BURNOUT AND PSYCHOLOGICAL WELLBEING AMONG NURSES IN MURANG'A COUNTY, KENYA: A CORRELATIONAL STUDY

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ABSTRACT

Burnout is a major health hazard that puts the general wellbeing of nurses at risk. The aim of this study was to determine the relationship between burnout and psychological wellbeing of nurses in Murang'a County public hospitals. The aim of this study was to examine the interplay between burnout and psychological wellbeing of general ward nurses in government hospitals. The study was informed by the multidimensional theory of burnout and the theory of psychological wellbeing. The study applied a correlational design as the framework of operation and was conducted in Murang'a County. Purposive sampling and simple random sampling methods was used to select 230 participants for the study. Ethical approval was obtained and data collected from the sampled facilities using the Maslach Burnout Inventory for Medical Personnel and the Psychological Wellbeing Scale. Data was analysed using mean, percentages, standard deviation and Pearson product moment correlation. The study adhered to ethical standards in order to protect participants from any harm. There was a significant correlation between burnout and psychological wellbeing (r[205]= -0.384, p = .000), implying that high levels of burnout translated to low levels of psychological wellbeing and vice versa. The study findings may inform policies on burnout management among nurses in public hospitals and county health boards. Predictive studies may be conducted to ascertain the causal relationship between burnout and psychological wellbeing.

Key Words: Emotional Exhaustion, Depersonalization, Reduced Personal Achievement, Psychological Wellbeing, County Public Hospitals

Introduction

Burnout is a significant issue that adversely impacts the psychological wellbeing of nurses and which may in turn affect provision of health services as observed by the World Health Organization [1]. Nurses may thus find themselves seeking health services when the problem is not illness but burnout. Burnout becomes a significant risk to psychological wellbeing which is about one's life "going well", and functioning at optimal levels [2]. Maintaining nurses' physical and psychological wellbeing is core to keeping them available and productive. Lohmann et al. [3]. reiterate that it is a way of keeping health risks at bay since their work demands place healthcare workers in danger of incapacitation with mental illness or poor psychological wellbeing. Studying how burnout interacts with positive psychological wellbeing may shed light into the related risks and possibly how they correlate.

Psychological wellbeing is a goal that every healthcare professional desires considering its importance to good mental health. According to [4] psychological wellbeing can be hedonic, eudaimonic or resilience. This means psychological wellbeing consists of pleasure and enjoyment, meaning and fulfilment, coping abilities, emotional regulation and robust problem-solving abilities. In other terms, psychological wellbeing encompasses not only having good feelings but also functioning well. [5] noted that psychological wellbeing does not imply the absence of pain because experiencing painful emotions is part of normal living. Learning to manage such emotions is what matters and failure to do so interferes with one's functioning. Psychological wellbeing was therefore considered in a positive sense.

Association between burnout and psychological wellbeing has been studied in regard to different subscales of burnout of emotional exhaustion, personal accomplishment and depersonalization. [6] in their study on association between burnout and wellbeing and the mediating role of psychological capital and self-esteem among nurses in China. Burnout correlated with psychological wellbeing (r= 0.658, p= 0.02), although psychological wellbeing was considered in terms of general wellbeing. Other studies describe burnout in terms of absence of distress. In a systematic review of published cross-sectional studies, [7] found correlations between burnout and absence of sickness. This trend is reflected in [8] in

their study in West Bank – Palestine that found significant relationship between psychological distress and burnout (p= .008). While the correlations existed between the three dimensions of burnout and psychological distress, this study sought to assess the connection between burnout and positive psychological wellbeing.

Another approach to studying the relationship between burnout and psychological wellbeing is assessing the associated factors. Elsewhere, it was reported that quality of life to be negatively correlated (r= -0.368, p= .001) with burnout among nurses in Saudi Arabia [8]. Although quality of life is related to psychological wellbeing, they are conceptualized differently, and the current study limits itself to positive psychological wellbeing.

Studies in Africa that assess the relationship between burnout and psychological wellbeing conceptualize psychological wellbeing as job satisfaction, poor health status and psychological distress. In South Africa, [10] found significant negative correlation between burnout and job satisfaction (r = -0.077, p= 0.01). [11] also focused on the predictors of burnout rather than the relationship with psychological wellbeing. Results showed that 44.4% experienced burnout which was predicted by different factors like marital status, poor health status, long work periods, intention to leave working in an emergency room and being on medication for problems associated with the nature of work. There were high chances that a person with poor health status (AOR: 4.8, 95% CI: (1.1-21.4) and fair health status (AOR:12, 95% CI:(4.5-32) had high burnout. While the studies point to the nature of relationship that may exist between burnout and psychological wellbeing, the relationship is only by inference. The studies correlate burnout with positive or negative aspects of psychological wellbeing, whereas the current study focuses on the latter.

