

Resilience and Burnout among Registered Nurses in Ghana during Covid- 19 Pandemic

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Abstract The COVID-19 pandemic wreaked havoc on healthcare systems, increasing the risk of psychological trauma among healthcare professionals, especially nurses. While mental health issues are an unavoidable part of life, they have become more severe and widespread among nurses as they battle COVID-19 on the pandemic's front lines. With having to carry the fear and burden associated with Covid- 19, and an increasing workload, nursing shortages, and long working hours, burnout is a significant concern among nurses. Initial evidence suggests that resilient nurses display distinctive qualities that help them adapt successfully to disturbances that threaten their function, viability, and development. This descriptive-correlational study aimed at examining the relationship between resilience and burnout among registered nurses in Ghana during the Covid- 19 pandemic. The study utilized 239 registered nurses from three selected hospitals who work in the Medical units, Surgical Units, Emergency units, and Intensive Care Units, using a purposive sampling technique. Data were collected through an online survey, using the 14- Item Resilience Scale (R.S.- 14) and the Maslach Burnout Inventory (M.B.I.) with the reliability of .888, and 0.840, respectively. Data were analyzed descriptively using means, standard deviations, Pearson Correlation, and ANOVA. Results showed that nurses have high resilience ($M=3.9105$, $SD=0.4941$) and moderate burnout ($M=2.9604$, $SD=0.3042$) level during the Covid-19 pandemic. Analysis of burnout's sub-variables showed that nurses experience a moderate level of emotional exhaustion ($M=2.804$, $SD=0.5170$) and personal achievement ($M=2.64917$, $SD=0.499936$), while depersonalization ($M=2.3076$, $SD=0.5953$) was low. The relationship between resilience and burnout showed a negative relationship ($r=-.751$, $p=.026$) at a 95% confidence interval, in that, as resilience increases, burnout decreases, and vice versa. Nurses working in the accident and emergency unit experienced a higher level of burnout than nurses in other clinical units, while those with clinical experience of 10 years and above experienced a high level of burnout than other groups. The study recommends that nurse managers and administrators provide opportunities for nurses to receive oriented training, learn new skills, and promote self-care, self-efficacy, and resilience among nurses through continuous professional development. Furthermore, to reduce nurse burnout, lower turnover rates, and improve nurse-patient outcomes, support systems in the nursing work environment should be strengthened; administrators should ensure a healthy workplace with an accurate nurse-patient ratio, appropriate workload, and appropriate working hours. Future research should look into the factors that lead to nurse burnout in Ghana, including individual, environmental, and COVID-19-related factors.

Keywords Resilience, Burnout, Registered nurses, Emotional Exhaustion, Covid- 19 pandemic

1. Introduction

The COVID-19 outbreak is a major global public health emergency that has put global and national healthcare systems to the test, overburdening and endangering healthcare professionals' wellbeing, especially nurses. According to the World Health Organization (W.H.O., 2021), there have been more than 123 million confirmed cases and over 2.71 million confirmed deaths in 223 countries, with over 35,000 confirmed cases involving health care workers. There are also approximately 3 million confirmed cases of

Covid- 19 and over 76 000 deaths (W.H.O., 2021) in Africa. In Ghana, reports from the Ghana Health Service (G.H.S., 2021) indicate more than 89,000 confirmed cases and over 700 deaths since the emergence of Covid- 19.

According to the World Health Organization (2020), the high incidence of Covid-19 cases has overburdened the healthcare system, resulting in an unexpected global demand for healthcare and healthcare professionals. While mental health issues are an unavoidable part of life, they have become more severe and widespread among health care workers as they battle COVID-19 on the front lines during the pandemic. During a global epidemic of infectious disease, healthcare professionals play a crucial role in patients' clinical treatment, preventing infection transmission, and the restoration of health. As a result, they encounter significant challenges associated with healthcare delivery services,

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which can be disruptive to their mental health (Driggin et al., 2020).

As nurses constitute the majority of the healthcare workforce, they provide roughly 3/4 of all healthcare services in the hospital. According to Yörük and Güler (2021), the nursing force is heavily burdened with the ever-growing stress associated with the Covid-19 pandemic due to the increasing demand for health care, an increasing number of patients they supervise, heavy and demanding workloads, long working hours, poor staffing ratios, lack of personal protective equipment, lack of communication between physicians and nurses, increasing nursing activities, and lack of organizational leadership within working environments for nurses (Al-Omari et al., 2020).

As a result, compared to other healthcare workers, nurses face tremendous mental health problems and have the highest levels of psychological distress, depression, anxiety, and burnout, affecting nursing care, nursing performance, productivity, and patient outcomes (Walton, Murray & Christian, 2020). The World Health Organization (2019) defines burnout as a condition conceptualized due to persistent pressures in the workplace that workers do not handle effectively. Globally, previous studies have shown high burnout levels among nurses, and have reported that about 60% of nurses leave or have intentions to leave their profession due to physical burdens, high occupational stress, burnout, and emotional exhaustion (Hämmig, 2018; Moloney, Boxall, Parsons & Cheung, 2018; Khamisa, Peltzer, Ilic & Oldenburg, 2016).

A cross-sectional survey of 50,273 nurses suggested that burnout is a significant problem among nurses in the United States, as respondents who reported leaving or considering leaving their job due to burnout and stressful work environment were 68.6% and 59.5%, respectively (Shah et al., 2021). A recent cross-sectional survey of 2,014 nurses by Hu et al. (2020) investigated frontline nurses' burnout, anxiety, depression, and fear statuses and their associated factors during the COVID-19 outbreak in Wuhan, China. This study showed that 91.2% of nurses reported moderate to high burnout levels in Wuhan. Similarly, Mastuo et al. (2020) found out that about 47% of nurses experienced high burnout levels during Covid- 19 outbreak in Japan.

