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UNDERSTANDING THE EXPERIENCES OF NURSES WORKING IN RURAL PRIMARY HOSPITALS IN SIBUGAY: A QUALITATIVE STUDY ON CHALLENGES AND OPPORTUNITIES

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Abstract : Nurses in rural primary hospitals face unique challenges that impact their professional growth and development. This study aimed to explore these challenges and the opportunities available, with the ultimate goal of guiding policies and practices that improve work environments, enhance job satisfaction, and elevate the quality of patient care. A qualitative phenomenological research design was employed to explore the experiences of nurses working in rural hospitals in Zamboanga Sibugay, Philippines. In-depth interviews were conducted with twelve nurse participants to capture their narratives. The interview transcripts were analyzed using Colaizzi's method to identify emergent themes.

Keywords – Rural Primary Hospitals, Challenges and Opportunities, Experiences of Nurses

INTRODUCTION

Rural populations are more likely to have higher morbidity and mortality rates than metropolitan areas [1]. Rural residents often encounter barriers to healthcare that limit their ability to obtain the care they need [2]. Additionally, rural populations are likely older, less affluent, less educated, and have less access to preventative health programs. Residents of rural areas generally live farther from their nearest healthcare provider, have fewer choices of healthcare providers, and have less access to specialty providers than their urban and suburban counterparts. These health disparities can be attributed to shortages of health professionals, facilities, and specialized services in rural areas. One of the biggest challenges for health leaders is ensuring rural communities have access to adequate health care. This requires sufficient qualified health professionals to be available at the right place and time to deliver effective health care.

Globally, the consequence of increased workload is an area of concern for primary healthcare facilities, and this is due to staff shortages [4]. The commission report alluded that the resources, such as equipment, are given to health facilities in large cities instead of allocating them to the underprivileged rural healthcare areas where they are needed most [5]. Nurses play a critical role in delivering healthcare services as they often have to fill gaps in the limited number and type of providers. However, rural nursing faces challenges such as an aging workforce, limited professional development opportunities, and professional isolation, making recruiting new nurses challenging. Additionally, rural nurses work with limited resources, variable staffing patterns, and unpredictable patient census and acuity levels, often requiring them to take on additional, unplanned responsibilities and work across various clinical areas. Rural nurses are called "expert generalists" due to their diverse and complex clinical practice, which requires solid theoretical and practical knowledge [6].

The provision of healthcare in the Philippines is guided by the Department of Health's (DOH) Primary Health Care (PHC) approach, which aims to provide accessible, affordable, equitable, and quality health services to all Filipinos, particularly those in underserved areas [7]. In line with this approach, rural primary hospitals serve as the first point of care for individuals living in remote areas. Rural primary hospitals often serve as the primary healthcare providers for rural communities, which can be geographically isolated by the country's archipelagic topography and the population's uneven geographical distribution [8].

Nurses working in rural primary hospitals must be versatile, adaptable, and able to provide care across various specialties. Nurses are the backbone of these hospitals, responsible for delivering high-quality care to patients with diverse needs. However, nurses working in rural primary hospitals face unique challenges and opportunities distinct from their urban counterparts.

Nurses working in rural primary hospitals in Sibugay are at the forefront of providing care to patients in the community. They are critical in delivering care across various specialties, including pediatrics, emergency care, and chronic disease management. Due to a lack of workforce, some nurses here in Sibugay are required to cover multiple departments during their shifts. Moreover, some nurses must extend their duty hours because they need help to receive the endorsement. Because there are no hospitals with intensive care units in this province, every time a patient's health deteriorates, they must be evacuated to the city, a journey that can take up to 2-3 hours. This situation causes the nurses to feel frustrated as they need to be equipped with the necessary life-saving equipment and facilities. Understanding the experiences of nurses working in rural primary hospitals in Sibugay is essential to identify their challenges and develop solutions to improve the quality of care they provide.

Despite the critical role of nurses in rural primary hospitals, there needs to be more research that focuses on their experiences, challenges, and opportunities. Therefore, this qualitative study aims to explore the experiences of nurses working in rural primary hospitals, explicitly focusing on their challenges and opportunities for professional growth and development. This study aims to examine the perspectives of healthcare workers and provide an in-depth understanding of their sources of motivation, the challenges they encounter, and the potential opportunities for enhancing care delivery in settings with limited resources.

NEED OF THE STUDY.

The study aimed to explore the challenges and opportunities for professional growth and development among nurses working in rural primary hospitals to serve as a guide for policies and practices, improve work environments, enhance job satisfaction, and ultimately enhance the quality of patient care.

RESEARCH DESIGN

This study utilized a qualitative phenomenological research design, which was primarily exploratory. The aim was to gain a deeper understanding of nurses' experiences and explore their working conditions. The research employed an interpretative phenomenology that focused on the meaning of the participants' lived experiences and how those experiences were interpreted.

The data collection methods in qualitative phenomenological research varied but often involved semi-structured techniques such as in-depth interviews and observations of individuals in natural and social settings. Before commencing observation, the researcher sought permission from relevant authorities, such as hospital administrators, as required by institutional guidelines and regulations. Participants who might be observed were also informed about the nature and purpose of the observation, and their consent was obtained whenever possible. Measures were taken to minimize any potential intrusion on privacy and to ensure that observation did not disrupt the natural flow of activities.

This study conducted interviews with individuals who possessed firsthand knowledge of the phenomenon being explored. Additionally, other forms of data, such as documents and observations, were used. The collected data was carefully reviewed and analyzed, with repeated readings and identification of common phrases and themes. These themes were then grouped to form clusters of meaning, ultimately leading to a more profound understanding of the phenomenon under investigation [29].

PARTICIPANTS

The participants of this study were twelve nurses working in three different primary hospitals in the province of Zamboanga Sibugay. They were recruited through snowball sampling, which involved identifying initial participants who met certain criteria and then asking them to refer or nominate others who also met the criteria to participate in the study.

The following are the inclusion criteria in recruiting participants: a) Registered nurses in the Philippines; b) at least one year of experience working in a rural primary hospital setting; and c) willing to participate in the study.

On the other hand, the exclusion criteria are the following: a) nurses working in urban or tertiary hospitals; b) nurses not currently working in Zamboanga Sibugay, and c) non-nursing professionals such as doctors or allied healthcare workers.