Local studies on the relationship between burnout and psychological wellbeing are mostly related and do not directly asses this relationship. [12] focused on the predictors of burnout where long working hours significantly contributed to burnout, and which was higher in females that in males (46 vs. 24, p=0.05). This shows that nurses working for unfavourably long hours were likely to develop burnout. This leans towards the connection between burnout and negative rather than positive psychological wellbeing. Elsewhere, [13] studied mental disorders among healthcare workers as a result of COVID-19 pandemic rather than burnout. The findings showed that depression was high among females that males (36.5 vs.

26.9%, *p*= .003), younger vs. older (38.1 vs. 26.4%, *p*= .001), Generalized anxiety was higher among younger vs. older healthcare workers (41.7 vs. 29.2%, *p*= .001) and insomnia among the younger compared to the older (30.3 vs. 18, *p*=. 001). These studies fail to show burnout may interact with positive health precisely among nurses as intended in the current study.

[14] assessed how COVID-19 affected health care workers in a health facility in Kenya, where depression (17.3 vs. 3.4% (*p=.026*) for frontline vs. second line; anxiety (11.1 vs. 5.1% (*p*=.681), insomnia (9.1 vs. 0.0% (*p*=. 0052) and burnout (56.1 vs. 32.8% (*p*=.005) were established as the key experiences of frontline workers most of whom included nurses. These factors only point out that COVID-19 affected nurses among other healthcare workers which in turn may have impacted their psychological wellbeing. While burnout has been explored extensively, existing studies tend to conflate psychological wellbeing with distress or general health. This study addresses this gap by focusing on positive psychological wellbeing as a distinct outcome variable."

Statement of the Problem

Psychological wellbeing is an important aspect of a nurse's mental health because it determines their individual capacity to withstand health risks. Burnout is among the risks that may lower psychological wellbeing of nurses which may in turn impact their efficiency in carrying out their duties. Studies show a global burnout prevalence of 43% [15] although it differs from country to country. For example, a prevalence of 31.5% has been realized in the US, 22% in China and 43% in Kenya [16]. This implies that nurses in Kenya may experience higher levels of burnout compared to other regions which may translate to low efficiency at work.

A global review studies focusing on the relationship between burnout and psychological wellbeing differ in their measurement of psychological wellbeing. Some have focused on the relationship between burnout and the absence of sickness [17] while others pay attention to burnout and psychological distress [18], and quality of life [19]. The same trend is portrayed in regional studies which correlate burnout with other variables such as job satisfaction and general wellbeing [20]. Local studies appear to be limited, and much of the reviewed studies are mostly related. For instance, [21] focuses on predictors of burnout like long working hours, while [14] and [13] explore mental disorders resulting from COVID-19 pandemic. While

these studies show the relationship between burnout and psychological wellbeing, majority of them have focused on negative rather than positive psychological wellbeing. In addition, studies focusing precisely on Murang'a County are limited which requires further exploration.

Nurse burnout has been found to affect nurse turnover with many leaving the profession as observed by [22]. It may also lead to cognitive dysfunction, depression and impaired sleep [23] as well as worsen patient safety [24]. [25] have demonstrated that nurses experience high levels of burnout (43.7%) that require to be investigated on how they affect psychological wellbeing. Despite these known effects and levels of burnout, the relationship between burnout and psychological wellbeing among nurses, specifically in Murang'a County, remains underexplored and poorly understood.

Purpose of the Study

The purpose of this study was to examine the relationship between burnout and psychological wellbeing among general nurses in hospitals in Murang'a County with a view to improving healthcare outcomes and inform policy.

Hypothesis

$H_0$1: There is no statistically significant relationship between burnout and psychological wellbeing among nurses in Murang'a County hospitals.

Theoretical Framework

The study was informed by the multidimensional theory of burnout and the theory of psychological wellbeing. The multidimensional theory was propounded by [26]. This theory posits that burnout is a psychological symptom that is characterized by emotional exhaustion, depersonalization and reduced personal achievement, which can surface among persons working with others in some defined capacity [27]. This suggests that burnout is not just fatigue, but fatigue that affects various dimensions of the individual and thus affecting their psychological wellbeing and diminishing their mental health. Maslach further states that emotional exhaustion dimension refers to feelings of emotional overextension and depletion of one's emotional resources. Depersonalization on the other hand encompasses negativity, callousness, and excessive detachment in response to others who ought to receive the service or care one offers. Reduced personal accomplishment is

used to describe the failing feelings of one's competence and success in achieving according to one's work or duty.

This theory has been criticized for equating emotional exhaustion with depersonalization and reduced personal accomplishment. Thus, it has been argued that emotional exhaustion should be considered as the main component of burnout and the rest as related variables and not elements of burnout [28]. However, the theory is in line with the biopsychosocial model which considers illness from a holistic perspective. It is therefore important because it explains the independent variable (burnout) in three main subdivisions of emotional exhaustion, depersonalization and reduced personal accomplishment. It also shows how psychological wellbeing may be affected when a person experiences extreme burnout.