Odonkor and Frimpong (2020) assessed burnout among health care professionals in Ghana in a cross-sectional study among 365 respondents who worked in 12 major healthcare facilities. Among the health worker groups, nurses had the highest percentage score values for all burnout variables, with 88.6%. However, this study did not investigate burnout in the Covid- 19 pandemic context and focused on burnout among health care professionals, not registered nurses solely. In another study, Poku, Donkor, and Naab (2020) found out that out of the 232 registered nurses studied, 91.1% experienced moderate to high emotional exhaustion rate. However, this study did not investigate the other two dimensions of burnout; depersonalization and perceived personal achievement.

Previous studies have shown substantial evidence that resilience has protective effects against burnout (Zou et al., 2016; Brown, Walters & Jones, 2019; Yu et al., 2019). However, the relationship between these phenomena has not been established during the Covid-19 pandemic in Ghana. Other significant limitations of previous studies include burnout studies conducted out of the context of the Covid-19 pandemic and another which examined only emotional exhaustion, one dimension of burnout. Furthermore, literature searches regarding resilience and burnout among registered nurses are significantly scanty in Ghana. Therefore, it is relevant and novel to conduct a study to establish the relationship among nurses, especially during the Covid- 19 pandemics where nursing workloads are demanding, and nursing work conditions are unpredictable in Ghana. Therefore, this study investigated the relationship between resilience and burnout among registered nurses in Ghana during Covid- 19 pandemic.

Specifically, it answered the following questions;

1. What is the level of resilience among registered nurses in Ghana during the Covid- 19 pandemic?
2. What is the level of burnout among registered nurses in Ghana during Covid- 19 pandemics in terms of
 - a) Emotional Exhaustion?
 - b) Depersonalization?
 - c) Perceived Personal Accomplishment?
3. Is the relationship between resilience and burnout among registered nurses in Ghana during Covid- 19?
4. Is there a significant difference in burnout among registered nurses in Ghana during Covid- 19 pandemics when considering;
 - a) Clinical Area?
 - b) Years of working experience?

Hypothesis

1. There is no significant relationship between resilience and burnout among registered nurses in Ghana during Covid- 19 pandemics.
2. There is no significant difference in burnout among registered nurses in Ghana when considering Units of assignment and years of working experience.

2. Literature Review

Workplace adversity may be harmful, frustrating, or traumatic, putting nurses in challenging circumstances or causing them to suffer. Despite the many obstacles in healthcare delivery, resilience is a vital characteristic that allows nurses to thrive and cope with their work environments while maintaining safe and stable psychological functioning. (Brennan, 2017). The American Psychological Association (2014) describes resilience as one's capacity to respond well in the face of hardship, trauma, disaster, challenges, or even primary stress sources. Oshio, Taku, Hirano, and Saeed (2018) define resilience as a trait

that a person exhibits or possesses as a resilient attribute or feature in their personality, while Foster, Cuzzillo, and Furness (2018) describe resilience as a mechanism by which people establish strategies to resolve adversity.

According to Collette and Ungar (2020), resilience is a complex process of positive adaptation which involves an individual's ability to adapt effectively to disruptions that threaten system operation, viability, or growth. Various forms of resilience include psychological resilience, emotional resilience, and physical resilience. Psychological resilience characterizes the capacity to withstand or adjust to uncertainty mentally, and it entails the implementation of a variety of meta-cognitive and emotional processes to protect people from the adverse effects of stress (Yörük & Güler, 2021).

Kuntz, Malinen, and Näswall (2017) posit that emotionally resilient people understand what they are feeling and why, and as a result, can maintain realistic optimism even in the face of a crisis, and are proactive in utilizing both internal and external resources to manage stressors and emotions in a healthy, positive manner. When dealing with illness, accidents, or other physical demands, physical resilience refers to the body's ability to adjust to difficulties, retain endurance and power, and heal rapidly and efficiently (Näswall et al., 2019).

Resilience has been researched most widely as an individual psychological construct, according to evidence reviews in the broader field of nursing, with conceptualizations ranging from resilience as a capacity or community of personal characteristics to resilience as a phenomenon between individuals and their environment (Delgado et al., 2017). Individual and intrapersonal attributes known to enhance nurses' resilience include self-control, faith, spirituality, hope, coping, self-confidence, compassion, awareness, and self-efficacy (Ang et al., 2019).

Traynor (2017), on the other hand, acknowledges that resilience requires critical interactions between nurses and their work environments and includes organizational support and resources, social networks, and services. Several research studies show that work-life balance, cognitive reframing, a clear sense of professional identity, accessing resources, and supportive relationships with others are effective resilience-building techniques in nursing (Foster et al., 2019; Rivard & Brown, 2019; Delgado et al., 2017).

According to Tuck, Manssuer, and Philip (2020), nurses engaged in primary care are overloaded by the complexity of the clinical challenges and other patients' conflicts. Despite the challenges, resilient nurses can maintain a positive attitude toward their patients, perform their duties realistically, and have effective stress-reduction strategies. Smith and Yang (2017) posit that there is a link between resilience and general wellbeing, personal quality of life, working relationships, psychological wellbeing, and job satisfaction.

According to Mcdermott et al. (2020), greater resilience levels may help boost or enhance positive intrapersonal and

interpersonal strengths. In contrast, low resilience is associated with mental outcomes such as depression, burnout, exhaustion, and psychological distress. A cross-sectional study of 1356 nurses by Ren et al. (2018) from 11 general hospitals in Guangzhou, China, showed that nurses had low resilience and could not effectively cope with job challenges and recover from adversity. Researchers, therefore, recommended the need to reduce job stress, enhance training, and strengthen self-efficacy.

In the study of Jose, Dhandapani, and Cyriac (2020), researchers found out that nurses in the emergency unit experienced a moderate-to-severe level of burnout in emotional exhaustion and depersonalization during the Covid pandemic, but a mild-to-moderate level of burnout in reduced personal accomplishment and showed a moderate to a high level of resilience. This study concluded a significant negative correlation between resilience and burnout among frontline nurses during the Covid pandemic. In a recent study, Roberts et al. (2021) found that about 18.9% of nurses in the U.K. have low resilience during the Covid- 19 pandemic, and further revealed that younger nurses with less experience have higher levels of anxiety and depression and had lower resilience.