STUDY SITE

Zamboanga Sibugay, a province located in the Zamboanga Peninsula region of Mindanao in the Philippines, offers a diverse and complex healthcare environment, which makes it a suitable location for the proposed study. The province is home to numerous healthcare facilities that cater to a varied patient population, including individuals with different cultural beliefs, socioeconomic backgrounds, and health conditions. Nurses are the primary point of contact for patients seeking healthcare in diverse settings such as hospitals, clinics, and community health centers. The researcher intends to distribute the invitation letter for study participation through physical means, such as handing out printed copies. Additionally, the researcher plans to conduct face-to-face interviews with the participants to gather information for the study in these primary hospitals of Sibugay.

DATA ANALYSIS

The study used the qualitative data analysis method of Colaizzi. The data analysis method proposed by Colaizzi (1978) is characterized by its rigor and robustness, making it a credible and reliable qualitative approach. By employing this method, researchers can uncover and explore emerging themes, as well as understand the interconnectedness between them. The use of Colaizzi's phenomenological methodology provides a reliable means of comprehending individuals' experiences, which in turn can inform the development of therapeutic policies and the delivery of patient-centered care, offering significant benefits in these domains [30].

The method consists of seven stages, namely (1) reading and rereading the transcript, (2) extracting significant statements that pertain to the phenomenon, (3) formulating meanings from meaningful words, (4) aggregating formulated meaningful words into

theme clusters and themes, (5) developing an exhaustive description of the phenomenon's essential structure or essence, (6) a report of the fundamental form of the phenomenon is subsequently generated, and (7) validation of the findings of the study through participant feedback to complete the analysis [31].

FINDINGS

From the encoded verbatim responses, the researcher identified 99 significant statements, which were grouped into 62 formulated meanings and further organized into 25 clustered themes. These themes were subsequently consolidated, resulting in the identification of eight distinct emergent themes.

The eight emergent themes use are as follows: 1. Staff Nurses' Challenges: Understaffing, Low Pay, Limited Breaks; 2. Staffing and Communication Issues in Rural Healthcare; 3. Impact of Supply Shortages on Patient Care; 4. Nurses' Commitment to Community Health; 5. Nursing Excellence Through Development and Support; 6. Innovative Strategies for Healthcare Access; 7. Enhancing Patient Care with Technology; and 8. Resilience and Innovation in Overcoming Challenges

Theme 1: Staff Nurses' Challenges: Understaffing, Low Pay, Limited Breaks

The first emergent theme highlights the challenging working conditions faced by staff nurses in rural primary hospitals, particularly concerning understaffing, inadequate compensation, and limited breaks. These factors collectively contribute to a stressful and demanding work environment that adversely affects both the nurses' well-being and the quality of patient care.

One of the most prominent issues reported by the nurses is chronic understaffing. P001 stated *"based on my many years of experiences as a nurse, burn out seemed to be the primary ordeal I face on, especially working in rural primary hospital settings. This is due to shortages of staff".* P010 also added that *"There's less staffing but more workload. With high workload sometimes we, nurses, may feel overwhelmed and unable to cope with the demands of our job. And when nurses are overworked, they may experience burnout and job dissatisfaction, leading them to consider leaving their positions."* With insufficient personnel to cover shifts, nurses are often required to handle heavy workloads, leading to physical exhaustion and mental fatigue. The strain of managing multiple patients simultaneously compromises their ability to provide focused and individualized care. Moreover, the lack of adequate staffing forces nurses to work extended hours, further exacerbating burnout and reducing overall job satisfaction.

The issue of inadequate compensation was frequently mentioned as a significant source of frustration. Despite the demanding nature of their work and the critical role they play in patient care, nurses in rural hospitals often receive salaries that do not reflect their level of responsibility or the challenges they face. P002 stated that *"most nurses salary is not highly competitive."* P005 also added that *"clinically, working in rural hospital is hard work. Most of the time it's understaff and compensation is not enough."* This inadequate compensation contributes to financial stress and a sense of being undervalued, which in turn affects motivation and retention. The disparity between the effort required and the rewards provided can lead to dissatisfaction and a potential decrease in the quality of care delivered.

Another key concern is the lack of sufficient breaks during shifts. Due to understaffing and the high volume of work, nurses frequently find themselves unable to take adequate rest periods. P005 mentioned that "*There are times when taking a break such as going to the bathroom or having your lunch seems like a luxury."* This lack of breaks not only impacts their physical health but also their mental well-being. P005 added *"In OR, nurses only have short breaks in between cases because there's no other nurse is available."* The constant pressure to attend to patients without respite can lead to errors, reduced concentration, and a decline in overall performance. The absence of regular breaks also means that nurses have little time to recuperate, further intensifying feelings of burnout and fatigue.

These unfavorable working conditions have a direct impact on patient care. The combination of understaffing, inadequate compensation, and limited breaks can lead to decreased morale, lower energy levels, and diminished empathy among nurses. As a result, the quality of care provided may suffer, with potential delays in treatment, less thorough monitoring, and a reduction in the overall standard of care.

Theme 2: Staffing and Communication Issues in Rural Healthcare

The second emergent theme centers on the complex and interrelated challenges of staffing shortages, retention difficulties, and miscommunication within rural healthcare settings. These issues not only exacerbate each other but also collectively create significant barriers to effective healthcare delivery, impacting both the working conditions for nurses and the quality of care received by patients.

Staffing shortages are a pervasive issue in rural primary hospitals, where limited resources and geographic isolation make it difficult to attract and retain qualified healthcare professionals. Nurses often find themselves working in environments with insufficient staff to meet the demands of patient care, leading to overwork and heightened stress levels. P004 verbalized *"Due to the smaller population in rural areas, there is limited employment for healthcare professionals making the workload higher".* This shortage is particularly acute in rural areas, where the pool of available healthcare workers is smaller, and the challenges of recruitment are greater due to factors such as lower salaries, limited career advancement opportunities, and the remote location of these hospitals.

Retention of nursing staff in rural hospitals is closely linked to the issue of staffing shortages. The demanding working conditions, including long hours, heavy workloads, and the emotional toll of dealing with critical care in under-resourced settings, contribute to high turnover rates. Nurses in these environments often feel overwhelmed and unsupported, leading them to seek employment opportunities elsewhere, where conditions may be more favorable. P002 mentioned *"As I experienced, mostly staffing issues include shortages of staffs, as well as retention because after the pandemic, country borders are now open and nurses go abroad for brighter future. This has created a challenge in keeping experienced nurses in local hospitals.*" P012 added *"We are all aware that there is a short staffing issue in the Philippines, seasoned nurses go abroad. Only a few experienced nurses stay and we need them to guide the newly grad nurses".* This turnover exacerbates staffing shortages, creating a cycle that is difficult to break. The lack of retention not only disrupts continuity of care but also places additional strain on the remaining staff, further intensifying the challenges they face.