The theory of psychological wellbeing was developed by [29]. The theory states that for a person to develop and have self-realization, they must first have a sound and optimal psychological functioning and experience [30]. There are generally two philosophical standpoints that underpin wellbeing, that is, hedonism and eudaimonism. Hedonism emphasizes happiness while eudaimonism emphasizes meaning or being meaningful [31]. While different scholars have emphasized either of the two standpoints in explaining psychological wellbeing, [29] has underscored the eudaimonic approach with six distinct aspects of psychological wellbeing. The six aspects are all characteristics of positive functioning and they include autonomy, environmental mastery, personal development, purposeful life, positive interpersonal relations and self-acceptance [31]. While there are different types of wellbeing, this study aligned itself with the multidimensional aspect of wellbeing because it sought to maximize on the multiplicity of experiences that contribute to nurses' positive psychological wellbeing.

The theory of psychological wellbeing has been criticized for overemphasizing on environmental mastery or the capacity of individuals to change and intervene in transforming the environment around them. This is at the expense of abandoning the positive functioning like meaningful life engagement, realizing personal capacities and enlightened self-knowledge [30]. However, [32] came to this realization and revised the theory by adding one modality of resilience which refers to the ability to maintain and recover wellbeing in the face of adversity. Thus, resilience runs parallel to the six dimensions or

categories of wellbeing such that, whenever one of them is threatened, a person is able to use the available resources to balance and maintain their wellbeing.

Conceptual Framework

In figure 1, it is hypothesized that burnout is correlated with psychological wellbeing. Burnout is conceptualized according to multidimensional theory which identifies three domains or components; emotional exhaustion (EE), Depersonalization (DP) and reduced personal achievement (PA). On the other hand, psychological wellbeing is indicated by autonomy, environmental mastery, personal development, purposeful life, positive interpersonal relations and self-acceptance. Accordingly, this relationship is moderated by resilience – the ability to withstand adverse experiences related to burnout.

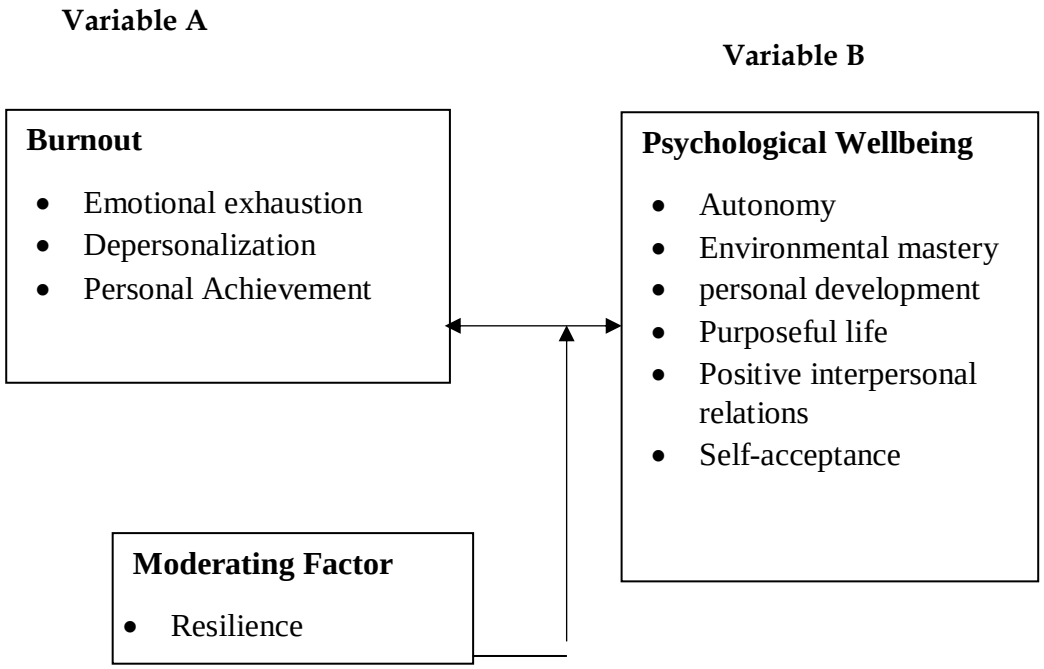

Figure 1: A conceptual Framework

Source: Author (2023)

Empirical Review

The relationship between burnout and psychological wellbeing is one that has been studied in different settings. In a multinational cross-sectional study, [33] assessed the determinants of burnout and other aspects of psychological wellbeing among healthcare workers in three countries, UK, Poland and Singapore. Relevant scales for safety, burnout, anxiety and

depression were used to gather data from the respondents. Multivariate analyses showed that, among other findings, burnout was found to correlate with psychological wellbeing of healthcare workers in the selected countries (UK, Poland and Singapore) (OR 0.64; 95%CI 0.51-0.82). This study however relied on absence of disorder as the definition psychological wellbeing. The current study diverged from this approach and determined this relationship while relying on positive psychological wellbeing as one of the variables.