Burnout syndrome is conceptualized as a condition exacerbated by prolonged susceptibility to stress at work that negatively affects wellbeing and quality of life, patient outcomes, and performance. According to Gribben and Semple (2020), due to the demanding nature and high emotional demands of nursing work, about one-third of nurses report exhaustion and burnout in their workplaces. In the early 1970s, Dr. Herbert Freudenberger coined the term "burnout" and described it as a long-term response to work-related emotional and interpersonal stress. Maslach & Leiter (2017) categorizes burnout under three sub-dimension; emotional exhaustion, depersonalization, and lack of personal accomplishment.

The most investigated dimension, emotional exhaustion, involves being physically and emotionally drained and exhausted intensely, resulting from repetitive work, personal demands, and ongoing tensions (Kinman & Leggetter, 2016). Maslach & Leiter, 1981 described depersonalization as a cold and skeptical demonstration of separation from the service recipient (patients) by deliberately ignoring the attributes that make them unique and engaging individuals. Gharakhani & Zaferanchi (2019) describe reduced personal accomplishment as the propensity to judge the value of one's work negatively, feeling inadequate in terms of the capacity to perform one's job, and a generalized low professional self-esteem.

According to research studies, burnout among nurses is intrinsically linked to work-related factors and secondarily to personality factors (Shanafelt et al., 2017; Bianchi, 2018; Dounavi, Fennell & Early, 2019). Work-related factors contributing to burnout include heavy workloads, rewards and incentives, conflicts between the nurse and organizational values (Wang et al., 2020), nurse-physician

conflicts, lack of feedback and support, nurse-patients conflict, ineffective teamwork communication, and work-family conflicts (Brown, Walters & Jones, 2019). Personal-related factors that influence burnout include age, gender, hardiness, coping skills, self-efficacy, years of working experience, and educational level (Yu et al., 2019).

In a cross-sectional study, Putra (2019), among a sample of 485 nurses in medical and surgical units in Indonesia, showed high levels of burnout among 24.3% in terms of emotional exhaustion, 24.5% depersonalization, and 34.8% had reduced personal accomplishment. Correlation analysis further found marital status and working experience as factors associated with burnout. Cañadas-De la Fuente et al. (2015) also reported average to high burnout levels among 676 nurses in Spain, and risk factors of burnout included age, gender, marital status, and type of shift work. In Greece, a cross-sectional survey by Lahana et al. (2017) among 180 nurses showed that female nurses had a higher personal accomplishment score than men.

Comparatively, it has been established that there is a significant negative relationship between burnout symptoms and resilience, which sheds light on the role of resilience in influencing burnout. In China, Kim and Choi (2016) found out high prevalence of burnout among emergency nurses, which was associated with job stress, limited hospital resources, and inadequate support from family. Similarly, Intensive Care Unit (I.C.U.) and emergency departments, a study by Cishahayo, Nankundwa, Sego, and Bhengu (2017) showed high emotional exhaustion (48.3%), high depersonalization (25%), and low personal accomplishment (50%).

Similarly, in a total of 366 Chinese female nurses, Zou et al. (2016) investigated the association between resilience, burnout, and psychological distress, where results showed that 85.5% of nurses experienced psychological distress. While resilience correlated negatively to psychological distress and burnout, burnout was positively associated with psychological distress.

3. Methodology

This quantitative study utilized a descriptive-correlational design to examine resilience and burnout among registered nurses in Ghana during the Covid-19 pandemic. The study used 239 registered nurses from three selected hospitals in Ghana who were purposively sampled to answer questionnaires through google forms. Inclusion criteria for respondents were; a) must be a registered nurse, b) must work in a Medical unit, Surgical unit, Emergency unit, Intensive Care Units, and c) must have at least one year of working experience. Exclusion criteria were a) nurse supervisors and administrators, b) nursing students and attendants, and c) nurses with less than a year of working experience.

The study adopted the 14-Item Resilience Scale (R.S.-14) to measure nurses' resilience level, an instrument developed by Wagnild & Collins (2009). The brief 14-item version of the original instrument is rated on a 5-point Likert scale and comprises 14 items ranging from 1 (Never) to 5 (Always). The RS-14 comprises five items referring to "self-reliance" (4,6,10,12 and 13), three items referring to "meaningfulness" (1, 3, and 7), two items referring to "equanimity" (5 and 14), two items referring to "perseverance" (2 and 9) and two items referring to "existential aloneness" (8 and 11).

Table 1. Socio-Demographic Profile of the Respondent

Socio-Demographic		Frequency	Percent
Age	21-27 Years	77	32.2
	28-34 Years	98	41.0
	35-41 Years	64	26.8
Sex	Females	149	62.3
	Males	90	37.7
Clinical Area	Medical Unit	87	36.4
	Surgical Unit	58	24.3
	Emergency Unit	34	14.2
	Intensive Care Unit	60	25.1
Clinical Experience	1-4 Years	118	49.4
	5-9 Years	56	23.4
	10+ Years	65	27.2
	Total	239	100.0

The study adopted the Maslach Burnout Inventory (M.B.I.) developed by Maslach (1981) to measure burnout which consists of 22-items that cover three dimensions: Emotional exhaustion (E.E.) (1-6), Depersonalization (D.P.) (7-13), and personal accomplishment (P.A.) (14-21). The question "I feel burnout" was eliminated because it asks a direct question of burnout. There are questions with answers on a frequency rating scale of 1 (never) to 5 (always) for each dimension. Studies have shown that reliability measurement is based on internal consistency by using Cronbach Alpha. The table below shows the Cronbach Alpha of the questionnaires used in the study:

Table 2. Reliability of the Questionnaires

Items	NO	Cronbach Alpha
Resilience	14	.888
Burnout	21	.840
Emotional exhaustion	6	.874
Depersonalization	7	.803
Personal Achievement	8	.832

In determining the strength of the relationship, the study utilized Cohen's (1998) absolute correlation values, where $r=.10$ to $.29$ means weak, $r=.30$ to $.49$ means moderate, and $r=.50$ to 1.0 , meaning high, furthermore in determining the significant difference value where $.01$ =small effect, $.06$ =moderate and $.14$ =large effect. All of these Likert scales were based on Vagias' (2006) guideline for Likert scales. As shown in the table below, each table contains a scaled answer and a qualitative descriptor:

