived from this study and may encourage primary caregivers to adopt healthier practices.

For Nursing Education

Integrating the findings of this study into the nursing syllabus, particularly under Nutrition and Maternal Care, can further enrich the training of future professionals. By emphasizing the differences in nutritional status across sociodemographic factors and parenting styles (Westerbotn et al., 2023), students will be better equipped to address these situations in their practice. The findings can be utilized during community, pediatric, and nutrition-related immersions and case-based learning to prepare nursing students to respond more effectively to childhood malnutrition in various settings.

For Nursing Research

This study contributes to the exploration of malnutrition and health behavior by illustrating the multifactorial nature of child malnutrition. It sets a foundation for future studies investigating similar patterns in other populations experiencing nutritional problems and associated conditions. This further encourages continuous inquiry into practical strategies for preventing and addressing child malnutrition (Westerbotn et al., 2023).

For Primary Caregivers

The direct beneficiaries of this research are the respondents, the primary caregivers of malnourished children. This research may allow them to reflect on their parenting and feeding styles. Identifying the various parenting styles and feeding strategies could empower them to provide informed, evidence-based guidance for planning their children's diets and feeding practices (Inbaraj et al., 2020).

For Policymakers and NGOs

The findings may serve as a basis for reinforcing existing policies or developing new initiatives aligned with Sustainable Development Goal 3 (Good Health and Well-being), outlined by the World Health Organization (2022). Furthermore, the study aligns with the National Unified Health Research Agenda (NUHRA) 2023–2028, emphasizing Health Promotion, Health of Vulnerable Populations, and Nutrition and Food Security. It also resonates with the Regional Unified Health Research Agenda-Cordillera Administrative Region (RUHRA-CAR) 2017–2022, particularly its focus on strengthening Health Service Delivery Systems, Food and Nutrition, along with Maternal, Neonatal, and Child Health. This study underscores the urgent need for more integrated, community-focused solutions by grounding its analysis in these national and regional priorities. These may include caregiver-focused educational programs, barangay-based growth monitoring, and nutrition seminars led by BHWs, BNSs, and daycare workers.

II. METHODS

Research Design

The study employed a descriptive, quantitative research design to determine the malnourished children aged 2 to 5 years in Baguio City and to identify significant differences across key variables. The non-experimental approach involves systematic collection and statistical analysis of naturally occurring numerical data (Lederman et al., 2023; Manjunatha, 2019: Siedlecki, 2019; Stangor & Walinga, 2014).

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Participants and Sampling

A total of 220 primary caregivers of malnourished children participated in this study. This sample size was determined using G*Power with $\alpha = 0.05$, power = 0.95, and a confidence level = 95%. Respondents were the primary caregivers of identified malnourished children aged 2-5 years. They are at least 18 years old, residents of Baguio City, and willing to participate in the study. Their children were determined to be malnourished based on the WHO classification (moderate acute malnutrition, severe acute malnutrition, overweight, and obese) (WHO, 2024). Primary caregivers of malnourished children with medical conditions and those with intellectual disabilities were excluded from the study. Respondents were recruited using a consecutive sampling method, in which 25 barangays were initially selected using the =RANDBETWEEN() function in Excel. Additional barangays were added until the target sample size was achieved.

Baguio City is composed of 128 barangays, which served as the sampling frame. From this total, 25 barangays were initially selected using the =RANDBETWEEN() function in Microsoft Excel. The selection of 25 barangays was based on feasibility considerations and the need to ensure sufficient geographic coverage across Baguio City while allowing efficient data collection within the study period. Consequently, the use of the =RANDBETWEEN() function generated random numbers corresponding to barangay indices, ensuring that each barangay had an equal probability of being selected. This approach is consistent with the principles of simple random sampling, in which selection is based on chance, and each unit has an equal likelihood of inclusion, thereby minimizing selection bias (Noor et al., 2022). Additional barangays were subsequently included as needed, bringing the total to 36, sufficient to complete the required number of respondents. Lastly, respondents in the selected barangays were recruited using a consecutive sampling method, in which eligible primary caregivers who met the inclusion criteria were recruited sequentially throughout the data collection period until the required sample size was reached.

Data Gathering Tools

The researchers designed a questionnaire that elicited the respondents' sociodemographic data, including their role, age group, educational attainment, working arrangement, family structure, and household size. Caregivers were then further categorized by the field of their completed tertiary core. Medical courses refer to degrees in healthcare-related fields, including but not limited to Nursing, Medicine, or Allied Health Sciences. In contrast, Non-medical courses refer to degrees outside the healthcare sector.

The parenting styles were determined using the Parenting Style Four Factor Questionnaire (PS-FFQ) by Shyny (2017). This adopted questionnaire demonstrated a high internal consistency, with a Cronbach's alpha of 0.92. It consists of 32 items categorized into Authoritarian (Items 1, 5, 9, 13, 17, 21, 25, 29), Authoritative (Items 2, 6, 10, 14, 18, 22, 26, 30), Permissive (Items 3, 7, 11, 15, 19, 23, 27, 31), and Uninvolved (Items 4, 8, 12, 16, 20, 24, 28, 32). Respondents rated each item from 1 (Never) to 5 (All of the time). The parenting style with the highest total score was identified as the dominant style.

The Feeding Practices and Structure Questionnaire (FPSQ-28) by Jansen et al. (2016) was also adopted to determine the caregivers' feeding practices. This questionnaire demonstrates acceptable model fit and reliability (RMSEA < 0.08; CFI/TLI > 0.90) with $\alpha >$ 0.70. It includes eight constructs on a 5-point Likert scale: Reward for Behavior (Items 7, 12, 14, 20), Reward for Eating (Items 1, 4, 18, 28), Persuasive Feeding (Items 2, 3, 5, 8, 13, 27), Overt Restriction (Items 6, 9, 10, 11), Covert Restriction (Items 23, 24, 25, 26), Structured Meal Setting (Items 15, 21, 22), and Structured Meal Timing (Items 16, 17, 19). Construct means were computed, with higher scores indicating stronger tendencies.

The questionnaires were translated into Filipino and Ilocano using the TRAPD (translation, review, adjudication, pre-testing, documentation) method (Walde & Völlm, 2023). Moreover, the Gunning Fog Index tool was employed to assess their readability. It resulted in a score of 7.540, which indicates middle school readability (Grades 6-8). The questionnaires were pilot tested and split-half tests confirmed reliability with PS-FFQ (Filipino: 0.8531; Ilocano: 0.7328), FPSQ-28 (Filipino: 0.8486; Ilocano: 0.7499), all exceeding the 0.70 threshold.

Data Gathering Procedure

Upon the approval and endorsement of the research panel, the researchers submitted the research protocol to the Saint Louis University Research Ethics Committee for review and approval. The researchers also coordinated with the Baguio City Health Services Office, barangay officials, health center staff, and daycare teachers to facilitate the recruitment and data gathering procedures.

Prospective respondents were identified with the help of the Barangay Health Workers, Barangay Nutrition Scholars, and Day Care Center Teachers. They were screened based on the study's inclusion and exclusion criteria. The primary caregivers of identified malnourished children were invited to participate in the study without coercion and after explaining to them the background of the study, their rights to refuse and withdraw, and the benefits and risks that they may encounter. The researchers also emphasized data privacy and anonymity of the respondents. Respondents were asked to sign an informed consent after clarifying all their questions regarding the study.

Respondents were given ample time to complete the questionnaires. Upon collection, the questionnaires were checked for completeness. The answers were encoded and analyzed using Microsoft Excel, Jamovi and the free version of SPSS. After encoding, the questionnaires were secured in a locked cabinet and the digital files were protected with passwords. In

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accordance with the Philippine Health Research Ethics Board (2017) guidelines, data will be kept for 3–5 years for verification purposes. After this period, physical records will be shredded, and digital files will be permanently deleted.

Data Collection and Analysis

Responses were encoded and organized in Microsoft Excel, and analyzed using descriptive and inferential statistics aided by Jamovi Statistical Software, then was cross-verified using IBM SPSS Statistics Software. Descriptive statistics, particularly frequencies and percentages, summarized caregiver demographics and common parenting and feeding practices using frequency and percentage.