[34] in a survey studied the levels of burnout and psychological wellbeing of government employed nurses in India. From a sample of 603 participants, data was collected using the Copenhagen Burnout Inventory, the General Health Questionnaire, and the Perceived Stress Scale. The findings showed high levels of burnout among the nurses but it was not correlated with psychological wellbeing (r = .284, p=.0.072). The study conceptualized psychological wellbeing using the GHQ-28 whose purpose is to identify minor psychiatric disorders. Conceptualizing psychological wellbeing in terms of disorder is limited and the current study sought to explore it from a positive perspective and how it may correlate with burnout.

In a multi-centre study, [35] measured burnout against the corresponding risk profile of paediatric nurses. A sample of 95 nurses drawn from four hospitals in the Spanish province of Granada was put into study, from which data was collected using the MBI, NEO Personality Inventory, and the Educational-Clinical questionnaire. It was found that 22 percent, 18.5 percent and 39 percent scored high on emotional exhaustion, depersonalization and low personal achievement respectively on the MBI scale. The scores on overall burnout did not correspond to the nurses' sociodemographic profile, work variables but the three domains were found to relate to the analysed psychological factors. While the study showed significant correlation between burnout domains and personal profiles, the current study explored further on how the domains correlated with positive psychological wellbeing.

While [33] and [34] measured psychological wellbeing by paying attention to absence of disorder and according to general health. [36] linked burnout and psychological wellbeing and the mediating role of social support in a cross-sectional study. The study was conducted on 486 Chinese university students aged 18-35 years of age and MBI, multidimensional scale of perceived social support (MSPSS), motivation strategy learning scale (MSLS) and

Psychological Wellbeing Scale (PWS). Social support was found to mediate burnout and subjective wellbeing such that high levels of social support minimized burnout effects while enhancing psychological wellbeing. This study, while linking burnout and psychological wellbeing, it did so by assessing the mediating role of social support. In a setting with limited study on the relationship between burnout and psychological wellbeing has been explored, the current study assessed the direct correlation between the two variables without any mediating variable. Differences in study population triggered the current study for comparison purposes.

[37] assessed the relationship between psychological wellbeing and burnout amongst medical students in India. Burnout was measured using the OLBI, psychological wellbeing using GHQ-12 and substance use using CAGE. Findings from the study indicated that 86% and 80% of the respondents experienced disengagement and emotional exhaustion, and 70% scored over 2 suggesting the possibility of gender specific scores in burnout. The results of GHQ-12 positively correlated with burnout (disengagement and exhaustion domains) of the OLBI. The GHQ-12 that was used measures wellbeing with focus on disease, which explains the combination with CAGE scale to measure negative psychological wellbeing. On the other hand, OLBI is not specifically tailored for nurses but wider populations compared to MBI which has versions suitable for healthcare professionals.

In a cross-sectional study, [38] explored the relationship between job stress, positive psychological resources, burnout and wellbeing. The study sampled 1500 workers from 26 factories in Northern China and data collected using MBI-GS, Psychological Capital Questionnaire (PCQ), Rosenberg Self-esteem Scale (RSS), and the Flourishing Scale (FS). Among other findings, psychological capital mediated the relationship between emotional exhaustion, depersonalization and professional efficacy and wellbeing. Despite the difference in population, the study could imply that in the presence of proper interventions, burnout is negatively correlated with psychological wellbeing ($r=-.322$, $p=0.02$). In the study, general wellbeing was equated to psychological wellbeing even though they are two different constructs. Studying positive psychological wellbeing would be more suitable in exploring the quality of mental health of nurses.

In the regional arena, [39] studied burnout in relation to quality of life of nurses in South West Nigerian health institutions. The study was descriptive in nature and 259 nurses were recruited for the study and MBI and Short-Form health survey (SF-12) used in collecting data from the respondents. In the findings, the physical health component (PHC) of the quality of life (QOL) scale were significantly negatively correlated to emotional exhaustion (r=.640, p<.001), depersonalization but not reduced personal achievement. This study correlated individual dimensions of burnout with the physical health of nurses, thus the need to explore the interplay between burnout and positive psychological wellbeing.

The study by [39] is closely related to another one by [40] who in their survey on Nigerian health workers assessed the status of mental health and psychological wellbeing and related factors. The study involved 384 participants from public health facilities in Sokoto Metropolis from whom the Kessler-10 Distress Scale, personal wellbeing index (PWBI) were used to collect data. Among other findings, psychological wellbeing was found to significantly correlate with work-related variables which may imply burnout (x^2=4.99, p=.007). This study did not measure burnout *per se* but it was implied in work-related variables and which correlated with personal wellbeing. A more direct study on a Kenyan population was necessary to explicate the relationship between burnout and psychological wellbeing.

In a local study, [14] assessed the mental wellbeing of nurses during the COVID-19 pandemic in a tertiary institution in Kenya. The study was cross-sectional and it involved 255 participants who were recruited for the study. Through multivariate logistic regression, the findings showed that burnout was linked to anxiety, depression, insomnia, and distress (p< .05). Despite this study providing insight on the local statistics on burnout and psychological wellbeing, psychological wellbeing was measured by implication. In addition, the study leaned more on presence of distress as the measure of psychological wellbeing, a limitation the current study aimed to overcome.