Table 3. Scoring system table for Resilience and Burnout

Numerical Scale	Scale Average Weight	Scaled Response	Qualitative Descriptor
5	4.5-5	Always	Very High
4	3.5-4.49	Often	High
3	2.5-3.49	Sometimes	Moderate
2	1.5-2.49	Rarely	Low
1	1-1.49	Never	Very Low

Due to the incidence of Covid- 19 and social distancing policies, both data gathering tools were exported into google forms, and all eligible registered nurses were contacted to answer through an online survey. The study's protocol was ethical and was cleared by the Ghana Health Service Ethical Review Committee (GHS- ERC). Before data collection, the researcher sent a formal letter to the three selected hospitals to seek permission to disseminate data gathering tools. The researcher explained the study's purpose and procedure and understood that participation was solely voluntary and could withdraw from the study at their own time without any penalty, and the researcher was not going to give any incentives for participation. Respondents' informed consent was sought, after which data gathering tools were administered. Since data gathering was done through online survey, the researcher complied with all data privacy act, and respondents remained anonymous throughout the study. All

ethical principles were adhered to, such as respondents' privacy and confidentiality. Furthermore, all references were acknowledged correctly in order to avoid plagiarism in the study.

The study used the Statistical Package for Social Sciences (SPSS) version 22 to analyze the data. Question one and two were answered by using frequencies, means, and standard deviations. Question three was answered by correlation using Pearson Correlation Coefficients to determine the relationship based on their strength and direction of resilience and burnout. The study used ANOVA to analyze Question four to assess the differences between registered nurses' burnout when considering clinical area and clinical experience.

4. Results and Discussion

The sociodemographic characteristics of respondents are presented in Table 1. In the present study, most of the respondents (41%) were between the ages of 28 and 34years. While 149 (62.3%) of them were females, most of them (39.4%) worked in the medical unit, and the majority (49.4%) had 1-4 years' clinical experience.

Resilience was quantified using 14 questions. In Table 4, the overall scaled response for resilience was *often* a qualitative descriptor as *high* ($M=3.9105$, $SD=0.4941$). In a detailed analysis, the highest scored item was "*my life has meaning*," with a scaled response of *always* and qualitative descriptor as *high* ($M=4.35$, $SD=0.803$). The lowest scored item was *I take things in stride*, with a scaled response of *sometimes* and qualitative descriptor as *average* ($M=3.49$, $SD=.653$). This implies that nurses have a high level of resilience during the Covid-19 pandemic. These results contradict the study of Jose, Dhandapani, and Cyriac (2020), where nurses reported a moderate to a high level of resilience.

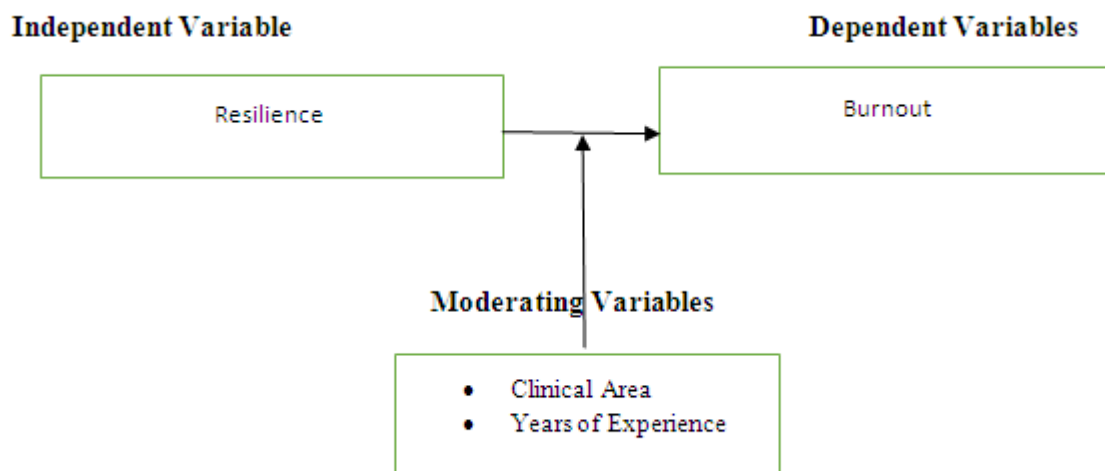


Figure 1. Conceptual framework on Resilience and Burnout

Table 4. Resilience (N= 239)

	Mean	Std. Deviation	Scaled Response	Qualitative Descriptor
My life has meaning	4.35	.803	Often	High
I am determined	4.05	.628	Often	High
I keep interested in things	4.05	.659	Often	High
When I am in a difficult situation, I can find my way out of it	4.02	.781	Often	High
I can find something to laugh about	3.95	.736	Often	High
I can get through difficult times because I have experienced difficulty before	3.92	.681	Often	High
I feel proud that I have accomplished things in life	3.91	.900	often	High
I am friends with myself	3.91	1.016	Often	High
I have self-discipline	3.91	.893	Often	High
In an emergency, I am someone people can generally rely on	3.84	.715	Often	High
My belief in myself gets me through hard times	3.81	.870	Often	High
I feel that I can handle many things at a time	3.79	.701	Often	High
I manage one way or another	3.76	.682	often	High
I take things in stride	3.49	.653	Sometimes	Moderate
Resilience	3.9105	0.4941	Often	High

4.5-5 Always; 3.5-4.49 Often; 2.5-3.49, Sometimes; 1.5-2.49 Rarely; 1-1.49 Never.

Table 5. Emotional Exhaustion (N= 239)

	Mean	Std. Deviation	Scaled Response	Qualitative Descriptor
Working with people all day long requires a great deal of effort	3.45	.879	Sometimes	Moderate
I feel emotionally drained by my work	3.13	.678	Sometimes	Moderate
I feel I work too hard at my job	2.74	.755	Sometimes	Moderate
It stresses me too much to work in direct contact with people	2.62	.753	Sometimes	Moderate
I feel frustrated by my work	2.59	.615	Sometimes	Moderate
I feel like I am at the end of my rope	2.29	.854	Rarely	Low
Emotional Exhaustion	2.804	.5170	Sometimes	Moderate

4.5-5 Always; 3.5-4.49 Often; 2.5-3.49 Sometimes; 1.5-2.49 Rarely; 1-1.49 Never.