For inferential analysis, the study employed Fisher's Exact Test to determine whether there were significant differences in children's nutritional status across various parenting styles, feeding practices, and sociodemographic variables of their primary caregivers. The decision was based on the observation that over 80% of the contingency table cells had expected frequencies of five or less. Fisher's Test is preferred in situations with unbalanced samples (Daniel & Cross, 2018; Kim, 2017; McDonald, 2014). The Test calculated the exact p-value under the null hypothesis (Agresti, 2006; Bewick et al., 2004). Jamovi automatically applied Monte Carlo simulation to efficiently estimate p-values for larger tables and to approximate results with high accuracy (IBM, 2022).

Ethical Consideration

The study followed ethical principles consistent with the National Ethical Guidelines for Health and Health-related Research (2017). Participation was entirely voluntary, and respondent protection, anonymity, and data confidentiality were strictly maintained throughout data collection, analysis, and interpretation. All respondents were fully informed of the study's objectives, procedures, potential risks, and benefits, before written informed consent was obtained. Minimal risk was anticipated, and appropriate measures were taken to ensure respondent safety and comfort during data gathering. The study was conducted with transparency and fairness, ensuring equitable respondent selection and respect for respondents' rights at all stages of the research process.

III. Results

Sociodemographic Profile of the Primary Caregivers of Malnourished Children

Table 1
Sociodemographic Profile of the Primary Caregivers of Malnourished Children

Sociodemographic Profile		*f*	%
Primary Caregiver	Mother	176	80.00
	Grandmother	15	6.82
	Father	12	5.45
	Sister	5	2.27
	Nanny	5	2.27
	Aunt	4	1.82
	Uncle	2	0.91
	Grandfather	1	0.45
	Brother	0	0.00
Age	29-44 years old	118	53.64
	18-28 years old	50	22.73
	45-60 years old	45	20.45
	61-85 years old and above	7	3.18
Highest Educational Attainment	High School Graduate	83	37.73
	Bachelor's Degree	58	26.36
	Vocational/Technical Graduate	33	15.00
	High School Level	22	10.00
	Elementary Graduate	11	5.00
	Elementary Level	6	2.73
	No Formal Education	5	2.27
	Master's Degree	2	0.91
	Doctorate's Degree	0	0.00
Medical or Non-Medical	Non-Medical	58	87.88
	Medical	8	12.12
If Medical (Specify what Course)	Nursing	8	100.00
Type of Work Arrangement	Unemployed	92	41.82
	Self-employed	38	17.27
	Employed full-time	35	15.91
	Work from Home	30	13.64
	Employed part-time	18	8.18
	Retired	5	2.27
	Student	2	0.91
Type of Family Structure	Nuclear	111	50.45
	Extended	70	31.82
	Blended	12	5.45
	Single-Parent	9	4.09
	Cohabiting Couple	8	3.64
	Grandparent-Led	7	3.18
	Joint	3	1.36
Household Size	3-4	92	41.82
	5-6	87	39.55
	7-8	26	11.82
	1-2	7	3.18
	9-10	5	2.27
	11 or more	3	1.36

Table 1 presents the sociodemographic profile of primary caregivers of malnourished children in Baguio City. Mothers comprised the majority of the respondents, highlighting their central role in child nutrition (Soharwardi et al., 2025). While caregivers varied in background, clear patterns emerged. Most were aged 29–44, those considered "Millennial", or belonging to Generation Y, suggesting a mix of caregiving experience, styles, and potential openness to modern health practices (Barska et al., 2023; Hayes, 2024). The predominance of high school graduates as their highest educational attainment may further influence caregivers' health literacy and engagement with nutritional advice (Prasetyo et al., 2023). Furthermore, Kosendiak et al. (2024) noted that even caregivers with medical backgrounds who are more knowledgeable about healthy eating habits occasionally engage in poor feeding practices. Employment status also varies, with many unemployed, indicating financial challenges in providing nutrition (Milovanska-

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Farrington, 2021). Even those with flexible work faced malnutrition risks due to limited food access and stress (Mishra & Sharma, 2023). Larger households also strain resources, affecting care quality (Ciptanurani & Chen, 2021). These findings emphasize that caregiver sociodemographic factors, more than feeding practices alone, significantly impact child nutrition. Interventions must therefore address broader social and economic contexts to be effective.

Nutritional Status of Malnourished Children in Baguio City

Table 2
Nutritional Status of Malnourished children in Baguio City

Nutritional Status		*f*	%
Undernourished	Moderate Acute Malnutrition	160	72.73
	Severe Acute Malnutrition	33	15.00
Overnourished	Obese	19	8.64
	Overweight	8	3.63
Total		**220**	**100.0**

Table 2 reveals that most malnourished children in Baguio City fall under Moderate Acute Malnutrition (MAM), Severe Acute Malnutrition (SAM), overweight, and obese categories, respectively. Despite urban settings, malnutrition remains a critical issue, particularly among children aged two to five, driven by poverty, poor feeding practices, and recurrent infections (Aktar et al., 2025; Dayani et al., 2024). Nearly 90% of malnourished children are undernourished, with MAM being the most prevalent. Contributing factors include inadequate maternal education, limited access to nutritious food and healthcare services, compounded by household financial constraints and early cessation of breastfeeding (Siddiqui et al., 2020).

Environmental and socioeconomic factors, such as poor hygiene, contaminated food and water, and reliance on cheap, nutrient-poor diets, exacerbate undernutrition. Studies indicate that Filipinos cannot afford a healthy diet, leading to reliance on low-cost, processed foods (UNICEF Philippines, 2023).

Conversely, overnutriton and childhood obesity are rising due to increased consumption of ultra-processed foods, sugary drinks, and sedentary lifestyles (Chen, 2021). Neighborhoods with limited recreational spaces and high densities of fast-food outlets contribute to this trend (Viajar et al., 2023). Food deserts force reliance on calorie-dense, nutrient-poor foods, while aggressive marketing of unhealthy foods influences children's eating habits (Sridhar & Gumpeny, 2024). Increased screen time further correlates with obesity risk (Robinson et al., 2017).

The data highlights persistent gaps in preventive and curative nutrition programs in urban communities. The coexistence of undernutrition and overnutrition calls for integrated, context-sensitive interventions that address maternal health, feeding practices, and urban lifestyle changes. This dual burden of malnutrition poses immediate risks to child health and long-term consequences for non-communicable diseases, carrying significant implications for establishing multi-level local health planning and policy development.

Parenting Styles employed by the Primary Caregivers of Malnourished Children

Table 3
Parenting Styles employed by the Primary Caregivers of Malnourished Children

Parenting Styles	*f*	%
Authoritative	171	77.73
Authoritative, Permissive	17	7.73
Authoritarian	17	7.73
Permissive	7	3.18
Uninvolved	2	0.91
Authoritative, Authoritarian	2	0.91
Permissive, Uninvolved	2	0.91
Authoritative, Permissive, Uninvolved	1	0.45
Authoritarian, Authoritative, Permissive, Uninvolved	1	0.45
Total	**220**	**100.0**

Table 3 presents the parenting styles of 220 primary caregivers of malnourished children in Baguio City, using Baumrind's (1968) typology and Maccoby and Martin's (1983) framework. The majority practiced an authoritative style, balancing structure with emotional support, which is linked to positive developmental and nutritional outcomes (Sanvictores & Mendez, 2022; Sokol et al., 2017). However, even authoritative parenting may not guarantee favorable nutritional outcomes due to food insecurity, economic instability, and limited healthcare access (Lopez et al., 2018; Varela et al., 2022). Apart from these, undernutrition may also be influenced by the availability of low-cost, processed food and fast-food chains available in cities like Baguio City (Barnuevo & Roma, 2023). Lastly, despite its supportive nature, authoritative parenting may fall short when caregivers lack deliberate dietary modeling or variety in meals. Children may still prefer convenience foods or develop picky eating habits, negatively impacting their nutrition (Del Campo et al., 2025; Krupa-Kotara et al., 2024). As Balantekin et al. (2020) highlighted, parenting style alone is insufficient without systemic support.