A number of studies have examined the relationship between burnout and psychological wellbeing. However, direct literature on positive psychological wellbeing is limited and in most cases the relationship is implied. In some studies, burnout is measured against mental wellbeing in terms of mental disorders and psychological distress. At the same time, the

studies that measure burnout and psychological wellbeing have correlated the two with the mediating role of another variable. There is also limitation in terms of the instruments that measure burnout and psychological wellbeing. On one hand, burnout is measured using MBI-GS which may not apply to nurses or OLBI that is suitable for general populations, and on the other, psychological wellbeing is conceptualized as absence of distress and disease. Some tools like QOL, GHI-12, 28, CAGE, focus more on negative attributes of psychological wellbeing rather than the positive. While numerous studies have explored burnout's impact on general wellbeing, few have employed Ryff's multidimensional model to explicitly assess psychological wellbeing in healthcare settings, particularly among nurses in Kenya. This creates a difficulty in interpreting the relationship between the two variables, a gap the current study aimed to fill.

Materials and Methods

Research Design

This study adopts a correlational research design to determine the relationship between burnout and psychological wellbeing. According to [41], correlational design involves measurements that indicate how two or more factors predict or estimate the level to which the values of each factor relates or changes according to an observable pattern. Accordingly, this design helped determine how burnout and psychological wellbeing interact to predict the mental health of nurses in public hospitals in Murang'a. This design was thus selected because it assisted in showing the magnitude and direction of burnout and psychological wellbeing especially in a healthcare setting.

Study Site

This study was conducted in Murang'a county of Kenya. The county is located in the Central region of Kenya (See Appendix 1). Murang'a County has a population of 942,581 which translates to about 524 people per square kilometre. It has seven sub-counties, namely, Kangema, Mathioya, Kiharu, Kigumo, Maragwa, Kandara and Gatanga, each of which has at least one sub county hospital. This county was selected because it has a largely rural population but is still vibrant in provision of healthcare services. For example, it was among the first counties to open a COVID-19 intensive care unit with a 35-bed capacity in April 2020 as a response to the pandemic, public hospitals in this County also extend their services

to patients from the neighbouring Counties of Nyeri, Machakos and Kirinyaga as these facilities are more accessible than their respective main county referral hospitals. It is therefore expected that the healthcare staff experienced and may still be experiencing burnout and thus the reason for its choice. Recently they have added the Kang'ata Care which encourages hospital deliveries and takes care of those with chronic illnesses and so they come for reviews in the different county hospitals.

Population

This study targets 611 nurses working in Murang'a County in all levels of government hospitals. The accessible population of the nurses is 439 formally employed nurses working in the sub-county public health hospitals in 6 sub-counties and in the county referral hospital. There are 347 female and 92 male nurses serving the seven facilities in the county. This population has been selected because it works in the sub-county and county hospitals which handle larger populations of patients and also provide more specialized services compared to the lower levels (level 3 and below). Table 1 shows the distribution of nurses and facilities in sub-counties.

Table 1 *Distribution of the Study Population*

Sub County Name	Main Sub County Hospital	Female Nurses	Male Nurses	Total Number of Nurses
1.Gatanga	Kirwara	37	4	41
2.Murang'a South	Maragwa	73	15	88
3.Kigumo	Kigumo	26	4	30
4.Kiharu	1.Murang'a Referral hospital	138	49	187
	2.Muriranjas	31	8	39
5.Kandara	Kandara	27	3	30
6.Kangema	Kangema	15	9	24

TOTAL	**347**	**92**	**439**

Source: Murang'a County Government (2022)

Sampling Design

The study utilized both probability and non-probability sampling designs. According to [41] a probability design provides the participants with the equal opportunity to participate in research while a non-probability design-clients are chosen according to their availability or convenience. The probability design was applied to the selection of the six sub-counties and the selection of nurses from each sub-county hospital so as to come up with a study sample. This gave equal chance for any subcounty or nurse participant to be part of the study. The non-probability design was used in the choice of the county and the selection of the sub-county hospitals because they had the required characteristics suitable for the current study. Figure 3.1 shows the sampling design.

Sampling Frame

A sampling frame, as [41] offers, is a list of available respondents in the target population either through their mail or published names. In this study, the researcher made use of a single sampling frame of all the published names of nurses working in Murang'a County, whether under contract or permanent employment. The reason for this sampling frame is because whether the participants are on contract or permanent employment, they provide services to the same population of patients. Furthermore, the list of available names is published by the records office in each sub-county hospital on a monthly basis and so it is ever up-to-date.