Emotional exhaustion was quantified using six-question items. The overall scaled response for emotional exhaustion presented in Table 5 above was *sometimes*, and the qualitative descriptor was *moderate* (M=2.804, SD=0.5170). In a detailed analysis, the highest scored item was *working with people all day long requires a great deal of effort* with a scaled response of *sometimes* and qualitative descriptors as *average* (M=3.45, SD=0.879). The lowest-ranked item was *I feel like I am at the end of my rope* with a scaled response of *rarely*, qualitative descriptor as *low* (M=2.29, SD=0.854). These results are consistent with Jose, Dhandapani, and Cyriac (2020), where frontline nurses in emergency units expressed a moderate to a high level of burnout in emotional exhaustion.

Depersonalization was quantified using seven questions. The overall scaled level of depersonalization presented in Table 6, was low and qualitative descriptor as *rarely* (M=2.3076, SD= 0.5953). In a detailed analysis, the highest-ranked item was *I really do not care about what happens to some of my clients* and qualitative descriptor as

high and with a scaled response of *often* (M=4.05, SD=0.926). The lowest-ranked item as *I have become more insensitive to people since I have been working* qualitative descriptor as *low* and with a scaled response of *rarely* (M=2.18, SD=1.017). The study contradicts Jose et al. (2020), which showed a moderate to a high depersonalization level.

In terms of personal achievement, eight questions were used to quantify the data. Presented in Table 7 below, the overall mean of personal achievement was *moderate* with a sometimes scaled response (M=2.64917, SD=0.499936). In a detailed analysis, the highest-ranked item was *I accomplish many worthwhile things in this job*; however, it is qualitative descriptor as *moderate*, with a scaled response of *sometimes* (M=2.69, SD=1.031). The lowest-ranked item was *I feel refreshed when I have been close to my patients/clients at work* with a scaled response of *rarely* and a qualitative descriptor of *low* (M=2.27, SD=0.672). This implies that nurses' perception of personal achievement was low. This result is consistent with Jose et al. (2020), where results

showed low personal achievement.

The nurses' overall burnout level was moderate, with a sometimes-scaled response ($M=2.9604$, $SD=0.3042$), presented in Table 8. In ranking the sub-variables of professional burnout, it was noted that emotional exhaustion was *average* ($M=2.8042$, $SD=0.5170$), the personal achievement was *average* ($M=2.6492$, $SD=0.4999$), and depersonalization was *low* ($M=2.3076$, $SD=0.5953$). This

implies that nurses have an average level of professional burnout, explicitly looking at emotional exhaustion. This study is inconsistent with *Hu et al. (2020)* where their study revealed a higher level of burnout among frontline nurses with 41.5, 27.6, and 38.3% of burnout in emotional exhaustion, depersonalization, and personal accomplishment, indicating a high prevalence of burnout among frontline nurses in the early outbreak of Covid-19 in Wuhan.

Table 6. Depersonalization (N= 239)

	Mean	Std. Deviation	Scaled Response	Qualitative Descriptor
I really don't care about what happens to some of my clients	4.05	.826	Often	High
I feel tired when I get up in the morning and have to face another day of work	2.61	.940	Sometimes	Moderate
I am at the end of my patience at the end of my workday	2.45	.856	Rarely	Low
I have the impression that my clients make me responsible for some of their problems	2.39	.740	Rarely	Low
I am afraid that this job is making me uncaring.	2.39	1.140	Rarely	Low
I feel I look after certain clients impersonally as if they are an object	2.19	.800	Rarely	Low
I have become more insensitive to people since I have been working	2.18	1.017	Rarely	Low
Depersonalization	2.3076	0.5953	Rarely	Low

4.5-5 Always; 3.5-4.49 Often; 2.5-3.49; Sometimes; 1.5-2.49 Rarely; 1-1.49 Never.

Table 7. Personal Achievement (N= 239)

	Mean	Std. Deviation	Scaled Response	Qualitative Descriptor
I accomplish many worthwhile things in this job	2.69	1.031	Sometimes	Moderate
I feel full of energy	2.37	.710	Rarely	Low
I am easily able to understand what my patient/client feel	2.23	.689	Rarely	Low
I look after my patient/ client problems very effectively	2.23	.657	Rarely	Low
In my work, I handle emotional problems very calmly	2.35	.655	Rarely	Low
Through my work, I feel that I have a positive influence on people.	2.33	.719	Rarely	Low
I am easily able to create a relaxed atmosphere with my patients/ clients	2.35	.695	Rarely	Low
I feel refreshed when I have been close to my patients/clients at work	2.27	.672	Rarely	Low
Personal Achievement	2.64917	.499936	Sometimes	Moderate

4.5-5 Always; 3.5-4.49 Often; 2.5-3.49; Sometimes; 1.5-2.49 Rarely; 1-1.49 Never.

Table 8. Burnout (239)

	Mean	Std. Deviation	Scaled Response	Qualitative Descriptor
Emotional Exhaustion	2.8042	0.5170	Sometimes	Moderate
Personal Achievement	2.6492	0.4999	Sometimes	Moderate
Depersonalization	2.3076	0.5953	Rarely	Low
Burnout	2.9604	0.3042	Sometimes	Moderate

4.5-5 Always; 3.5-4.49 Often; 2.5-3.49; Sometimes; 1.5-2.49 Rarely; 1-1.49 Never.

4.1. Relationship between Resilience and Burnout

Pearson correlation coefficient was used to examine the relationship between resilience and professional burnout. In Table 9, the relationship between resilience and professional burnout showed a *negative relationship* ($r = -.751$, $p = .026$) at a 95% confidence interval. This means that the higher the resilience, the lower the professional burnout of the registered nurses. The study *fails to reject* the null hypothesis that there is no significant relationship between resilience and professional burnout. The study is consistent with Jose, Dhandapani, and Cyriac (2020), which showed a negative relationship between resilience and burnout among frontline nurses during Covid- 19 pandemic.