Less common styles, authoritarian, permissive, and uninvolved, warrant attention. Authoritarian parenting may foster coercive feeding and stressful mealtimes, possibly leading to food resistance or overeating (Baumrind, 1968; Majeed & Joshi, 2024). Permissive parenting, while nurturing, often lacks boundaries, resulting in unstructured eating and nutritional imbalances (Hennessy et al., 2012). Uninvolved parenting is linked to neglect, poor monitoring, and long-term nutritional deficits, especially in high-stress households (Awiszus et al., 2022).

Notably, over 10% of caregivers exhibited "hybrid" parenting styles, combinations such as Authoritative-Permissive or Authoritative-Authoritarian, reflecting adaptive strategies responsive to stress, work demands, or household dynamics. This inconsistency can confuse children and disrupt eating routines, undermining self-regulation (Ventura & Birch, 2008; El-Khani et al.,

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2019). In economically constrained settings, such fluidity may be a coping mechanism.

Cultural context further complicates caregiving. In collectivist Filipino families, extended relatives often share caregiving roles, sometimes promoting conflicting feeding practices rooted in tradition (Lansford, 2022). Grandparents may encourage overfeeding or outdated methods, contrasting with modern nutrition advice. Consistent mealtime routines, predictability, minimal distractions, and child involvement correlate with healthier diets, whereas disrupted routines linked to hybrid or inconsistent parenting increase the risk of malnutrition (Powell et al., 2016). These findings support Family Systems Theory and the Socio-Ecological Model, illustrating that parenting and feeding practices emerge from complex interactions of family dynamics, economic factors, cultural norms, and environmental conditions.

Consequently, interventions should avoid one-size-fits-all approaches and instead provide flexible, culturally sensitive support that addresses caregivers' lived realities. Projects like Project NURTURE (Nutrition among Urban Poor through Unified Response) in Samar, Philippines, which integrates community nutrition education, breastfeeding support, and health monitoring, exemplify effective, context-specific strategies to improve child nutrition in resource-limited urban settings (Save the Children Philippines, 2019).

Feeding Practices by the Primary Caregivers of Malnourished Children

Table 4
Feeding Practices by the Primary Caregivers of Malnourished Children

Feeding Practices	*f*	%
Persuasive Feeding	69	31.36
Overt Restriction	42	19.09
Reward for Behavior	38	17.27
Reward for Eating	9	4.09
Structured Meal Setting	9	4.09
Persuasive Feeding, Reward for Behavior	9	4.09
Structured Meal Timing	8	3.64
Covert Restriction	6	2.73
Persuasive Feeding, Overt Restriction	5	2.27
Overt Restriction, Reward for Behavior	3	1.36
Overt Restriction, Covert Restriction	3	1.36
Reward for Eating, Persuasive Feeding	2	0.91
Reward for Behavior, Structured Meal Setting	2	0.91
Persuasive Feeding, Structured Meal Setting	2	0.91
Reward for Eating, Reward for Behavior	2	0.91
Reward for Eating, Overt Restriction	2	0.91
Persuasive Feeding, Overt Restriction, Reward for Behavior	1	0.45
Persuasive Feeding, Structured Meal Setting, Structured Meal Timing	1	0.45
Persuasive Feeding, Overt Restriction, Covert Restriction	1	0.45
Persuasive Feeding, Overt Restriction, Structured Meal Setting	1	0.45
Reward for Eating, Structured Meal Timing	1	0.45
Reward for Eating, Overt Restriction, Reward for Behavior	1	0.45
Persuasive Feeding, Structured Meal Timing	1	0.45
Overt Restriction, Structured Meal Timing	1	0.45
Overt Restriction, Reward for Behavior, Covert Restriction	1	0.45
Total	**220**	**100.0**

Table 4 presents the feeding practices of primary caregivers of malnourished children in Baguio City. The most commonly reported practice was persuasive feeding (31.36%), followed by overt restriction (19.09%) and reward for behavior (17.27%). These patterns suggest that many caregivers use directive strategies that influence when, how much, or what children eat. Complex combinations of feeding practices were also observed. About 13.64% of caregivers used 2–3 combined practices. Some, like overt and covert restriction, were aligned in purpose, while others, such as persuasive feeding with overt restriction (2.3%), were contradictory. These inconsistencies may confuse children and hinder the development of healthy eating habits.

Overt restriction, or openly forbidding food, can backfire. According to Reactance Theory (Brehm, 1966, as cited in Rosenberg & Siegel, 2016), it threatens a child's autonomy, particularly during Erikson's early developmental stages. Fisher and Birch (1999, as cited in Rollins et al., 2014) and Wehrly et al. (2014) found that this practice increases children's attention to and desire for restricted foods, disrupting self-regulation and contributing to malnutrition.

Covert restriction avoids direct conflict by limiting access without the child's awareness. While it generally supports healthier eating, malnutrition may still occur due to misinformation or nutrient over-restriction (Tahreem et al., 2025).

Reward-based feeding can lead to emotional eating and preference for nutrient-poor foods (Jansen et al., 2020; Calcaterra et al., 2023), complicating emotional regulation in young children.

Lastly, structured meal planning (timing and setting) is developmentally appropriate but may be inconsistently applied due to caregiver time constraints, low self-efficacy, or food insecurity (Jones et al., 2023; Toro et al., 2023). Thus, structured routines alone do not ensure diet quality, frequency, or access to sanitation (Adeyami et al., 2022), underscoring the need for enabling conditions and practical support

Difference in Nutritional Status According to Parenting Styles. Feeding Practices and Sociodemographic Profile

Table 5
Difference in Nutritional Status According to Parenting Styles. Feeding Practices and Sociodemographic Profile

Variables	Fisher's p-value	Interpretation
Parenting Style	0.050	Significant Difference
Feeding Practices	0.327	No Significant Difference
Primary Caregiver Role	0.608	No Significant Difference
Age of Primary Caregiver	0.019	Significant Difference
Highest Educational Attainment	0.008	Significant Difference
Type of Working Arrangement	0.019	Significant Difference

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Variables	Fisher's p-value	Interpretation
Type of Family Structure	0.025	Significant Difference
Household Size	0.802	No Significant Difference
Not significant at $p > 0.05$		

Table 5 presents the Fisher's Exact Test results examining differences in children's nutritional status according to parenting style, feeding practices, and selected sociodemographic characteristics of primary caregivers. A statistically significant difference was observed in nutritional status across parenting styles (p = 0.050), reinforcing the influence of caregiver behavior on child health. This finding is consistent with the Socio-Ecological Model and Family Systems Theory, which view parenting style as shaped by caregiver traits, household structure, and broader social influences. Ventura and Birch (2008) emphasized that parenting style plays a key role in shaping children's eating behaviors, while family dynamics affect authority, emotional climate, and feeding routines. Supporting this, Nadhila et al. (2023) reported lower malnutrition rates among children raised by authoritative parents, and Dayani et al. (2024) highlighted the protective role of emotionally supportive and attentive caregiving. Chen et al. (2021) further noted that authoritative parenting was associated with higher fruit intake among preschoolers, although specific feeding behaviors such as role modeling and structured meal routines exerted stronger effects. However, other studies reported mixed results. Kiefner-Burmeister and Hinman (2020) found no consistent association between parenting style and BMI, attributing variations to cultural and economic contexts, whereas Alahmadi (2019) linked controlling parenting styles to higher BMI, in contrast to this study, which found that such styles were associated with undernutrition. Morowatisharifabad et al. (2016) suggested that parenting style influences nutrition indirectly through feeding behaviors.

In contrast, no significant difference was found between children's nutritional status and feeding practices alone (p = 0.327), indicating that malnutrition cannot be attributed solely to how children are fed. This underscores the multifactorial nature of malnutrition, wherein household size, food allocation, socioeconomic status, caregiver workload, and living arrangements collectively shape nutritional outcomes (Rouf et al., 2023). The frequent use of persuasive feeding, restriction, and reward-based strategies among children with moderate acute malnutrition suggests the presence of problematic feeding dynamics. Masuke et al. (2021) emphasized that inadequate dietary diversity, delayed introduction of complementary foods, and insufficient meal frequency significantly contribute to undernutrition, while Samuel et al. (2025) observed that even caregivers with medical knowledge may engage in suboptimal feeding practices. Although other studies affirm the strong influence of feeding practices on children's food preferences and nutrition, particularly when reinforced by positive role modeling (Scaglioni et al., 2018; Prasetyo et al., 2023), the present findings suggest that parenting style exerts a broader and more consistent influence on nutritional status than feeding practices alone (Dayani et al., 2024; Nadhila et al., 2023; Ventura & Birch, 2008).