Sampling Procedure

This study applied multi-stage sampling procedure in selecting the participants of the study. In this case Murang'a County was purposively sampled because it has the desired characteristics of a busy rural hospital. Similarly, six sub-counties were purposively selected because the subcounty hospitals are located within them. Six sub-county hospitals were selected through purposive sampling as well as they allowed the researcher to apply own judgement. Random sampling was used in selecting the participants for the study because it gave them an equal chance in participating in the study. To achieve this random sample,

the researcher used a list acquired from the records office to select random names of participants who were then allowed to participate in the study.

Sample Size

The researcher selected a sample of 209 participants (Female = 140, Male =69) from the accessible population which was generated using a Yamane (1967) formula for calculating sample size. This formula was used because it is used in generating sample sizes of different populations and is simplified. The sample generation is shown below.

$n= N/1+N(e)^2$

Where n = desired sample size,

N= the study population and

e= margin of error. Therefore:

$n= 439/1+439(0.05)^2$

n = 209.296 = 209

The distribution of the sample is shown below in table 2

Table 2: ***Distribution of the Sample Size***

Sub County Name	**Main Sub County Hospital**	**Female Nurses**	**Male Nurses**	**Total Number of Nurses**	**Sample Distribution**		**Total Sample**
					Female	**Male**	
1.Gatanga	Kirwara	37	4	41	13	4	17
2.Murang'a South	Maragwa	73	15	88	23	10	33
3.Kigumo	Kigumo	26	4	30	13	4	17
4.Kiharu	1.Murang'a Referral hospital	138	49	187	63	40	103
	2.Muriranjas	31	8	39	21	8	29
5.Kandara	Kandara	27	3	30	17	3	20
TOTAL		**347**	**83**	**439**	**140**	**69**	**209**

Research Procedures

This section outlines the sources of data and the instruments to be used to collect data for each variable. Data collection is the process of gathering information from the respondents within a given period of time and using a specified instrument. This research relied on primary data collected from the respondents on their experiences of burnout and psychological wellbeing.

Pilot Study

A pilot study was conducted in Kangema Sub County Hospital on a sample of 23 participants, who accounted for 10 percent of the total population. According to [42], a 10 percent of the total sample is suitable for a pilot study using a correlational design. Kangema Sub-County was selected because the participants had similar characteristics as the study population. In order to avoid data contamination, the participants of the pilot study were excluded from the actual study. Data from the pilot study produced a Cronbach's alpha of 0.823 and 0.784 for MBI-HSS and PWBS-18 respectively. All the items were found suitable for data collection permitting progress to the next level of data collection.

Research Instruments

The following research instruments were used for the study.

Maslach Burnout Inventory for Medical Personnel (MBI-HSS-MP)

In order to collect data on burnout, the researcher used the Maslach Burnout Inventory for Human Services Survey on Medical Personnel [26]. This tool was originated by [26] and it assesses how individuals who provide human services experience exhaustion and burnout. Since medical personnel are much studied than many other populations, this tool was specifically tailored in order to capture some constructs that are specific to them. The tool contains 22 items with seven points and are distributed across 3 dimensions of emotional exhaustion (EE), Personal accomplishment (PA), and Depersonalization (DP). The EE has nine items, PA eight items and DP five items. The response scales range from 0-7 where 0 = never, 1 = a few times a year or less, 2 = once a month or less, 3 = a few times a month, 4 = once a week, 5 = a few times a week, and 6 = every day. The highest possible score for this tool is 154 while the lowest possible score is 22. Items 1-7 are meant to measure emotional exhaustion, 8-14 depersonalization and 15-22 reduced personal achievement.

The tool was scored by summing up the item scores for each dimension and dividing them into dimensions of low, moderate and high. The highest score for EE and DP is 49 and 56 for PA while the lowest possible score for EE and DP is 7 and 8 for PA. The scores can be divided into ranges of 7-21 (low), 22-36 (moderate) and 37-49 (high) for EE and DP and 7-23 (low), 24-39 (moderate) and 40-56 (high) for DP.

Psychological Wellbeing Scale

Psychological Wellbeing was measured using the Psychological Wellbeing Scale (PWBS-18). This scale was developed by Ryff and Keyes (1995). This tool consists of 18 survey items in which respondents give a rating of how strongly they agree or disagree with the 18 statements on a 7-point scale. There are 6 subscales in the PWBS which include autonomy (items 15, 17, 18), environmental mastery (items 4, 8, 9), personal growth (items 11, 12, 14), positive relations with others (items 6, 13, 16), purpose in life (items 3, 7, 10), and self-acceptance (items 1, 2, 5). Item 1, 2, 3, 8, 9, 11, 12, 13, 17 and 18 are reverse coded. The 7-point scale consists of: 1 = strongly agree, 2 = somewhat disagree, 3 = a little agree; 4 = neither agree or disagree; 5 = a little disagree; 6 = somewhat disagree; 7 = strongly disagree. In order to calculate the scores of every respondent to the items, the scores are summed where higher scores imply higher levels of psychological wellbeing. Accordingly, the highest possible score for this tool is 126 and the lowest possible score is 18. By dividing the scores into low, moderate and high levels psychological wellbeing, a score of 18-54 counted as low, 55-90 moderate, and 91-126 (high). The current study adopted this scoring methods of the instruments because it gives a more direct interpretation of the dimension scores. The tools have also been tested in different contexts where high consistency levels were realized making it suitable for a Kenyan setting, and thus its adoption.