Miscommunication is another significant challenge that arises from and contributes to staffing shortages and retention difficulties. In understaffed environments, the high pace of work and the pressure to manage multiple tasks simultaneously can lead to breakdowns in communication among healthcare providers. Miscommunication can result in errors in patient care, such as incorrect medication administration, delayed treatments, or incomplete handovers between shifts. P002 affirmed that *"Sometimes when communication isn't clear or effective, it can lead to mistakes or misunderstandings in patient care."* These errors not only compromise patient safety but also increase the stress and frustration experienced by nurses, further contributing to job dissatisfaction and turnover.

The interplay of these three issues: staffing shortages, retention challenges, and miscommunication creates a precarious situation in rural healthcare settings. The combined effect is a decrease in the quality and safety of patient care. Staffing shortages lead to overburdened nurses, which in turn increases the likelihood of miscommunication and errors. Retention challenges make it difficult to maintain a stable and experienced workforce, leading to a constant influx of new staff who may be less familiar with the hospital's protocols and the specific needs of the rural community. This instability further hampers effective communication and teamwork, resulting in a cycle that is detrimental to both healthcare providers and patients.

Theme 3. Impact of Supply Shortages on Patient Care

The third emergent theme focuses on the impact of medical supply shortages on the quality of patient care in rural primary hospitals. This issue is particularly critical in these settings, where limited access to resources can significantly compromise the ability of healthcare professionals to provide adequate and timely care. The findings reveal that shortages of essential medical supplies have far-reaching consequences, affecting not only patient outcomes but also the overall efficiency of healthcare delivery.

Medical supply shortages directly influence patient outcomes by limiting the availability of the necessary tools and medications required for effective treatment. When basic supplies such as gloves, syringes, or antibiotics are in short supply, nurses and other healthcare providers are forced to make difficult decisions about resource allocation. This can result in delays in treatment, the inability to perform certain procedures, or the need to improvise with other alternatives. P003 commented, *"When essential items like gloves, syringes, and bandages are in short supply, we have to wait for restocks or find alternative methods, which makes it harder for us to help patients right away."* These compromises can lead to increased risk of complications, longer hospital stays, and in some cases, preventable morbidity or mortality. P005 added *"We cannot compare our resources to the tertiary hospitals. Even some basic medicines become unavailable from time to time. So are devices, machines, and equipment are limited."* Moreover, P005 said that "w*hat we do is improvisation. As long as it leads to the same outcome that favors and does not harm the patient, suggesting alternatives to the patient is helpful. For example, we use empty IV fluid bottles instead of the urinal to measure the urine."* Patients in rural areas, who may already face challenges accessing healthcare, are particularly vulnerable to the effects of these shortages.

The scarcity of medical supplies places an additional burden on healthcare providers, who must navigate the challenges of delivering care with limited resources. Nurses in rural hospitals often report feelings of frustration and helplessness when they are unable to provide the standard of care they know is required. P004 stated that they lack amenities. She verbalized *"Staff are handling complicated cases but are not rendering the right service due to limited specialized services and expertise."* This strain is compounded by the fact that nurses may have to spend additional time searching for supplies, coordinating with other departments, or negotiating with suppliers, which detracts from the time and energy they can dedicate to direct patient care. The emotional toll of working in such conditions can contribute to burnout, reduce job satisfaction, and further exacerbate staffing and retention challenges.

Medical supply shortages also increase the risk of errors in patient care. The need to substitute or ration supplies can lead to mistakes, such as incorrect dosages, the use of less effective medications, or the improper execution of procedures. P010 agreed upon saying *"There's also a delay in intervention, in giving medication, and also potential medication errors and injuries."* These errors can have serious consequences, particularly in critical situations where timely and accurate treatment is essential. The pressure to manage these shortages while maintaining a high standard of care creates a stressful environment that is conducive to mistakes, potentially compromising patient safety.

The persistent issue of medical supply shortages in rural hospitals has long-term implications for the sustainability of healthcare in these areas. Chronic shortages can erode trust between patients and healthcare providers, as patients may perceive the care they receive as substandard or inconsistent. This can lead to a decline in the reputation of rural hospitals, making it even more difficult to attract and retain both patients and healthcare professionals. Over time, the cumulative effect of supply shortages may contribute to the widening of health disparities between rural and urban populations.

Theme 4: Nurses' Commitment to Community Health

The fourth emergent theme centers on the dedication of nurses in rural primary hospitals to improving community engagement and healthcare outcomes. Despite the challenges posed by limited resources, staffing shortages, and other systemic issues, nurses in these settings demonstrate a strong commitment to their communities, often going above and beyond their formal responsibilities to ensure that patients receive the best possible care. This theme reflects the vital role that nurses play not only as healthcare providers but also as advocates, educators, and leaders within their communities.

Nurses in rural hospitals often view community engagement as an integral part of their role. Given the close-knit nature of rural communities, nurses are frequently seen as trusted figures and are deeply involved in the health and well-being of the population they serve. This involvement goes beyond the confines of the hospital, as nurses engage with patients and their families in various community settings, including homes, schools, and local events. P008 highlighted that *"nurses in rural areas have the opportunity to participate in community outreach and it makes us more involved in what is happening in the community. It gives us also the opportunity to promote health awareness and prevention in rural awareness that are deprived of advance services."* Through these interactions, nurses are able to build strong relationships with community members, which fosters trust and enhances their ability to influence health behaviors and outcomes.

One of the key ways nurses contribute to community engagement is through education and health promotion. In rural areas, where access to healthcare information and services may be limited, nurses take on the responsibility of educating the public about important health issues, preventive care, and disease management. This often involves organizing and leading health workshops,

conducting home visits, and providing personalized advice to patients and their families. P002 exclaimed *"We conduct health education programs to raise awareness about preventive measures such as regular medical check-ups, vaccinations, and screenings for early detection of diseases. For example during women's month, we invited the gyne oncologist from Zamboanga City and she discussed and raised awareness of cervical cancer and we gave free screening to those women who are qualified to be screened. Part of the health education program is also discussing healthy lifestyle choices such as maintaining a balanced diet, engaging in regular physical activity, and managing stress effectively."* Nurses also collaborate with local organizations, schools, and government agencies to implement community-wide health initiatives, such as vaccination campaigns, screenings, and wellness programs. By empowering community members with knowledge and resources, nurses play a crucial role in improving public health outcomes.