Regarding caregiver sociodemographic characteristics, no significant difference was observed across primary caregiver roles (p = 0.608), despite mothers being the most common caregivers, reflecting prevailing Filipino family norms (Alampay, 2024; Gutierrez, 2024). Comparable nutritional outcomes among children cared for by mothers, grandparents, or other relatives suggest that caregiving quality, shared practices, and access to health resources may be more influential than caregiver role alone. This aligns with Family Systems Theory, which emphasizes shared family dynamics over individual roles, and with the Socio-Ecological Model, which situates caregiving behaviors within broader social and cultural contexts. However, caregiver age demonstrated a significant association with nutritional status (p = 0.019), with higher malnutrition rates observed among children cared for by those aged 18–44. Younger caregivers may be more vulnerable to misinformation and reliance on convenience foods (Amarra & Cayabyab, 2022; Picard, 2023), while caregivers aged 29–44 often face competing work and family demands (Oudat et al., 2025; Xiong et al., 2019). In contrast, older caregivers tend to rely on traditional feeding routines and home-prepared meals, though these may not always align with current dietary recommendations (Atoloye et al., 2024; Liao & Deng, 2021).

Highest educational attainment also showed a statistically significant difference (p = 0.008), supporting evidence that education enhances caregivers' capacity to access, interpret, and apply nutrition-related information (Breiner et al., 2016; de Buhr & Tannen, 2020; Lee et al., 2020). Nonetheless, the presence of overnutrition among children of caregivers with bachelor's degrees suggests that knowledge alone does not guarantee healthy outcomes. Time constraints, urban food environments, and difficulties translating knowledge into practice may contribute to this pattern (Kharbanda et al., 2025). Similarly, caregiver working arrangement was significantly associated with nutritional status (p = 0.019), highlighting the role of time availability and caregiving consistency. While unemployed caregivers accounted for the largest number of malnourished children, financial insecurity may limit access to food (Milovanska-Farrington, 2021). In contrast, full-time out-of-home employment may reduce feeding supervision and meal regularity. These findings suggest that employment quality, flexibility, and stability are more influential than employment status alone (Sheely, 2022).

Family structure also demonstrated a significant difference (p = 0.025), with nuclear families exhibiting higher rates of both undernutrition and overnutrition, potentially due to time constraints among dual-income parents. Extended families benefited from shared caregiving but faced financial limitations, while joint families showed mixed outcomes, indicating that caregiver quantity alone does not ensure better nutrition. In contrast, household size showed no

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significant association with nutritional status (p = 0.802), suggesting that family size alone may not predict nutritional outcomes without considering socioeconomic and contextual factors (Ciptanurani & Chen, 2021). Taken together, the findings in Table 5 demonstrate that while several caregiver-related factors show statistically significant associations with children's nutritional status, their effects are mediated by broader family dynamics and structural conditions. Consistent with the Family Systems Theory and the Socio-Ecological Model, caregiving behaviors are embedded within layered social, economic, and institutional contexts, underscoring the need for holistic interventions that address parenting style, caregiver capacity, and systemic support to improve child nutrition outcomes.

IV. Conclusion

This study examined the nutritional status of malnourished children in Baguio City and found that moderate acute malnutrition was the most common form. Nonetheless, primary caregivers exhibited a wide range of feeding practices and parenting styles; no single practice, when isolated, significantly affected child nutritional status, highlighting that individual behaviors are mediated by broader contextual factors. Instead, sociodemographic variables (caregiver age, education, work status, and family structure) emerged as stronger predictors of nutrition, with feeding behaviors shaped not only by knowledge but by beliefs, social pressures, and perceived barriers, remarkably low perceived control, and norms favoring convenience.

This study reinforces the importance of viewing malnutrition not just as a result of individual feeding behaviors but as a reflection of the caregiving environment as a whole. By applying an integrated Socio-Ecological Model and Family Systems perspective, feeding practices operate within layers. Caregivers do not make decisions in a vacuum; their actions are shaped by the demands they face, the support they receive, and the routines they maintain within their families. Recognizing these influences allows for a more realistic approach to addressing child nutrition, one that values practicality, consistency, and the unique circumstances of each household.

Despite the findings, several limitations are to be acknowledged. First, the design of this study allows only for the identification and association between caregiving dynamics and malnutrition, but does not establish causality between the two variables. Furthermore, geographically, the focus of this study is on Baguio City. The findings may not generally apply to rural areas where practices differ. Future research should utilize broader geographic sampling and longitudinal methods to further validate these findings across varying landscapes.

V. Recommendations

Future research may focus on rural, indigenous, and coastal communities, where caregiving practices and access to nutrition vary. Examining how parental education influences feeding behavior, health literacy, and access to services is also crucial. Using qualitative or mixed-method approaches can offer more profound insight into the emotional and environmental factors affecting caregiver decisions. Broader indicators of malnutrition, such as stunting, wasting, and underweight, should also be taken into account.

Since authoritative parenting was the most frequently reported style, government agencies such as the Department of Health and the Department of Social Welfare and Development may organize quarterly growth monitoring and nutrition seminars for caregivers. The Department of Education can also conduct regular nutrition sessions during Parent-Teacher Association meetings, particularly during National Nutrition Month in July. These may include guidance on meal preparation, managing picky eating, and promoting healthy school snacks. Such efforts can provide caregivers with practical tools to improve child nutrition both at home and in educational settings.

Contribution of Authors

The authors confirm that they meet the international criteria for authorship. Each author has made substantial contributions to the conception or design of the work; the acquisition, analysis, or interpretation of data; and the drafting or critical revision of the manuscript. All authors have approved the final version for publication and agree to be accountable for all aspects of the work.

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Conflict of Interest

The researchers declare no conflicts of interest that could have influenced the design, conduct, or reporting of the study. No external funding, sponsorship, or financial incentives were received, and there were no personal, professional, or academic affiliations that could compromise objectivity. None of the respondents were direct patients or dependents of the research team. All findings were reported solely based on empirical evidence and ethical research principles.

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Disclosure of Use of Generative AI

Generative Artificial Intelligence tools were utilized solely to support language refinement and improve the clarity of the manuscript. All core aspects of the study, including conceptualization, research design, data collection, analysis, and interpretation, were independently carried out by the authors. The authors take full responsibility for the content, accuracy, and conclusions presented in this work.

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The Pursuit of Wellness Attainment for Filipino LGBTQIA Adolescents in Family Contexts: Gender Minority-Family Relations Wellness Model

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ABSTRACT

Introduction: Wellness is a dynamic and multidimensional state that evolves across the lifespan, with adolescence representing a critical developmental stage. This study developed a Gender Minority–Family Relations Wellness Model explaining how family-related factors influence the multidimensional wellness of Filipino LGBTQIA adolescents within sociocultural contexts characterized by collectivism, religiosity, and strong family cohesion.

Methods: A structured narrative review was conducted using literature from PubMed, CINAHL, and Google Scholar (2001–2025). Studies from Philippine and Southeast Asian contexts were included. Thematic synthesis identified patterns related to family structure, dynamics, acceptance, rejection, and adolescent health outcomes.

Results: The proposed model identifies eight interrelated determinants: family type, family structure, family dynamics, family reactions, family conflict, family rejection, family acceptance, and family support. Evidence indicates that Filipino family systems significantly shape adolescent wellness trajectories. Affirming environments promote resilience, identity integration, and psychological well-being, while rejecting environments may increase risks of depression, substance use, and suicidality. Family acceptance is consistently identified as a key protective factor.

Conclusion: The model provides a culturally grounded framework for nursing and adolescent health. However, as a conceptual model, it requires empirical validation through quantitative and mixed-methods research.