Validity and Reliability

Validity

Validity is the capacity of a tool to measure what it purports to measure. This study made use of face, content and construct validities. Face validity was achieved by ensuring that the tool is as consistent as possible with the subject matter of the research and that it was well understood by the participants. Content validity was achieved by ensuring that extensive

literature review informs the construction of the tool as well as expert opinion on the quality of the tool. This ensured that all the items covered the subject matter of the research.

Construct validity on the other hand was achieved by ensuring that the items of the study are those contained in the topic and objectives of the study. The MBI-HSS was validated in a study by [42] population of dental students in a Spanish university on a sample of 533 participants. Its construct validity was found to have a value (> 1.5) explaining for 51.2% of the total variance and a specificity of 92.1% with an area under curve of 0.96. This makes it suitable for the current study. Although this population differed from that of nurses, it is assumed that the experiences of dental students was closely related to that of nurses because of similar work environments.

On the other hand, [43] conducted a study to determine the validity and reliability of the PWBS-18 during the recruitment of clinical nurses in a medical centre in Taipei, Taiwan. The construct and criterion validities were tested in the study which were found to be good with a confirmatory factor index (CFI) was found at 0.90. This makes it suitable for the current study because of the high level of validity.

Reliability

The MBI-HSS-MP was selected because it has good psychometric properties in assessing burnout accurately among healthcare professionals in the three dimensions of emotional exhaustion (EE), personal achievement (PA) and depersonalization (DP). The tool was tested on a population of 306 health professionals in Persia where a comparative fit index was .941 and the Tucker Lewis index at .929. Its test-retest reliability of the items was satisfactory and differential item functioning was not found across genders or healthcare professionals [44]. On the other hand, the PWBS-18 was preferred because after it was applied on a population of 474 nurses in Taiwan it produced a Cronbach's alpha of .880 and aggregate subscale alphas of .720 to .880 except .570 for autonomy. Despite that, its construct and criterion validity of the short form were good [45] With the validation from the cited research, the tools were found to be reliable after pilot study which reaffirmed their capacity for the current study.

Data Analysis Methods

The researcher made use of both descriptive and inferential statistics to analyse data. Descriptive statistics involved percentages, mean and standard deviation and were chosen to help in quantifying and describing the basic features of the collected data. On the other hand, inferential statistics was useful because they helped in showing the extent of interaction between the burnout and psychological wellbeing among nurses.

Ethical Consideration

As a requisite for any research exercise, the researcher obtained authorization to carry out the study from United States International University graduate school -Institutional Research Board (IRB) and the National Commission for Science, Technology and Innovation (NACOSTI). The permit assisted the researcher to obtain a mandate from both county and respective sub county levels of administration. The researcher also sought permission from the instrument developers in order to use the instrument on the participants of the study. The researcher provided informed consent to the participants by explaining the purpose, harms and benefits of the research to the respondents. Furthermore, the respondents were free to participate in the study or withdraw at any time with no penalty to their decision. The researcher then obtained a written consent from each of the participants before recruiting them for the study.

Confidentiality was assured to the participants by making sure that the study instrument does not bear any name of the participants. A code was assigned to each participant. The questionnaires also remained under lock and key and were only accessed during the period of analysis. The questionnaires were destroyed six months after analysis and after the work has been submitted and published to ensure that no unauthorized access is made on them. The soft data was however kept and protected with a password so that it may be produced on demand.

After the research, the participants were debriefed in case they experienced any form of discomfort and reassured on the privacy of their information. The researcher helped the participants who experienced psychological distress after completing the test by providing them with psychological first aid and later referring them for psychological therapy.

Results

Response Rate

This study sampled 209 participants to whom questionnaires were issued. Out of the issued questionnaires, 205 were returned accounting for a response rate of 98.1%. The response rate is shown in table 3

Table 3 *Response Rate*

Sample	Collected Questionnaires	Response Rate (%)
209	205	98.1

objectives.

4.3.1 Demographic characteristics

The researcher sought to describe the demographic characteristics of the respondents. These were measured in terms of age, gender, length of service, marital status and level of education. The findings for the demographic characteristics are shown in table 4.