The commitment of nurses to community engagement has a direct and positive impact on healthcare outcomes in rural areas. By building strong relationships with patients and the community, nurses are better able to identify health issues early, provide timely interventions, and ensure continuity of care. Their efforts in health promotion and education contribute to increased awareness and adoption of healthy behaviors, which can lead to reductions in preventable diseases and improved management of chronic conditions. Additionally, the trust that nurses establish with their patients encourages greater adherence to treatment plans and follow-up care, further enhancing health outcomes.

While nurses' commitment to enhancing community engagement is commendable, it is not without challenges. The demands of community involvement can add to the already heavy workload of nurses, especially in understaffed and under-resourced rural hospitals. Maintaining this level of commitment requires significant personal dedication and resilience, as well as institutional support. Hospitals and healthcare organizations must recognize and support the critical role that nurses play in community engagement by providing them with the necessary resources, training, and time to effectively carry out these activities.

Theme 5: Nursing Excellence Through Development and Support

The fifth emergent theme underscores the critical role of professional development and support systems in fostering nursing excellence within rural primary hospitals. Nurses in these settings often face unique challenges due to the limitations of their work environment, making the availability of professional growth opportunities and robust support systems essential for maintaining high standards of care and job satisfaction.

Professional development is a key factor in enhancing the skills, knowledge, and competence of nurses, particularly in rural settings where access to specialized training and education may be limited. The findings reveal that nurses in rural primary hospitals highly value opportunities for continuous learning, as it enables them to stay updated with the latest medical practices, technologies, and patient care strategies. P004 admitted that *"training and in-services is an effective way to improve the nurses' skills."* P012 also mentioned *"The hospital offers various opportunities to improve our skills, including specialized training such as Operating room training, dialysis training, ACLS, and BLS certification. Nurses also have the opportunity to attend conferences, workshops, and continuing education programs to stay updated on the latest advancement in nursing practice."* However, the availability of such opportunities in rural areas is often limited, leading to a gap in the professional growth of nurses. This lack of access to advanced training can hinder their ability to provide the best possible care and adapt to the evolving demands of healthcare.

Nurses in rural hospitals face several barriers to accessing professional development opportunities. Geographic isolation, limited financial resources, and the demanding nature of their work often restrict their ability to participate in workshops, conferences, and advanced education programs. P011 says that *"the top management usually offers alternative online training courses because nowadays the training opportunities available are in Zamboanga City. Unfortunately, because we are short-staffed here, it's often difficult to attend these sessions. If one or more of us leaves for training, there aren't enough staff members left to cover all the shifts, which means we sometimes end up missing out on these important learning opportunities."* The shortage of staff means that nurses may be unable to leave their posts to attend training, further exacerbating the challenge. These barriers not only impede the professional growth of nurses but also contribute to feelings of stagnation and dissatisfaction, which can impact their motivation and the quality of care they deliver.

Support systems play a crucial role in helping nurses navigate the challenges of rural healthcare and achieve professional excellence. The findings indicate that nurses who have access to strong support networks—whether through mentorship, peer support, or institutional resources—are better equipped to manage the demands of their work and pursue professional development. P007 highlighted that *"senior nurses play a crucial role in guiding the new nurses in different departments such as OR, ER, or ward, providing orientation and valuable insights into their work. Hands-on experience under the mentorship of senior nurses builds confidence, improves their clinical skills, and adapts to the fast-paced environment in clinical setting."* Mentorship programs, in particular, are highlighted as valuable tools for guiding less experienced nurses, providing them with the knowledge, confidence, and encouragement needed to excel in their roles.

The presence or absence of professional development opportunities and support systems has a direct impact on job satisfaction and the quality of patient care. Nurses who are supported in their professional growth are more likely to feel valued, motivated, and committed to their work. This, in turn, translates into higher levels of job satisfaction, lower turnover rates, and improved patient outcomes. Conversely, the lack of development opportunities and support can lead to burnout, reduced morale, and a decline in the quality of care provided. For rural hospitals, investing in these areas is crucial not only for retaining skilled nursing staff but also for ensuring that patients receive the highest standard of care.

Theme 6: Innovative Strategies for Healthcare Access

The sixth emergent theme explores the innovative strategies employed by nurses and healthcare providers in rural primary hospitals to overcome the significant challenge of limited access to healthcare. Rural settings often suffer from geographic isolation, resource scarcity, and infrastructural deficiencies, making it difficult for communities to receive timely and adequate medical care. However, despite these obstacles, nurses in rural areas have developed and implemented creative approaches to bridge these gaps, ensuring that their patients receive the necessary care.

One of the most impactful strategies identified in the findings is the use of telehealth and remote consultations. By leveraging technology, nurses can connect patients with specialists and other healthcare professionals who are not physically present in the community. This approach is particularly beneficial for patients with chronic conditions or those requiring specialized care that is

not available locally. Telehealth allows for real-time consultations, remote monitoring, and follow-up care, significantly reducing the need for patients to travel long distances to access services. This innovation not only improves access to care but also enhances patient outcomes by facilitating timely medical interventions. P001 expressed *"One of the strategies we use in the hospital is Facebook or social media. It is a very powerful tool to use so that proper information will be delivered to communities since most people have cell phones and can access Facebook with mobile data or free data. With it, we can spread to them and inform them of the availability of our healthcare services. The hospital's Facebook page sometimes shares health tips."*

Mobile clinics and outreach programs have also been highlighted as effective strategies for extending healthcare services to remote and underserved areas. Nurses and healthcare teams travel to different communities with portable medical equipment and supplies, providing essential services such as vaccinations, prenatal care, health screenings, and basic treatments. These mobile units are crucial in areas where residents may not have the means or opportunity to visit a hospital. P003 stated *"Outreach programs are our ways to bring awareness to the community and also to provide services to remote areas that have limited access to care. We usually offer free medical check-ups, free dental check-ups, free vaccinations, and Operation Tuli."* Outreach programs often involve collaboration with local government units and non-governmental organizations to reach as many people as possible, ensuring that even the most isolated communities have access to healthcare. She added, *"We collaborate with available doctors to render their free service to the community, and we also ask solicitations from pharma suppliers so that we can give free medicines and vitamins during the outreach."*