Keywords: *LGBTQIA adolescents, wellness, family dynamics, family acceptance, nursing*

I. Introduction

Wellness is a multidimensional and dynamic construct that extends beyond the absence of disease, encompassing physical, psychological, social, and developmental well-being. It is understood as a continuous and evolving process through which individuals strive for balance and optimal functioning across life domains (Berman et al., 2016). During adolescence, this process becomes particularly complex due to rapid biological maturation, identity formation, and increased sensitivity to social and relational environments (Patton et al. (2015).

In the Philippine context, adolescent development is deeply embedded within family-centered sociocultural systems. The Filipino concept of *pamilya* serves as the primary context for identity formation, emotional regulation, and socialization. Cultural values such as *utang na loob* (reciprocity), *hiya* (social propriety), and *pakikisama* (harmonious interpersonal relations) shape behavioral expectations and relational dynamics within households. Within this collectivist framework, family cohesion and approval are central determinants of adolescent psychological stability and social functioning.

For Filipino LGBTQIA adolescents, these sociocultural structures may function as both protective and risk-enhancing systems. While strong kinship ties can foster belonging, resilience, and social support, incongruence between family expectations and non-heteronormative identities may result in concealment, relational strain, or psychological distress. These dynamics are further influenced by broader socioreligious norms that shape family responses along a continuum ranging from acceptance and support to conditional tolerance or rejection.

At the global level, LGBTQIA adolescents are disproportionately exposed to mental health risks, including depression, anxiety, substance use, and

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suicidality, largely driven by minority stress and social exclusion processes (Ryan et al., 2009, 2010). Empirical evidence consistently demonstrates that family rejection is associated with increased risk for adverse psychosocial outcomes, whereas family acceptance functions as a critical protective factor that enhances resilience and well-being (Ryan et al., 2009, 2010).

In the Philippines, these vulnerabilities are further intensified by structural and institutional inequities, including stigma, limited access to gender-affirming healthcare, and inconsistent policy protections. Filipino LGBTQIA adolescents experience identity development within a sociocultural environment shaped by collectivism, strong family interdependence, and religious conservatism. National evidence suggests that while Filipino culture may exhibit surface-level tolerance toward gender diversity, this acceptance is often conditional and does not necessarily translate into affirming family environments or institutional protection (Tan, 2001; United Nations Development Programme [UNDP], 2014). The Being LGBT in Asia: The Philippines Country Report documented that LGBTQIA individuals commonly experience family pressure to conform to heteronormative expectations, concealment of identity, and barriers to accessing affirming psychosocial and health services (UNDP, 2014). These conditions may intensify minority stress and compromise adolescent wellness trajectories. Recent Philippine evidence further indicates that LGBTQ+ emerging adults in Metro Manila demonstrate significantly higher risks for adverse mental health outcomes, reinforcing the ongoing psychosocial vulnerabilities experienced by sexual and gender minority populations in local contexts (Wong et al., 2024).

Reports have documented that discrimination within educational and community settings contributes significantly to psychological distress among LGBTQIA youth (Human Rights Watch, 2017). Similarly, global evidence indicates that school-based violence related to sexual orientation and gender identity is associated with poorer academic performance and adverse mental health outcomes (UNESCO, 2018).

Evidence from the Philippines further demonstrates that discrimination is not confined to school environments but frequently intersects with family experiences. Human Rights Watch (2017) documented that LGBTQIA Filipino students reported bullying, exclusion, and punitive responses from both educational institutions and family systems, contributing to emotional distress, school absenteeism, and compromised psychological well-being. These findings reinforce the need to conceptualize adolescent wellness within the interconnected systems of family, school, and sociocultural environment.

Across Southeast Asia, LGBTQIA adolescents experience comparable patterns of marginalization shaped by sociocultural norms, institutional constraints, and limited access to affirming support systems. These intersecting conditions reinforce internalized stigma, restrict help-seeking behaviors, and negatively influence developmental trajectories. Collectively, these findings highlight that adolescent wellness cannot be fully understood outside the context of family systems and broader sociocultural environments.

Despite growing recognition of LGBTQIA health disparities, there remains a lack of culturally grounded and integrative frameworks that explain how Filipino family systems shape LGBTQIA adolescent wellness. Existing models are largely Western-centric and insufficiently account for collectivist values and relational dynamics that characterize Filipino families.

To address this gap, this study proposes the Gender Minority–Family Relations Wellness Model, which conceptualizes how family structures, dynamics, and responses influence wellness outcomes among Filipino LGBTQIA adolescents. This model addresses the central question: *How do family systems shape the wellness of Filipino LGBTQIA adolescents within a culturally embedded Filipino context?* The framework is further informed by Minority Stress Theory, which posits that stigma-related stressors such as discrimination, concealment, and rejection—contribute to adverse mental health outcomes among sexual and gender minority populations.

II. Methods

Research Design

This study employed a structured narrative review to synthesize existing literature on LGBTQIA adolescent wellness within family systems. A narrative approach was selected to allow conceptual integration across diverse study designs (qualitative, quantitative, and mixed-methods) while generating a theory-informed model. Although the review followed systematic elements (e.g., defined search strategy, screening, and extraction), it did not adhere to full systematic review protocols such as PRISMA due to its conceptual and integrative purpose.

Search Strategy

A comprehensive literature search was conducted using PubMed, CINAHL, and Google Scholar to identify relevant studies related to LGBTQIA adolescents, family dynamics, and wellness outcomes. The search included studies published from 2001 to 2025 to ensure the inclusion of contemporary evidence on LGBTQIA adolescent health and family experiences. Search terms were developed using Boolean operators and combinations of keywords across three major domains: (1) population, including LGBTQIA adolescents and youth; (2) family context, including family acceptance, rejection, and family dynamics; and (3) outcomes, including wellness, mental health, and psychosocial outcomes. In PubMed, search terms included "*LGBTQ*," "*LGBTQIA*," "*sexual minority*," "*gender minority*," "*transgender*," "*adolescent*," "*youth*," "*family*," "*family acceptance*," "*family rejection*," "*family dynamics*," "*wellness*," "*mental health*," and "*psychosocial outcomes*." Similar

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subject headings and text words were adapted for CINAHL using Medical Subject Headings (MH) and text word (TX) searches. Additionally, Google Scholar was used as a supplementary source to capture interdisciplinary and regional literature, particularly studies situated within Southeast Asian and Philippine contexts.

Screening Process

Studies were initially screened based on titles and abstracts to determine relevance to the research objectives. Full-text articles were then assessed to confirm eligibility and ensure alignment with the inclusion criteria. Only studies that met all predefined criteria were retained for final synthesis. Although formal risk-of-bias assessment tools (e.g., CASP, JBI, or Cochrane checklists) were not applied due to the narrative nature of the review, an internal appraisal process was conducted to enhance methodological rigor. Included studies were evaluated based on the following considerations: peer-review status, methodological transparency, relevance to LGBTQIA adolescent and family system contexts, and the presence of empirical grounding (qualitative, quantitative, or mixed-method designs). Studies were included if they focused on LGBTQIA adolescents or youth populations, examined family relationships or interaction processes, reported mental health, wellness, or psychosocial outcomes, and were peer-reviewed articles published in English between 2015 and 2025. Studies were excluded if they focused solely on adult populations, did not examine family-related variables, or consisted of opinion papers without empirical or theoretical grounding.

Data Extraction

Data were systematically extracted using a structured matrix to ensure consistency and transparency across the included studies. Information recorded for each study included the author(s) and year of publication, research design, participant characteristics, and study setting, whether global or local in context. In addition, key findings related to family factors and the reported impacts on adolescent wellness outcomes were documented to facilitate synthesis and comparative analysis of the evidence.

Data Synthesis

A thematic synthesis approach was used to identify recurring patterns across studies. Extracted data were coded and grouped into conceptual categories, particularly focusing on family acceptance, rejection, dynamics, and support. These themes informed the development of the Gender Minority–Family Relations Wellness Model.