Table 4 *Demographic Characteristics of the Respondents*

	Frequency	Percent
Age		
Below 30 years	52	25.4
31-40	85	41.5
41-50	34	16.6
51+	34	16.6
Gender		
Male	46	22.4
Female	159	77.6
Length of service		
Below 5 years	35	17.1
5-10	53	25.9
11-15	45	22.0
16-20	21	10.2
21+	51	24.9
Marital status		
Single	59	28.8
Married	142	69.3
Divorced	3	1.5
Separated	1	.5
Level of education		
Certificate	10	4.9
Diploma	152	74.1
Degree	39	19.0
Masters	4	2.0
Total	**205**	**100**

Table 4 shows that 41.5% of the participants were aged between 31-40 years. Those aged 41-50 years and 51 and above were the least accounting for 16.6% each. Over three quarters (77.6%) of the participants were female and less than a quarter (22.4%) male. Slightly over a

quarter (25.9%) of the participants had worked for a period of 5-10 years and only 10.2% had worked for a period of 16-20 years. Over two thirds (69.3%) were married and only 0.5% were separated. Those with diploma were nearly three quarters (74.1%) of the total participants and only 2% held a Master's degree. The findings on demographic characteristics of the participants indicate that each of the targeted projected characteristics was available among the respondents. This indicates that the data was representative and suitable for analysis.

Relationship between Burnout and Psychological Wellbeing

The main objective of this study was to examine the relationship between burnout and psychological wellbeing. Although the original items are ordinal, composite scores were treated as continuous variables for Pearson correlation, as is common in psychological research. The relationship between burnout and psychological wellbeing was examined by correlating burnout together with its components and psychological wellbeing. The null hypothesis was also tested.

H_0: There is no statistically significant relationship between burnout and psychological wellbeing among nurses in Murang'a County Hospitals.

It was thus rejected and restated as below:

H_A: There is a statistically significant relationship between burnout and psychological wellbeing among nurses in Murang'a County Hospitals.

The findings are shown in table 5.

Table 5 *Relationship between Burnout and Psychological Wellbeing*

		Psychological Wellbeing
Burnout	Pearson Correlation	-.384**
	Sig. (2-tailed)	.000
	N	205
Emotional Exhaustion	Pearson Correlation	-.192**
	Sig. (2-tailed)	.006

	N	205
Depersonalization	Pearson Correlation	-.356**
	Sig. (2-tailed)	.000
	N	205
Reduced Personal Achievement	Pearson Correlation	-.329**
	Sig. (2-tailed)	.000
	N	205

Table 5 shows that the individual dimensions of burnout were significantly correlated with psychological wellbeing; Emotional exhaustion [r(205) = -.192, p = .000]; Depersonalization [r(205) = -.356, p = .006]; and reduced personal achievement [r(205) = .329, p = .000]. The overall burnout was also found to be significantly correlated to psychological wellbeing [r(205) =-.384, p =.000]. . The moderate negative correlation found (r = –0.384) suggests that as burnout increases, psychological wellbeing among nurses' declines. This supports the conceptual assumption that burnout undermines emotional and cognitive resources necessary for wellbeing. These results also support Maslach's conceptualization of burnout as a multidimensional syndrome that negatively impacts an individual's sense of accomplishment and emotional capacity, thus impairing aspects of Ryff's psychological wellbeing such as self-acceptance and purpose in life. Burnout effects are detrimental to nurse psychological wellbeing and can deplete positive emotions, erode positive relationships hinder self-worth and personal growth causing vicious cycle of vulnerability to burnout.

Discussions and Recommendations

These findings agree with [33] who found burnout to correlate significantly with psychological wellbeing of nurses in select European countries. The findings also agree with [35] who found the different domains of burnout to correlate with depression, even though the study focused on negative aspects of psychological wellbeing. [37] found positive correlation between psychological wellbeing and burnout, although GHQ-12 was used to measure psychological wellbeing and was the manipulated variable, possibly explaining the similarity. [40] also found a significant relationship between work-related variables

(including burnout) and personal wellbeing that measures individual subjective wellbeing, and thus the similarity. [14] studied psychological wellbeing in terms of distress, their findings resonated with the current study perhaps due to the COVID-19 period influence to the former.

The current study partially diverges from the findings by [39] which found Nigerian nurses' burnout to negatively correlate with physical health component of QOL scale – a difference that could be accounted for by the difference in measurement. The present study contradicted [34] who unlike the present study, used GHQ-28 to assess wellbeing, which emphasizes psychological distress rather than positive functioning, potentially explaining the divergent findings. [36] found social support to mediate the relationship between burnout and subjective wellbeing. Despite there being a relationship, the findings may not parallel the current study.

Recommendations

Healthcare institutions should implement structured interventions to reduce burnout risks such as workload management, psychological support programs and professional development which can promote nurses' psychological wellbeing.

The Ministry of Health in collaboration with county governments should tailor a policy that incorporates mental health in health care training, accessible psychological services, adequate staffing and fostering a culture of psychological safety and open dialogue.

Mental health practitioners can also play a role in advocacy and policy influence on mental health policies, action plans and mental health amendment acts to ensure continuous growth and attention to the nurse's wellbeing.

Suggestions for Further Studies

This study was correlational in nature and further studies may determine the causal relationship between burnout and psychological wellbeing.

Similar research can be conducted in other counties in Kenya to assess whether there are differences in burnout response in different regions.

A study on interventions to prevent occurrence of burnout amongst nurses in order to achieve and maintain a healthy psychological wellbeing.

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