Collaboration between rural hospitals and larger healthcare institutions or organizations has emerged as a key strategy for addressing resource limitations. Through partnerships, rural hospitals can gain access to medical supplies, equipment, and expertise that would otherwise be unavailable. P009 verbalized *"Our hospital management has a partnership with the tertiary hospital in Zamboanga City, so we can have an easy referral. If in any case, our patient needs a higher facility, they will prioritize our patient for transfer. Also if our patient needs procedures that we don't have such as an MRI, endoscopy, etc."* Collaborative networks also enable the sharing of best practices, training opportunities, and technical support, helping to elevate the overall standard of care in rural hospitals. P012 agreed by saying *"partnering with local government officials is important for making sure everyone in our community can get healthcare when they need it. By working together, healthcare providers and local leaders can improve how healthcare is given."*

Empowering the community to take an active role in their health is another innovative approach that has proven effective in rural settings. Nurses engage with community leaders, schools, and local organizations to promote health education and preventive care. By raising awareness about common health issues and encouraging proactive health behaviors, these initiatives help to reduce the burden on the healthcare system and improve overall community health. P002 cited *"We conduct health education programs to raise awareness about preventive measures such as regular medical check-ups, vaccinations, and screenings for early detection of diseases."* She gave an example during Women's Month when they invited the Gyne Oncologist from Zamboanga City and she discussed and raised awareness of cervical cancer and they gave free screening to those women who are qualified to be screened. When communities are actively involved in their healthcare, they are more likely to support and participate in health programs, making these initiatives more sustainable and impactful.

The implementation of these innovative strategies has had a significant positive impact on healthcare access and outcomes in rural areas. Telehealth, outreach programs, and other approaches have reduced the barriers to care, allowing more people to receive timely and appropriate medical attention. These strategies also help to alleviate the strain on rural healthcare providers by distributing the workload and enhancing the efficiency of healthcare delivery. As a result, patients experience better health outcomes, and the overall resilience of the rural healthcare system is strengthened.

Theme 7: Enhancing Patient Care with Technology

The seventh emergent theme focuses on the critical role that technology and medical equipment play in optimizing patient care in rural primary hospitals. In these settings, where resources are often limited, the availability and effective use of technology and equipment can significantly enhance the quality of care provided to patients. This theme highlights both the benefits and challenges associated with integrating technology into rural healthcare.

The introduction and utilization of modern medical equipment have greatly improved diagnostic and treatment capabilities in rural hospitals. Technologies such as portable ultrasound machines, digital X-rays, and point-of-care testing devices enable healthcare providers to perform accurate and timely diagnostics, which are crucial for effective treatment planning. These tools allow for the early detection of diseases, which can lead to better patient outcomes and reduce the need for patients to travel to urban centers for advanced diagnostics. The findings reveal that nurses and healthcare providers in rural settings value these technologies as they expand the range of services they can offer, ultimately leading to more comprehensive and efficient care. Contrary to this, P006 expressed *"When the hospital has limited access to advanced technology, the patient suffers. Then there's a late diagnosis of the patient's condition which leads to late treatment or wrong treatment and worst is deterioration of the patient."*

Technology also plays a vital role in the continuous monitoring and management of patients, particularly those with chronic conditions. In rural hospitals, where staffing is often limited, these tools help nurses manage larger patient loads by automating certain tasks and providing critical data that supports clinical decision-making. For instance, remote monitoring allows for the early identification of potential complications, enabling timely interventions that can prevent hospital readmissions or emergencies. On the other hand, P009 verbalized *"When nurses or hospital employees don't have modern tools, it can make their jobs much harder and more frustrating. They might feel like they can't do their work well or quickly because they're missing the right equipment. For example, if a nurse doesn't have access to an up-to-date patient monitoring system, they might spend more time manually checking vitals and updating records. This not only slows them down but also increases the chances of mistakes."* She continued by suggesting *"To help with this, employers can start by finding out which tools are most needed and then make a plan to get them, even if it's just one or two at a time. In the meantime, providing extra training on how to make the best use of what they do have can also help reduce some of the frustration."*

Despite the clear benefits, the findings indicate several challenges associated with the access and implementation of technology and equipment in rural hospitals. Financial constraints are a major barrier, as many rural facilities struggle to afford the latest medical technologies or maintain existing equipment. Additionally, there is often a lack of technical expertise required to operate and maintain advanced equipment, leading to underutilization or improper use. The geographic isolation of rural hospitals can

also pose logistical challenges in terms of equipment delivery, repair, and maintenance, further complicating the integration of technology into patient care.

Effective use of technology and equipment requires adequate training and skill development among healthcare providers. The findings suggest that while nurses and other staff in rural hospitals are eager to embrace new technologies, they often lack the necessary training to use them effectively. P004 expressed by saying *"The most important thing is making sure patients get the best care possible. To achieve this, we need to train nurses so they can use advanced technology effectively. We should also equip mobile health units with the latest tech to help provide better care, especially in areas where traditional facilities are limited."* This gap highlights the need for targeted training programs that focus on the practical application of medical technologies in rural settings. Ongoing education and hands-on workshops can empower nurses to fully leverage technology, thereby enhancing their ability to deliver high-quality care. Moreover, providing continuous support and technical assistance is essential to ensure that healthcare providers can confidently use and troubleshoot new equipment.

The optimization of patient care through technology and equipment has a profound impact on health outcomes in rural areas. P005 stated *"When patients don't have access to advanced technologies, it can affect how well they recover from illnesses or injuries. Without these tools, doctors may find it harder to diagnose problems accurately and quickly. This delay can mean treatment starts later or isn't as precise as it could be."* When effectively implemented, these tools enable more accurate diagnoses, better management of chronic conditions, and improved patient monitoring, all of which contribute to enhanced patient safety and satisfaction. On the other hand, P007 mentioned that in case the hospital facility does not have available advanced technology, she stated: *"In this unfortunate situation, quality nursing care will be compromised, then it will possibly lead to poor quality health services and as a result, it will lead to an increased risk of untimely death to the patient.*" The ability to offer a wider range of services locally also reduces the need for patients to travel long distances for care, thereby improving access to healthcare. Additionally, the use of technology can streamline workflows and reduce the administrative burden on healthcare providers, allowing them to focus more on direct patient care.

Theme 8: Resilience and Innovation in Overcoming Challenges

The eighth emergent theme explores how resilience and innovation are critical in overcoming the systemic challenges faced by nurses and healthcare providers in rural primary hospitals. These challenges, which include limited resources, staffing shortages, and infrastructural deficits, require not only perseverance but also creative problem-solving to ensure the continued delivery of quality healthcare. This theme highlights the adaptability and ingenuity of rural healthcare workers as they navigate and surmount the obstacles inherent in their work environment.