Summary Table

Study (Author, Year)	Research Design & Participants	Setting	Key Findings (Family Factor)	Impact on Wellness
Cleofas & Alibudbud, 2023	Retrospective quantitative study; LGBTQ+ students	Philippines	Reduced access to social and potentially family-based support during prolonged quarantine	Increased depressive symptoms, decreased life satisfaction
Ryan et al., 2009	Quantitative; LGB youth	USA	Family rejection predicts risk behaviors	Increased depression, suicidality
Ryan et al., 2010	Quantitative; LGBTQ adolescents	USA	Family acceptance as protective factor	Higher self-esteem, better mental health
Human Rights Watch, 2017	Qualitative/report; LGBTQ students	Philippines	Family and school discrimination intersect	Psychological distress, exclusion
UNDP, 2014	National report; LGBTQ persons	Philippines	Family pressure, concealment, stigma	Identity stress, limited support access
Tan, 2001	Qualitative/cultural analysis	Philippines	Conditional social tolerance and pluralistic coping	Concealment, resilience, adaptive coping
UNESCO, 2018	Global report; youth	Global	Violence linked to lack of support systems	Poor academic and mental health outcomes
Wong et al., 2024	Quantitative; LGBTQ+ emerging adults	Metro Manila, Philippines	LGBTQ+ participants demonstrated elevated mental health risks in relation to social and contextual factors	Higher risk for adverse mental health outcomes

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III. RESULTS

Theoretical Framework

This study is grounded in the integration of three complementary theoretical perspectives: the Multidimensional Wellness Model (Berman et al., 2016), the Family Acceptance Framework (Ryan et al., 2009, 2010), and Family Interactional Theory (Hanson et al., 2005). Collectively, these frameworks provide a multi-level explanatory lens for understanding how family processes shape the multidimensional wellness of LGBTQIA adolescents.

The Multidimensional Wellness Model conceptualizes wellness as an interconnected and dynamic system comprising physical, emotional, social, intellectual, spiritual, environmental, and occupational dimensions. These domains are interdependent, such that changes in one dimension may influence functioning across others. The model emphasizes wellness as a developmental and evolving process, particularly salient during adolescence, a stage characterized by rapid and simultaneous biopsychosocial changes (Berman et al., 2016).

The Family Acceptance Framework focuses on caregiver behaviors and their influence on adolescent health trajectories. It conceptualizes family responses along a continuum from acceptance to rejection, with each position associated with distinct psychosocial outcomes. Family acceptance is consistently linked to improved mental health, resilience, and identity integration, whereas family rejection is associated with increased risks of depression, substance use, and suicidality (Ryan et al., 2009, 2010). This framework positions family acceptance as a central protective factor in LGBTQIA adolescent development.

Family Interactional Theory provides the process-oriented mechanism that explains how these family responses are produced and sustained. Families operate as dynamic systems in which interaction patterns and relational processes influence health outcomes (Hanson et al., 2005; Looman, 2020).

These three frameworks are integrated through a multi-level explanatory structure:

- The Multidimensional Wellness Model defines the outcome level, specifying wellness across biopsychosocial domains.
- The Family Acceptance Framework defines the behavioral mechanism, describing the continuum of acceptance and rejection.
- Family Interactional Theory defines the process mechanism, explaining how relational dynamics and communication patterns generate these behaviors.

At the integrated level, the model posits a sequential relational pathway in which family interaction patterns shape acceptance or rejection behaviors, which in turn influence multidimensional wellness outcomes among LGBTQIA adolescents.

Integration of Minority Stress Theory

To strengthen the explanatory power of the model, this study explicitly integrates Minority Stress Theory as a cross-cutting framework that contextualizes how external and internal stress processes influence LGBTQIA adolescent wellness (Meyer, 2003).

Minority Stress Theory posits that sexual and gender minority individuals experience chronic stressors arising from stigmatized social positions (Meyer, 2003). These stressors are typically categorized as:

- Distal stressors (e.g., discrimination, stigma, family rejection) (Meyer, 2003)
- Proximal stressors (e.g., internalized stigma, concealment, identity conflict) (Meyer, 2003)

Within the proposed model, minority stress is operationalized through specific family-related determinants:

- Distal Stressors are represented by:

Family rejection, family conflict, and negative family reactions (Ryan et al., 2009; Ryan et al., 2010)

- Protective/Buffering Processes are represented by:

Family acceptance and family support (Ryan et al., 2010)

- Mediating Processes occur through:

Family dynamics (communication, emotional climate) and adolescent identity integration and coping responses (Hanson et al., 2005; Meyer, 2015)

In this integrated framework, family systems function as the primary site where minority stress is either amplified or mitigated. Within the Filipino context, minority stress is further shaped by collectivist family expectations and socioreligious norms. LGBTQIA adolescents may experience pressure to prioritize family harmony, maintain social propriety (hiya), and conform to traditional gender roles to preserve family reputation (UNDP, 2014). These culturally embedded expectations may intensify concealment, internalized stigma, and identity-related stress, particularly in families characterized by conditional acceptance or silence regarding gender diversity (Tan, 2001). Recent Philippine evidence supports this proposition, showing elevated mental health risks among LGBTQ+ populations in Metro Manila, suggesting that sociocultural and interpersonal stressors remain salient determinants of psychological well-being in local contexts (Wong et al., 2024). Pandemic-related disruptions have further intensified psychosocial vulnerabilities among sexual and gender minority youth. Evidence from the Philippines indicates that prolonged quarantine conditions were associated with increased depressive symptoms and declining life satisfaction among young LGBTQ+ individuals, reflecting the compounded effects of social isolation, restricted support systems, and identity-related stressors (Cleofas & Alibudbud, 2023). Within the context of the

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present model, these findings reinforce how external stressors may interact with family environments to either buffer or exacerbate mental health risks. Rejecting or conflict-laden family environments intensify stress exposure, increasing the likelihood of adverse mental health outcomes such as depression, anxiety, and suicidality (Meyer, 2003; Ryan et al., 2009). Conversely, affirming and supportive family environments act as protective buffers, reducing stress burden and promoting resilience, self-acceptance, and multidimensional wellness (Ryan et al., 2010; Meyer, 2015).

Thus, Minority Stress Theory provides the stress-process mechanism that explains why and how family-related factors influence wellness outcomes. It complements:

- The Multidimensional Wellness Model (outcome domains) (Berman et al., 2016)
- The Family Acceptance Framework (behavioral continuum) (Ryan et al., 2009; Ryan et al., 2010)
- Family Interactional Theory (relational processes) (Hanson et al., 2005)

At the integrated level, the model proposes that:

Family interaction patterns shape acceptance or rejection responses, which in turn determine the level of minority stress experienced by the adolescent, ultimately influencing multidimensional wellness outcomes (Meyer, 2003; Ryan et al., 2010).

Gender Minority–Family Relations Wellness Model

Model Development

The Gender Minority–Family Relations Wellness Model was developed through an integrative conceptual synthesis approach designed to systematically construct a culturally grounded explanatory framework. The development process combined empirical literature integration with theory-driven modeling informed by family systems theory and minority stress theory.

The model development followed a four-phase analytic procedure:

Phase 1: Literature Mapping

Relevant literature was reviewed to identify recurring constructs related to LGBTQIA adolescent experiences, family systems, and multidimensional wellness outcomes. This phase established consistent variables across studies, particularly family acceptance, family rejection, family dynamics, and psychosocial wellness domains.

Phase 2: Thematic Clustering

Extracted concepts were organized into eight core determinants of family influence: family type, family structure, family dynamics, family reactions, family conflict, family rejection, family acceptance, and family support. These determinants reflect both structural and interactional dimensions of family functioning.

Phase 3: Conceptual Integration

The identified determinants were arranged along a relational continuum of influence. Distal structural variables (e.g., family type and family structure) were conceptualized as shaping proximal interactional processes (e.g., communication patterns, emotional responses, and relational dynamics). These interactional processes subsequently influence behavioral responses within the family system, particularly acceptance and rejection patterns.

Phase 4: Model Construction

A directional pathway model was developed linking family system characteristics to adolescent wellness outcomes. The framework positions family systems as interconnected structural and relational mechanisms that shape psychological adjustment and multidimensional wellness outcomes, including physical, emotional, social, and psychological domains. The model assumes that family systems function as interconnected and dynamic structures, where interactional patterns shape behavioral responses and adolescent outcomes (Looman, 2020).

Core Proposition

The model proposes that LGBTQIA adolescent wellness is shaped through a continuum of interrelated structural and relational family processes. Family systems operate not as static categories but as dynamic and evolving relational environments.