Table 9. Correlations

	Resilience	Burnout
Pearson Correlation	1	-.751**
Sig. (2-tailed)		.026
N	239	239

4.2. Difference in Burnout when Considering Clinical Area

A one-way between-group analysis of variance was performed to investigate the clinical area's impact on burnout, illustrated in Table 10 and Table 11. Participants were divided into four groups based on their clinical specialty. Group 1 is the medical unit, Group 2 is the surgical unit, Group 3 is the emergency unit, and Group 4 is the intensive care unit. There was a *statistically significant difference* at the $p > 0.004$ level in the clinical area's burnout score: $F = 4.633$. Despite reaching statistically significant, the actual difference in mean scores between the groups was *small*. The effect size, calculated using eta squared, was 0.104. Post-hoc comparison using the LSD test indicated that the mean score for Emergency unit ($M = 3.1342$, $SD = 0.2222$) significantly different from intensive unit ($M = 3.0206$, $SD = 0.2900$), surgical unit ($M = 3.0185$, $SD = 0.3657$) and medical unit ($M = 2.8637$, $SD = 0.2593$). The study *rejects* the null hypothesis that there is no significant difference in professional burnout when considering the clinical area.

Table 10. ANOVA

Burnout					
	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	1.199	3	.400	4.633	.004
Within Groups	12.591	146	.086		
Total	13.789	149			

Table 11. Multiple Comparisons

Dependent Variable: L.S.D.		Burnout				
(I) clinical area		Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Emergency Unit	Medical Unit	.270470*	.09574	.005	.08124	.45968
	Surgical Unit	.1156806	.10117	.255	-.08427	.31563
	Intensive Care Unit	.1136478	.10054	.260	-.08506	.31236

Table 12. ANOVA

Burnout					
	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	1.094	2	.547	6.337	.002
Within Groups	12.695	147	.086		
Total	13.789	149			

Table 13. Multiple Comparisons

Dependent Variable: L.S.D.		Burnout				
(I) clinical experience		Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
10+ Years	1-4 Years	.193955*	.05863	.004	.0534	.2851
	5-9 Years	-.01055	.07609	.890	-.1609	.1398

*. The mean difference is significant at the 0.05 level.

4.3. Difference in Burnout when Considering Clinical Experience

A one-way between-group analysis of variance was conducted to explore the impact of clinical experience on burnout. Participants were divided into three groups according to their clinical experience. Group 1: 1 to 4 years; Group 2: 5 to 9 years; and Group 3: 10 years and above. As shown in Table 12 and Table 13, there was a *statistically significant difference* at the $p > 0.002$ level in burnout score: $F = 6.337$. Despite reaching statistically significant, the actual difference in mean score between the groups was *moderate*. The effect size, calculated using eta squared, was 0.086. Post-hoc comparison using the LSD test indicated that the mean score for 5-9 years ($M = 3.0696$, $SD = 0.3395$) significantly different from 10 years and above ($M = 3.0590$, $SD = 0.2077$), and 1-4 years ($M = 2.8898$, $SD = 0.3080$). Therefore, the study *rejects* the null hypothesis that there is no significant difference in professional burnout when considering clinical experience.

5. Conclusions and Recommendations

The study aimed to look into the relationship between resilience and burnout among registered nurses during the Covid-19 pandemic. According to the results, registered nurses have a high level of resilience and a moderate degree of burnout during the Covid- 19 pandemic. Compared to other countries, burnout levels may have been moderate because Covid-19 cases are not as prevalent in Ghana, and the workload may not be as extensive as in countries where Covid-19 cases are prevalent. The study also showed a negative relationship between resilience and burnout, implying that when nurses' resilience level increases, their burnout decreases. Conversely, as resilience decreases, burnout levels increase among nurses. The study's results also revealed that nurses working in accident and emergency units had a higher level of burnout in the clinical area than those in medical, surgical, and intensive care units. Furthermore, nurses with 10 years or more of clinical working experience were more burned out than those with 1 to 4 and 5 to 9 years of clinical experience.

The study recommends that nurse managers and administrators provide opportunities for nurses to receive training and learn new skills to promote self-care, self-efficacy, and resilience among nurses through continuous professional development. Furthermore, to reduce nurse burnout, support systems in the nursing work environment should be strengthened, and administrators should ensure a healthy workplace with an accurate nurse-patient ratio, appropriate workload, and appropriate working hours. Future research should look into the factors that lead to nurse burnout in Ghana, including individual, environmental, and COVID-19-related or pandemic-related factors.