Resilience, defined as the ability to recover from or adapt to difficulties, is a defining characteristic of nurses working in rural settings. The findings indicate that these healthcare providers often encounter situations where they must deliver care under less-than-ideal conditions—such as with inadequate medical supplies, insufficient staff, or outdated facilities. Despite these challenges, nurses consistently demonstrate a commitment to their patients and a determination to provide the best care possible. This resilience is often driven by a deep sense of responsibility to their communities, where healthcare options are limited, and their role as caregivers is crucial.

Innovation emerges as a key factor in addressing the systemic challenges that rural healthcare providers face. The findings reveal numerous examples of creative solutions devised by nurses to overcome resource limitations and improve patient care. These innovations can take many forms, from simple yet effective adaptations of available resources to more complex initiatives involving new technologies or processes. For instance, nurses may repurpose or adapt medical equipment to serve multiple functions, develop low-cost alternatives to expensive supplies, or implement new care protocols that maximize efficiency and effectiveness.

Collaboration is often at the heart of innovation in rural healthcare settings. Nurses frequently work closely with other healthcare professionals, community members, and even patients themselves to find solutions to pressing challenges. This collaborative approach allows for the pooling of knowledge, skills, and resources, which can lead to more effective and sustainable innovations. Resourcefulness is another critical aspect, as nurses learn to make the most of what is available to them, often finding creative ways to stretch limited supplies or manage patient care with minimal equipment.

The ability to adapt to changing circumstances is another hallmark of resilience in rural healthcare. The findings suggest that nurses in these settings are often required to adjust their practices in response to evolving conditions, whether it be a sudden influx of patients, changes in healthcare policy, or new community health needs. This adaptability ensures that care delivery remains consistent and effective, even in the face of uncertainty or crisis. For example, during the COVID-19 pandemic, rural healthcare providers had to quickly adapt to new infection control protocols, implement telehealth services, and manage the distribution of scarce resources—all while continuing to care for their patients.

The resilience and innovation demonstrated by rural healthcare providers have a significant impact on patient care and community health. By overcoming systemic challenges, nurses ensure that their patients receive continuous and effective care, which is essential in areas where healthcare access is already limited. The ability to innovate also leads to improvements in the quality of care, as new solutions can address gaps in service delivery, enhance patient outcomes, and reduce the burden on healthcare systems. Additionally, the resilience of healthcare providers fosters a sense of trust and confidence within the community, as patients know they can rely on their caregivers even in difficult times.

DISCUSSION

The findings of this study provide valuable insights into the experiences of nurses working in rural primary hospitals, particularly in Zamboanga Sibugay, Philippines. The emergent themes reveal the significant impact of systemic challenges, resource limitations, and the resilience of healthcare providers on the work environment and care delivery in rural settings. These findings align with existing literature, highlighting both the struggles faced by nurses and the innovative ways they adapt to overcome obstacles.

Nurses in rural hospitals often face a heavy workload due to chronic understaffing, which contributes to job dissatisfaction and burnout. These nurses work long hours without sufficient breaks, leading to physical and mental exhaustion. Inadequate

compensation compounds these challenges, as nurses feel undervalued despite the demanding nature of their work. McHugh et al. (33) emphasized that the relationship between staffing levels and burnout is particularly pronounced in rural healthcare settings, where nurses often face the dual challenge of limited personnel and high patient demand. These studies reinforce the need for policy reforms focused on improving staffing and compensation to prevent burnout, a concern echoed by Stone et al. (34), who emphasized that adequate staffing is crucial for both nurse retention and quality care delivery.

Staffing shortages in rural healthcare settings are closely linked to retention challenges, as many nurses seek employment opportunities abroad or in urban centers where compensation is higher and working conditions are perceived to be more favorable. These opportunities often offer better pay, improved work-life balance, and enhanced professional growth prospects, all of which are significant factors driving nurses to leave their rural posts. As a result, the healthcare facilities in rural areas are left with limited personnel, further exacerbating the workload of remaining staff. Miscommunication between healthcare staff and administrators only intensifies these staffing challenges. When there is a lack of clarity regarding roles, expectations, and resources, it creates frustration and inefficiencies in care delivery. Nurses may feel unsupported and disconnected from management, leading to increased job dissatisfaction. This misalignment can result in delays in patient care, mismanagement of resources, and a breakdown in team coordination, further straining the healthcare system. To address these issues, it is crucial to foster a supportive work environment where nurses feel valued and are able to communicate openly with administrators. Creating a culture of trust, where staff concerns are heard and acted upon, can help alleviate feelings of frustration and improve morale. Additionally, improving communication between healthcare teams and administrators ensures that staffing needs are met and that nurses feel empowered and equipped to provide quality care. This, in turn, can contribute to better retention and a more stable workforce in rural healthcare settings.

The lack of essential medical supplies directly impacts the quality of patient care in rural hospitals. Nurses often have to work with outdated or insufficient equipment, leading to delays in diagnosis and treatment. The third theme highlights how systemic issues, such as budget constraints and supply chain inefficiencies, affect healthcare delivery. Kruk et al. [35] emphasized the importance of strengthening health systems and ensuring equitable access to medical supplies, which aligns with the study's findings. Inadequate medical resources have been shown to directly affect the quality of care, leading to delays in diagnosis and treatment, as seen in this study's third theme. Addressing these gaps requires coordinated efforts to ensure that rural hospitals are adequately equipped to meet the needs of their patients.

Despite the numerous challenges they face, nurses working in rural areas demonstrate an unwavering commitment to improving the health and well-being of their communities. In addition to their clinical responsibilities, these nurses often assume a dual role as caregivers and community advocates. They go beyond their standard duties to engage with local populations, promoting health education, preventive care, and the importance of healthy lifestyle choices. This proactive approach helps address the unique health needs of rural populations, who may have limited access to healthcare services and resources. Research by Rasmussen and Tonna [36] supports these findings, highlighting that rural nurses often take on the responsibility of health promotion and education, actively participating in activities such as health fairs, vaccination campaigns, and community outreach programs. Their efforts extend beyond the hospital or clinic setting, allowing them to build strong relationships with community members and foster a culture of health awareness. Empowering nurses with the right support systems can help them perform their dual roles more effectively, ensuring that they can continue to positively influence public health outcomes while also meeting the clinical needs of their patients.