Within the Filipino sociocultural context, family responses are conceptualized as fluid rather than binary, ranging along a continuum from rejection, to conditional acceptance, to full affirmation. These relational positions influence adolescent developmental trajectories and overall wellness outcomes across multiple domains.

Figure 1 illustrates how family-related factors shape the overall well-being of LGBTQIA adolescents through interconnected structural, relational, and response-based processes. At the core of the model is the assumption that family remains the most immediate and influential social system affecting adolescent development, particularly for gender minority individuals navigating identity formation.

The outer wheel represents eight essential dimensions of family relations, namely: Family Type, Family Structure, Family Dynamics, Family Reactions, Family Conflict, Family Rejection, Family Acceptance, and Family Support. These dimensions are arranged in a cyclical configuration to emphasize their dynamic, interdependent, and evolving nature.

Family Type and Family Structure constitute the foundational components of the model. These elements define the composition and organization of the family unit, including nuclear, extended, single-parent, or blended configurations, which shape the context within which interactions occur. These structural conditions

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influence how roles, authority, and emotional connections are distributed within the family system.

Moving into relational processes, Family Dynamics and Family Reactions capture the patterns of interaction and behavioral responses among family members. Family dynamics reflect communication styles, emotional bonds, and relational patterns, while family reactions specifically refer to how family members respond to a gender minority adolescent's identity expression. In Filipino families, such responses are often influenced by religious beliefs, family honor, and concerns regarding social reputation. Responses may not always manifest as explicit rejection but may instead involve silence, discouragement of disclosure, or conditional tolerance, wherein adolescents are accepted only if gender expression remains private or socially inconspicuous (UNDP, 2014; Tan, 2001). These reactions may range from supportive and affirming to ambivalent or hostile.

The model further incorporates critical tension points through Family Conflict and Family Rejection, which represent negative relational experiences. Family conflict refers to disagreements, misunderstandings, or tensions that may arise due to differing beliefs, values, or expectations. In the Philippine context, conflict frequently emerges when adolescents' identity expression is perceived as incongruent with parental expectations, religious doctrine, or anticipated future family roles. Human Rights Watch (2017) reported that such tensions may result in emotional withdrawal, verbal invalidation, or punitive control strategies. Family rejection, particularly when identity-based, involves explicit or implicit denial, invalidation, or stigmatization of the adolescent's gender identity. These elements are strongly associated with adverse psychological and behavioral outcomes.

Conversely, Family Acceptance and Family Support function as protective and promotive factors. Family acceptance involves the recognition, validation, and affirmation of the adolescent's identity, while family support encompasses both emotional (e.g., empathy, understanding) and instrumental (e.g., provision of resources, advocacy) forms of assistance. These elements contribute significantly to resilience, positive self-concept, and adaptive coping.

Surrounding the central wheel are two contrasting environmental conditions: The Supportive Family Environment and the Rejecting Family Environment. A supportive environment is characterized by open communication, conflict resolution, and consistent provision of support, leading to positive outcomes such as improved mental health, higher self-esteem, and healthier coping behaviors. In contrast, a rejecting family environment, marked by persistent conflict and identity-based rejection, contributes to negative outcomes, including depression, anxiety, substance use, and psychosocial distress.

At the base of the model, Cultural and Social Influences and the broader Environmental Context are recognized as external forces that shape family beliefs, norms, and behaviors. These include societal attitudes, cultural values, community expectations, and institutional structures that either reinforce or challenge family responses to gender diversity.

Ultimately, the model positions LGBTQIA Adolescent Wellness encompassing physical, emotional, social, and psychological health as the outcome of these interacting forces. It underscores that adolescent well-being is not determined by a single factor but emerges from the continuous interplay between family structure, relational processes, and environmental context.

Figure 1. Gender Minority-Family Relations Wellness Model

Major Concepts and Definitions

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The model identifies eight determinants that collectively influence wellness among LGBTQIA adolescents. Each determinant is defined based on synthesis of nursing and family systems literature (Hanson et al., 2005; Ryan et al., 2009, 2010; Looman & Rouster, 2020).

Family Type

Family type refers to the composition of individuals connected through biological, legal, or emotional ties, including nuclear, extended, blended, joint, and chosen families. These configurations influence identity development and support systems (Hanson et al., 2005).

Family Structure

Family structure refers to the organization of roles and relationships within the household, including single-parent, cohabiting, and same-sex parent households (Hanson et al., 2005).

Family Dynamics

Family dynamics refer to interaction patterns, communication processes, and emotional relationships within families. Positive dynamics promote well-being, while negative dynamics contribute to distress (Jabbari & Rouster, 2020).

Family Reactions

Family reactions encompass immediate behavioral, emotional, and cognitive responses of caregivers following an adolescent's disclosure of sexual orientation or gender identity, ranging from supportive to rejecting responses (Ryan et al., 2009, 2010).

Family Conflict

Family conflict refers to disagreements or tensions that arise within the household, often linked to differing beliefs or expectations. In the context of LGBTQIA adolescents, such conflict may contribute to emotional distress and strained relationships (Ryan et al., 2009, 2010).

Family Rejection

Family rejection involves behaviors that withdraw emotional support, validation, or acceptance. These experiences are associated with increased risks of low self-esteem, social isolation, and adverse mental health outcomes (Ryan et al., 2009, 2010).

Family Acceptance

Family acceptance is reflected in behaviors that affirm an adolescent's identity and promote inclusion. Such responses contribute to improved mental health, resilience, and overall well-being (Ryan et al., 2009, 2010).

Family Support

Family support includes emotional, psychological, and practical assistance that enables adolescents to cope with challenges and develop adaptive strategies. Even incremental increases in supportive behaviors can produce meaningful improvements in well-being (Ryan et al., 2009, 2010).

Major Assumptions

This study is anchored in the nursing metaparadigm person, environment, health, and nursing as articulated in Fawcett's Nursing Metaparadigm. While these concepts provide a broad theoretical foundation for nursing, they do not inherently reflect a family-centered orientation. In this study, a family-centered lens is intentionally applied to interpret each component of the metaparadigm within the lived experiences of Filipino LGBTQIA adolescents.

Nursing

Nursing is understood as both a scientific discipline and a caring practice concerned with promoting health and well-being across the lifespan. In the context of this study, nursing practice extends beyond individual care to include meaningful engagement with families. Attention is given to how relational patterns within the family shape health experiences, positioning nurses as facilitators of supportive and responsive family involvement.

Person

The person is primarily viewed as the LGBTQIA adolescent, recognized as a holistic and developing individual. At the same time, the adolescent's experiences cannot be separated from the family context in which they are embedded. From this perspective, the family is not treated as a separate unit of analysis but as an interconnected system that continuously influences identity formation, emotional experiences, and overall well-being.

Health

Health is approached as a dynamic and multidimensional condition that includes emotional, social, psychological, and physical aspects of well-being. Rather than being solely an individual outcome, health in this study is understood as something shaped through ongoing interactions within the family. Patterns of acceptance, support, or rejection are seen as central influences on how well-being is experienced and sustained.

Environment

Environment refers to the broader social, cultural, and institutional conditions in which adolescents live. Particular attention is given to the family as the most immediate and influential environment. At the same time, family responses are recognized as being shaped by wider sociocultural forces, including prevailing norms, values, and attitudes toward gender diversity.

Significance to Nursing Practice

The Gender Minority–Family Relations Wellness Model provides a comprehensive framework for guiding nursing practice, education, research, and policy within the Filipino sociocultural context. Central to this model is the recognition that family systems play a pivotal role in shaping the multidimensional wellness

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of LGBTQIA adolescents. Nurses are positioned to assess family systems holistically, recognizing the complex and dynamic interactions that influence adolescent wellness (Looman, 2020). In clinical practice, nurses are uniquely positioned to conduct holistic, family-centered assessments that examine communication patterns, relational dynamics, and behavioral responses influencing adolescent well-being. By identifying both protective and risk factors within family interactions, nurses can implement targeted interventions that promote acceptance, strengthen support systems, and mitigate the risks of depression, anxiety, substance use, and suicidality.