REFERENCES

- [1] Al-Omari, A., Alhuqbani, W. N., Zaidi, A. R. Z., Al-Subaie, M. F., AlHindi, A. M., Abogosh, A. K., ... & Al Mutair, A. (2020). Clinical characteristics of non-intensive care unit COVID-19 patients in Saudi Arabia: a descriptive cross-sectional study. *Journal of infection and public health*, 13(11), 1639-1644. <https://doi.org/10.1016/j.jiph.2020.09.003>.
- [2] Ang, S. Y., Uthaman, T., Ayre, T. C., Lim, S. H., & Lopez, V. (2019). A Photovoice study on nurses' perceptions and experience of resiliency. *Journal of nursing management*, 27(2), 414-422. <https://doi.org/10.1111/jonm.12702>.
- [3] Brennan, E. J. (2017). Towards resilience and wellbeing in nurses. *British journal of nursing*, 26(1), 43-47. <https://doi.org/10.12968/bjon.2017.26.1.43>.
- [4] Brown, A. R., Walters, J. E., & Jones, A. E. (2019). Pathways to retention: Job satisfaction, burnout, & organizational commitment among social workers. *Journal of Evidence-Based Social Work*, 16(6), 577-594. <https://orcid.org/0000-0002-0946-6232>.
- [5] Cañadas-De la Fuente, G. A., Vargas, C., San Luis, C., García, I., Cañadas, G. R., & Emilia, I. (2015). Risk factors and prevalence of burnout syndrome in the nursing profession. *International journal of nursing studies*, 52(1), 240-249. <https://doi.org/10.1016/j.ijnurstu.2014.07.001>.
- [6] Cishahayo, E., Nankundwa, E., Sego, R., & Bhengu, B. (2017). Burnout among nurses working in critical care settings: a case of a selected tertiary hospital in Rwanda. *International Journal of Research in Medical Sciences*, 5(12), 5121-5128. DOI: <http://dx.doi.org/10.18203/2320-6012.ijrms20175430>.
- [7] Collette, A., & Ungar, M. (2020). The Resilience of Individuals, Families, Communities, and Environments: Mutually Dependent Protective Processes and Complex Systems. In *Systemic Research in Individual, Couple, and Family Therapy and Counseling* (pp. 97-111). Springer, Cham. https://doi.org/10.1007/978-3-030-36560-8_6.
- [8] Delgado, C., Upton, D., Ranse, K., Furness, T., & Foster, K. (2017). Nurses' resilience and the emotional labour of nursing work: An integrative review of empirical literature. *International Journal of Nursing Studies*, 70, 71-88. <https://doi.org/10.1016/j.ijnurstu.2017.02.008>.
- [9] Dounavi, K., Fennell, B., & Early, E. (2019). Supervision for certification in the field of applied behaviour analysis: Characteristics and relationship with job satisfaction, burnout, work demands, and support. *International journal of environmental research and public health*, 16(12), 2098. <https://doi.org/10.3390/ijerph16122098>.
- [10] Driggin, E., Madhavan, M. V., Bikdeli, B., Chuich, T., Laracy, J., Biondi-Zoccai, G., ... & Parikh, S. A. (2020). Cardiovascular considerations for patients, health care workers, and health systems during the COVID-19 pandemic. *Journal of the American College of Cardiology*, 75(18), 2352-2371. <https://doi.org/10.1016/j.jacc.2020.03.031>.
- [11] Foster, K., Cuzzillo, C., & Furness, T. (2018). Strengthening mental health nurses' resilience through a workplace resilience programme: A qualitative inquiry. *Journal of psychiatric and mental health nursing*, 25(5-6), 338-348.

- [12] Foster, K., Roche, M., Delgado, C., Cuzzillo, C., Giandinoto, J. A., & Furness, T. (2019). Resilience and mental health nursing: An integrative review of international literature. *International journal of mental health nursing*, 28(1), 71-85. <https://doi.org/10.1111/inm.12548>.
- [13] Ghana Health Service. (2021). COVID-19. <https://www.ghanahealthservice.org/covid19/>.
- [14] Gharakhani, D., & Zaferanchi, A. (2019). The effect of job burnout on turnover intention with regard to the mediating role of job satisfaction. *Journal of Health*, 10(1), 109-117. <https://doi.org/10.29252/j.health.10.1.109>.
- [15] Gribben, L., & Semple, C. J. (2020). Factors contributing to burnout and work-life balance in adult oncology nursing: an integrative review. *European Journal of Oncology Nursing*, 101887. <https://doi.org/10.1016/j.ejon.2020.101887>.
- [16] Hämmig, O. (2018). Explaining burnout and the intention to leave the profession among health professionals—a cross-sectional study in a hospital setting in Switzerland. *B.M.C. health services research*, 18(1), 1-11. <https://doi.org/10.1186/s12913-018-3556-1>.
- [17] Hu, D., Kong, Y., Li, W., Han, Q., Zhang, X., Zhu, L. X., ... & Zhu, J. (2020). Frontline nurses' burnout, anxiety, depression, and fear statuses and their associated factors during the COVID-19 outbreak in Wuhan, China: A large-scale cross-sectional study. *EClinicalMedicine*, 24, 100424.
- [18] Hu, D., Kong, Y., Li, W., Han, Q., Zhang, X., Zhu, L. X., ... & Zhu, J. (2020). Frontline nurses' burnout, anxiety, depression, and fear statuses and their associated factors during the COVID-19 outbreak in Wuhan, China: A large-scale cross-sectional study. *EClinicalMedicine*, 24, 100424. <https://doi.org/10.1016/j.eclinm.2020.100424>.
- [19] Jose, S., Dhandapani, M., & Cyriac, M. C. (2020). Burnout and Resilience among Frontline Nurses during COVID-19 Pandemic: A Cross-sectional Study in the Emergency Department of a Tertiary Care Center, North India. *Indian journal of critical care medicine: peer-reviewed, official publication of Indian Society of Critical Care Medicine*, 24(11), 1081. <https://doi.org/10.5005/jp-journals-10071-23667>.
- [20] Khamisa, N., Peltzer, K., Ilic, D., & Oldenburg, B. (2016). Work related stress, burnout, job satisfaction and general health of nurses: A follow-up study. *International journal of nursing practice*, 22(6), 538-545. <https://doi.org/10.1111/ijn.12455>.
- [21] Kinman, G., & Leggetter, S. (2016, December). Emotional labour and wellbeing: what protects nurses?. In *Healthcare* (Vol. 4, No. 4, p. 89). Multidisciplinary Digital Publishing Institute. <https://doi.org/10.3390/healthcare4040089>.
- [22] Kuntz, J. R., Malinen, S., & Näswall, K. (2017). Employee resilience: Directions for resilience development. *Consulting Psychology Journal: Practice and Research*, 69(3), 223.
- [23] Kutluturk, S., Sozeri, E., Uysal, N., & Bay, F. (2016). Resilience and burnout status among nurses working in oncology. *Annals of general psychiatry*, 15(1), 1-9. <https://doi.org/10.1186/s12991-016-0121-3>.
- [24] Lahana, E., Papadopoulou, K., Roumeliotou, O., Tsounis, A., Sarafis, P., & Niakas, D. (2017). Burnout among nurses working in social welfare centers for the disabled. <https://doi.org/10.1186/s12912-017-0209-3>.
- [25] Maslach, C., & Leiter, M. P. (2017). New insights into burnout and health care: Strategies for improving civility and alleviating burnout. *Medical teacher*, 39(2), 160-163. <https://doi.org/10.1080/0142159X.2016.1248918>.
- [26] Mcdermott, R. C., Fruh, S. M., Williams, S., Hauff, C., Graves, R. J., Melnyk, B. M., & Hall, H. R. (2020). Nursing students' resilience, depression, wellbeing, and academic distress: Testing a moderated mediation model. *Journal of Advanced Nursing*, 76(12), 3385-3397. <https://doi.org/10.1111/jan.14531>.
- [27] Moloney, W., Boxall, P., Parsons, M., & Cheung, G. (2018). Factors predicting Registered Nurses' intentions to leave their organization and profession: A job demands-resources framework. *Journal of Advanced Nursing*, 74(4), 864-875. <https://doi.org/10.1111/jan.13497>.
- [28] Näswall, K., Malinen, S., Kuntz, J. & Hodliffe, M. (2019), "Employee resilience: development and Validation of a measure", *Journal of Managerial Psychology*, Vol. 34 No. 5, pp. 353-367. <https://doi.org/10.1108/JMP-02-2018-0102>.
- [29] Odonkor, S. T., & Frimpong, K. (2020). Burnout among healthcare professionals in Ghana: a critical assessment. *BioMed research international*, 2020. <https://doi.org/10.1155/2020/1614968>.
- [30] Oshio, A., Taku, K., Hirano, M., & Saeed, G. (2018). Resilience and Big Five personality traits: A meta-analysis. *Personality and Individual Differences*, 127, 54-60.
- [31] Poku, C. A., Donkor, E., & Naab, F. (2020). Determinants of emotional exhaustion among nursing workforce in urban Ghana: a cross-sectional study. *BMC nursing*, 19(1), 1-10.
- [32] Ren, Y., Zhou, Y., Wang, S., Luo, T., Huang, M., & Zeng, Y. (2018). Exploratory study on resilience and its influencing factors among hospital nurses in Guangzhou, China. *International Journal of Nursing Sciences*, 5(1), 57-62. <https://doi.org/10.1016/j.ijnss.2017.11.001>.
- [33] Rivard, A. M., & Brown, C. A. (2019). Moral distress and resilience in the occupational therapy workplace. *Safety*, 5(1), 10. <https://doi.org/10.3390/safety5010010>.
- [34] Roberts, N. J., McAloney-Kocaman, K., Lippitt, K., Ray, E., Welch, L., & Kelly, C. (2021). Levels of Resilience, anxiety and depression in nurses working in respiratory clinical areas during the COVID pandemic. *Respiratory medicine*, 176, 106219. <https://doi.org/10.1016/j.rmed.2020.106219>.
- [35] Shah, M., K., Gandrakota, N., Cimiotti, J., P., Ghose, N., Moore, M., Ali, M., K. O. (2021). Prevalence of and Factors Associated with Nurse Burnout in the U.S. *JAMA Netw Open*. 4(2); e2036469. <https://doi.org/10.1001/jamanetworkopen.2020.36469>.
- [36] Smith, G. D., & Yang, F. (2017). Stress, resilience and psychological wellbeing in Chinese undergraduate nursing students. *Nurse Education Today*, 49, 90-95. <https://doi.org/10.1016/j.nedt.2016.10.004>.
- [37] Traynor, M. (2017). Resilience: part of the problem or part of the solution?. *Mental Health Nursing*, 37(6), 8-10. <https://eprints.mdx.ac.uk/id/eprint/22832>.
- [38] Tuck, M. E., Manssuer, H. A., & Philip, M. F. (2020). *The Effect of Personality Traits, Resilience, and Spirituality on the Attitude and Performance Towards Caregiving in a Child-Death Simulation Among Nursing Students* (Doctoral