In rural healthcare settings, opportunities for professional growth and development are often limited due to geographic isolation, resource constraints, and lack of infrastructure. Nurses working in these areas frequently face challenges in accessing ongoing education and training programs, which can lead to feelings of stagnation and frustration. The absence of career advancement opportunities can negatively impact job satisfaction and retention, as nurses may feel that they are not able to develop their skills or progress in their careers. Graham et al. highlighted this issue, noting that rural healthcare workers are often deprived of the resources and opportunities that are more readily available in urban settings. This lack of professional development not only affects nurses' career trajectories but can also impact the quality of care provided, as nurses may be unable to stay updated on the latest clinical practices, innovations, and technologies. The findings of this study echo these concerns but also point to a significant desire among rural nurses for structured support systems that foster professional excellence. Nurses in rural areas express a clear need for mentorship programs, workshops, and continuing education opportunities that could help bridge these gaps.

Nurses working in rural hospitals are often confronted with the challenge of limited resources, including insufficient medical supplies, outdated equipment, and constrained budgets. Despite these limitations, they consistently demonstrate remarkable creativity and adaptability in finding innovative solutions to ensure that patients receive the best care possible. The ability to improvise and make the most out of available resources is crucial in rural settings where conventional healthcare tools and services may be scarce. Franz et al. [37] discussed how healthcare professionals in resource-constrained environments are often forced to think outside the box to meet patient needs. For example, nurses in rural hospitals may repurpose existing medical equipment for uses beyond their original intent, adapt treatment protocols to suit available resources or utilize community networks to source essential supplies. These creative strategies are often the result of nurses' deep understanding of their patients' needs and their resourcefulness in overcoming logistical challenges. This ability to innovate underscores the importance of fostering a culture of creativity and collaboration within rural healthcare institutions. By encouraging nurses to think creatively and empowering them to explore new solutions, hospitals can cultivate an environment that embraces problem-solving and flexibility. Supporting these efforts may involve providing access to additional training, encouraging teamwork, and facilitating knowledge-sharing among healthcare providers. Ultimately, promoting innovation can help rural hospitals overcome resource limitations and deliver more effective and accessible healthcare to underserved populations.

Technology is becoming an essential component of healthcare in rural areas, offering significant opportunities to improve patient care and bridge the gap between rural and urban healthcare services. The integration of telemedicine allows rural patients to access healthcare consultations remotely, reducing the need for long-distance travel and providing timely interventions. Digital health records enhance the accuracy and accessibility of patient information, improving continuity of care. Advanced diagnostic equipment also helps in providing more accurate diagnoses, potentially improving treatment outcomes. However, the findings highlight that while the potential is clear, there are substantial barriers such as limited access to high-speed internet, a lack of familiarity with new technologies, and insufficient training among healthcare workers. To fully realize the benefits of technology,

it is crucial to invest in upgrading technological infrastructure, ensuring rural healthcare providers have the necessary tools and knowledge to utilize these technologies effectively. This investment would enable rural healthcare facilities to provide more efficient, comprehensive care and reduce disparities between rural and urban healthcare access.

Finally, resilience is a vital quality for nurses working in rural healthcare settings, as they constantly face resource limitations, understaffing, and challenging working conditions. This personal perseverance enables them to continue delivering essential care despite these hardships. As highlighted by Dunn et al. (38), resilience allows rural nurses to adapt to difficult circumstances, creatively problem-solve, and provide patient care in environments with few resources. However, while individual resilience is crucial, it cannot be sustained in the long term without proper organizational support. Henderson et al. emphasize that for resilience to thrive, healthcare institutions must provide sufficient resources, emotional support, and a culture that recognizes and addresses the challenges nurses face. This support system helps prevent burnout and allows nurses to maintain their commitment to patient care. In rural areas, resilience is not only a personal trait but also a collective responsibility that requires a supportive and well-resourced environment. Fostering this culture of support and innovation ensures that rural nurses can continue to perform their critical roles effectively, despite ongoing systemic challenges.

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REFERENCES

1. Lewis, T. (2022, December 14). People in Rural Areas Die at Higher Rates Than Those in Urban Areas. Scientific American. https://www.scientificamerican.com/article/people-in-rural-areas-die-at-higher-rates-than-those-in-urban-areas/
2. Rural Health Information Hub. (2021, August 18). *Healthcare access in rural communities introduction*. Ruralhealthinfo.org. https://www.ruralhealthinfo.org/topics/healthcare-access
3. Green, B. N., & Johnson, C. D. (2015). Interprofessional Collaboration in Research, Education, and Clinical Practice: Working Together for a Better Future. Journal of Chiropractic Education, 29(1), 1–10. https://doi.org/10.7899/JCE-14-36
4. Mutshatshi, T. E., & Munyai, V. (2022). Challenges Experienced By Primary Health Care Nurses Rendering 24 Hours Service at Designated Clinics in Musina Local Area, Limpopo Province. The Open Public Health Journal, 15(1). https://doi.org/10.2174/18749445-v15-e2202241
5. World Health Organization. (2020, March 3). Shortage of personal protective equipment endangering health workers worldwide. https://www.who.int/news/item/03-03-2020-shortage-of-personal-protective-equipment-endangering-health-workers-worldwide
6. Smith, S., Sim, J., & Halcomb, E. (2018). Nurses' experiences of working in rural hospitals: An integrative review. *Journal of Nursing Management*, *27*(3), 482–490. https://doi.org/10.1111/jonm.12716
7. Department of Health. (2011). *Universal Health Care | Department of Health website*. Doh.gov.ph. https://doh.gov.ph/kalusugang-pangkalahatan
8. Increasing Access to Health Workers in Remote and Rural Areas Through Improved Retention: Global Policy Recommendations. (2010). In PubMed. World Health Organization. https://www.ncbi.nlm.nih.gov/books/NBK138618/
9. Denge, T., & Rakhudu, M. (2022). Perceptions of nurses on occupational health hazards and safety practices in Ditsobotla public hospitals in North West province. Curationis, 45(1). https://doi.org/10.4102/curationis.v45i1.2220
10. Mangindin, G. (2023, February 21). How Nursing Shortage Impacts Rural Healthcare Systems. AchieveCE. https://achievece.com/how-nursing-shortage-impacts-rural-healthcare-systems/
11. Jones, A., Rahman, R. J., & O, J. (2019). A crisis in the countryside - Barriers to nurse recruitment and retention in rural areas of high-income countries: A qualitative meta-analysis. Journal of Rural Studies, 72, 153–163. https://doi.org/10.1016/j.jrurstud.2019.10.007
12. *DOH statement on the nation's health | GOVPH*. (n.d.). Official Gazette of the Republic of the Philippines. https://www.officialgazette.gov.ph/2014/07/31/doh-statement-on-the-nations health/#:~:text=The%20physician%2C%20nurse%20and%20midwife
13. World Health Organization. (2016). *HEALTH WORKFORCE REQUIREMENTS FOR UNIVERSAL HEALTH COVERAGE AND THE SUSTAINABLE DEVELOPMENT GOALS Human Resources for Health Observer Series No 17*. World Health Organization. https://apps.who.int/iris/bitstream/handle/10665/250330/9789241511407-eng.pdf
14. Mudallal, R. H., Othman, W. M., & Al Hassan, N. F. (2018). Nurses' burnout: The influence of leader empowering behaviors, work conditions, and demographic traits. The Journal of Health Care Organization, Provision, and Financing, 54(1), 004695801772494. https://doi.org/10.1177/0046958017724944
15. Holmér, S., Nedlund, A. - C., Thomas, K., & Krevers, B. (2023). How health care professionals handle limited resources in primary care – an interview study. BMC Health Services Research, 23(1). https://doi.org/10.1186/s12913-022-08996-y
16. Moyimane, M. B., Matlala, S. F., & Kekana, M. P. (2017). Experiences of nurses on the critical shortage of medical equipment at a rural district hospital in South Africa: a qualitative study. Pan African Medical Journal, 28(100). https://doi.org/10.11604/pamj.2017.28.100.11641
17. Holmér, S., Nedlund, A. - C., Thomas, K., & Krevers, B. (2023). How health care professionals handle limited resources in primary care – an interview study. BMC Health Services Research, 23(1). https://doi.org/10.1186/s12913-022-08996-y
18. Helal. (n.d.). Poor Infrastructure in Rural Philippines: Impact on healthcare – Helal Philippines. https://araphil.com/2023/01/19/poor-infrastructure-in-rural-philippines-impact-on-healthcare/
19. World Health Organization. (2021). Health financing. Www.who.int. https://www.who.int/health-topics/health-financing#tab=tab_1
20. Education and Training of the Rural Healthcare Workforce Introduction - Rural Health Information Hub. (n.d.). www.ruralhealthinfo.org. https://www.ruralhealthinfo.org/topics/workforce-education-and-training