The model further underscores the importance of culturally responsive and gender-affirming care. Nurses must integrate Filipino values such as *pamilya*, *pakikisama*, and *utang na loob* while addressing socioreligious influences that shape family attitudes toward gender diversity. Recognizing that family acceptance exists along a continuum from rejection to conditional tolerance to full affirmation—enables nurses to design nuanced, context-sensitive interventions that facilitate gradual shifts toward supportive family environments. Evidence indicates that Filipino LGBTQIA adolescents continue to face barriers to accessing affirming mental health services, alongside elevated risks for adverse psychological outcomes, particularly during periods of social disruption such as the COVID-19 pandemic (United Nations Development Programme [UNDP], 2014; Human Rights Watch, 2017; Wong et al., 2024; Cleofas & Alibudbud, 2023). These realities highlight the critical role of nurses as advocates, educators, and facilitators of family-centered care.

Beyond clinical settings, the model supports broader nursing roles in advocacy, policy development, and intersectoral collaboration. Nurses can contribute to the creation of inclusive healthcare environments, family education programs, and community-based support systems through partnerships with schools, faith-based institutions, and LGBTQIA advocacy organizations. In education, integrating this model into nursing curricula strengthens competencies in culturally sensitive, family-centered, and gender-affirming care. In research, the framework provides a foundation for developing culturally appropriate assessment tools and empirically validating family-related determinants of adolescent wellness. Collectively, these applications position nursing as a critical force in advancing inclusive, evidence-based, and culturally grounded health interventions for LGBTQIA adolescents.

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Model Validation

The Gender Minority–Family Relations Wellness Model is conceptual in nature and requires systematic empirical validation prior to its application in clinical practice, education, or policy development. Although the model integrates established theoretical frameworks—the Multidimensional Wellness Model (Berman et al., 2016), the Family Acceptance Framework (Ryan et al., 2009, 2010), and Family Interactional Theory (Hanson et al., 2005) it proposed relational pathways must be empirically tested to establish reliability, validity, and predictive utility.

Future validation efforts should adopt a multi-method research strategy, including the following approaches:

1. Empirical Testing

Empirical studies should examine whether the hypothesized relationships among family type, family structure, family dynamics, acceptance, rejection, and adolescent wellness outcomes are supported by observed data.

2. Pilot Studies

Small-scale pilot studies are recommended to evaluate feasibility, refine data collection procedures, and test the clarity and operationalization of key constructs, including family acceptance, family support, and multidimensional wellness indicators.

3. Quantitative Validation

Advanced statistical techniques, such as Structural Equation Modeling (SEM) or path analysis, should be employed to test the strength, direction, and significance of hypothesized relationships within the model. In addition, psychometric evaluation should be conducted to assess the reliability and validity of instruments measuring family processes and adolescent wellness outcomes.

4. Psychometric Evaluation

Standardized scales assessing family acceptance, rejection, and support should undergo reliability testing (e.g., internal consistency, test–retest reliability) and construct validity assessment to ensure measurement accuracy within LGBTQIA adolescent populations.

5. Cross-Cultural Validation

Given the culturally embedded nature of the model, validation studies should be conducted across Filipino and broader Southeast Asian contexts to assess cultural applicability, measurement equivalence, and contextual sensitivity.

6. Longitudinal Validation

Longitudinal research designs are recommended to examine the temporal stability of relationships and to establish potential causal pathways between family system processes and adolescent wellness outcomes over time.

7. Expert Review

Content validation should be conducted through expert evaluation involving specialists in nursing, psychology, adolescent health, and LGBTQIA studies. Expert feedback should be used to refine conceptual clarity, improve construct definitions, and strengthen theoretical coherence.

Limitations

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This study has several limitations that should be acknowledged when interpreting its findings. First, the use of a structured narrative review approach may introduce selection bias, as it relies on the interpretation and synthesis of existing literature rather than systematic statistical aggregation. Consequently, the absence of meta-analytic techniques limits the ability to generate statistically pooled estimates and weakens generalizability.

Second, the proposed Gender Minority–Family Relations Wellness Model remains conceptual in nature and has not yet undergone empirical validation. As such, the relationships and pathways outlined in the model should be interpreted as theoretical propositions requiring further testing using quantitative and longitudinal research designs.

Third, although this study intentionally incorporated Philippine and Southeast Asian literature, the available body of local empirical research on LGBTQIA adolescents and family systems remains limited. Consequently, several theoretical relationships within the model continue to rely on Western evidence, which may not fully capture the nuances of collectivist Filipino family dynamics and culturally embedded minority stress processes. This reliance may limit cultural specificity and transferability, particularly in relation to collectivist Filipino family systems, where relational dynamics, filial expectations, and socio-cultural norms may differ substantially from Western settings.

Finally, variability in study designs, populations, and measurement tools across the reviewed literature may have affected the consistency and comparability of synthesized findings, further constraining the strength of conclusions drawn.

IV. Conclusion

The Gender Minority–Family Relations Wellness Model offers a culturally grounded framework elucidating how Filipino family systems shape the multidimensional wellness of LGBTQIA adolescents. Integrating multidimensional wellness theory, family acceptance research, and interactional family systems theory, the model demonstrates that family influence exists along a continuum from rejection to conditional acceptance to full affirmation—directly impacting adolescents' resilience, identity integration, and psychological well-being. Grounded in Filipino values such as *pamilya*, *pakikisama*, and *utang na loob*, the model highlights that nurturing affirming family environments is essential for mitigating mental health risks and fostering holistic development. While conceptual, the framework provides a critical foundation for research, nursing practice, and policy, emphasizing the necessity of culturally responsive, family-centered interventions. Recent Philippine evidence further highlights that large-scale societal disruptions, such as the COVID-19 pandemic, can exacerbate mental health disparities among LGBTQIA youth, leading to increased depressive symptoms and reduced life satisfaction (Cleofas & Alibudbud, 2023). These findings reinforce the urgency of strengthening affirming family environments as stable and protective systems of support.

Call-to-Action: Policymakers, healthcare providers, and educators must implement family-centered, culturally sensitive programs that actively promote acceptance and support for LGBTQIA adolescents, ensuring equitable opportunities for health, well-being, and positive developmental trajectories.

V. Recommendations

Based on the conceptual and theoretical foundations of the Gender Minority–Family Relations Wellness Model, the following directions are recommended for future research:

1. Empirical Validation of the Model
   - Conduct quantitative studies to test the relationships proposed in the model.
   - Utilize structural equation modeling or other advanced statistical techniques to examine the strength and direction of pathways between family factors and wellness outcomes.
   - Perform psychometric validation of instruments measuring family acceptance, rejection, support, and multidimensional wellness.
2. Mixed-Method Research
   - Combine qualitative and quantitative approaches to gain a deeper understanding of family interactions, adolescent experiences, and wellness outcomes.
   - Qualitative data can provide rich contextual insights, while quantitative data can test generalizable relationships.
3. Cultural Comparative Studies
   - Explore LGBTQIA adolescent experiences across different cultural, ethnic, and social contexts.
   - Examine how cultural norms, values, and family expectations shape family acceptance, conflict, and adolescent wellness.
4. Intervention-Based Research
   - Develop and evaluate family-centered interventions aimed at enhancing acceptance, support, and communication within families of LGBTQIA adolescents.
   - Assess the effectiveness of interventions in improving multidimensional wellness outcomes.
5. Longitudinal Studies

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- Investigate how family acceptance, support, and rejection impact the long-term health, mental health, and well-being of LGBTQIA adolescents.
- Track changes over time to better understand causal relationships and developmental trajectories.

Contribution of Authors

MAC was solely responsible for the conceptualization, literature search, data synthesis, analysis, writing, and final approval of this narrative review.

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Conflict of Interest

The researchers declare no conflicts of interest that could have influenced the design, conduct, or reporting of the study. No external funding, sponsorship, or financial incentives were received, and there were no personal, professional, or academic affiliations that could compromise objectivity. None of the respondents were direct patients or dependents of the research team. All findings were reported solely based on empirical evidence and ethical research principles.

Disclosure of Use of Generative AI

The author use artificial intelligence (AI)–assisted tools only to support language editing, grammar correction, and improvement of clarity and readability of the manuscript.

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