- dissertation, Brenau University).
- [39] Wagnild, G. M., & Collins, J. A. (2009). Assessing resilience. *Journal of psychosocial nursing and mental health services*, 47(12), 28-33. <https://doi.org/10.3928/02793695-20091103-01>.
- [40] Walton, M., Murray, E., & Christian, M. D. (2020). Mental health care for medical staff and affiliated healthcare workers during the COVID-19 pandemic. *European Heart Journal: Acute Cardiovascular Care*, 9(3), 241-247. <https://doi.org/10.1177/2048872620922795>.
- [41] Wang, H., Jin, Y., Wang, D., Zhao, S., Sang, X., & Yuan, B. (2020). Job satisfaction, burnout, and turnover intention among primary care providers in rural China: results from structural equation modeling. *B.M.C. family practice*, 21(1), 1-10. <https://doi.org/10.1186/s12875-020-1083-8>.
- [42] Williams, T. A., Gruber, D. A., Sutcliffe, K. M., Shepherd, D. A., & Zhao, E. Y. (2017). Organizational response to adversity: Fusing crisis management and resilience research streams. *Academy of Management Annals*, 11(2), 733-769. <https://doi.org/10.5465/annals.2015.0134>.
- [43] World Health Organization. (2020). *Coronavirus disease (COVID-19) outbreak: rights, roles and responsibilities of health workers, including key considerations for occupational safety and health: interim guidance, March 19 2020* (No. WHO/2019-nCov/HCW_advice/2020.2).
- [44] Yörük, S., & Güler, D. (2021). The relationship between psychological resilience, burnout, stress, and sociodemographic factors with depression in nurses and midwives during the COVID-19 pandemic: A cross-sectional study in Turkey. *Perspectives in Psychiatric Care*, 57(1), 390-398. <https://doi.org/10.1111/ppc.12659>.
- [45] Yu, F., Raphael, D., Mackay, L., Smith, M., & King, A. (2019). Personal and work-related factors associated with nurse resilience: A systematic review. *International Journal of Nursing Studies*, 93, 129-140. <https://doi.org/10.1016/j.ijnurstu.2019.02.014>.
- [46] Zou, G., Shen, X., Tian, X., Liu, C., Li, G., Kong, L., & Li, P. (2016). Correlates of psychological distress, Burnout, and Resilience among Chinese female nurses. *Industrial health*, 2015-0103. <https://doi.org/10.2486/indhealth.2015-0103>.