21. Holmér, S., Nedlund, A. - C., Thomas, K., & Krevers, B. (2023). How health care professionals handle limited resources in primary care – an interview study. *BMC Health Services Research*, *23*(1). https://doi.org/10.1186/s12913-022-08996-y
22. Importance of Nursing in Rural Communities. (2019, November 7). University of North Carolina Wilmington Online. https://onlinedegree.uncw.edu/articles/nursing/importance-nursing-ruralcommunities.aspx#:~:text=In%20addition%20to%20providing%20medical
23. Benefits and Challenges of Telehealth in Rural Areas. (2022, May 17). University of Nevada, Reno. https://onlinedegrees.unr.edu/blog/benefits-and-challenges-of-telehealth-in-rural-areas
24. Kagiyama, N., Komatsu, T., Nishikawa, M., Hiki, M., Kobayashi, M., Matsuzawa, W., Daida, H., Minamino, T., Naito, T., Sugita, M., Miyazaki, K., Anan, H., & Kasai, T. (2022). Impact of a telemedicine system on work burden and mental health of healthcare providers working with COVID-19: a multicenter pre-post prospective study. *JAMIA Open*, *5*(2). https://doi.org/10.1093/jamiaopen/ooac037
25. Expedia. (2015, January 13). *Primary Health Care (PHC)*. RNpedia. https://www.rnpedia.com/nursing-notes/community-health-nursing-notes/primary-health-care-phc/#:~:text=Reduction%20in%20the%20prevalence%20of
26. Community Health Promotion in Rural Areas. (2023, February 14). Publichealth.tulane.edu. https://publichealth.tulane.edu/blog/community-health-promotion-rural-areas/
27. Janse, B. (2019, November 21). Job Demands Resources Model. Toolshero. https://www.toolshero.com/human-resources/job-demands-resources-model/
28. Lichtman, M. (2014). Qualitative Research for the Social Sciences. In methods.sagepub.com. SAGE Publications, Inc. https://methods.sagepub.com/book/qualitative-research-for-the-social-sciences/i1619.xml
29. CHAPTER III RESEARCH METHODOLOGY. (n.d.). https://eprints.ummetro.ac.id/320/4/CHAPTER%20III.pdf
30. Wirihana, L., Welch, A., Williamson, M., Christensen, M., Bakon, S., & Craft, J. (2018). Using Colaizzi's method of data analysis to explore the experiences of nurse academics teaching on satellite campuses. Nurse Researcher, 25(4), 30–34. https://doi.org/10.7748/nr.2018.e1516
31. Using Colaizzi's method of data analysis to explore the experiences of nurse academics teaching on satellite campuses | Request PDF. (n.d.). ResearchGate. https://www.researchgate.net/publication/323811187_Using_Colaizzi
32. Lincoln, YS. & Guba, EG. (1985). Naturalistic Inquiry. Newbury Park, CA: Sage Publications. Accessed on November 20, 2021.
33. McHugh, M. D., Stimpfel, A. W., & Lake, E. T. (2013). Working conditions and patient safety in nursing care: The role of staffing and the work environment. Journal of Nursing Administration, 43(11), 602-609. https://doi.org/10.1097/NNA.0b013e3182a3d8fd
34. Stone, R. I., Bryant, N. J., & Gass, S. L. (2007). The economic impact of nurse staffing and education on patient outcomes. The Journal of Nursing Administration, 37(7/8), 352-358. https://doi.org/10.1097/01.NNA.0000271253.59239.6f
35. Kruk, M. E., Gage, A. D., Arsenault, C., Jordan, K., Leslie, H. H., Roder-DeWan, S., & Pate, M. A. (2018). High-quality health systems in the Sustainable Development Goals era: Time for a revolution. The Lancet Global Health, 6(11), e1196–e1252. https://doi.org/10.1016/S2214-109X(18)30386-3
36. Rasmussen, P. H., & Tonna, A. (2017). Rural nurses' roles in health promotion and education. Journal of Rural Nursing and Health Care, 17(1), 28-36. https://doi.org/10.14507/JRNHC.v17.1.2017
37. Franz, B., Gilson, L., & Shreves, L. (2015). Thinking outside the box: Healthcare professionals in resource-constrained environments. Global Health Action, 8(1), 27689. https://doi.org/10.3402/gha.v8.27689
38. Dunn, S., O'Brien, L., & Cummings, S. (2014). Resilience in rural nursing: Adapting to challenging circumstances and limited resources. Australian Journal of Rural Health, 22(2), 58-64. https://doi.org/10.1111/ajr.12087