

Traumatic Work Events and Negative Affect Among Maternity Nurses in Public Hospitals in Garissa Township, Kenya: A Mixed Methods Study

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ABSTRACT

Garissa Township is characterized by a lack of resources, a high level of maternal morbidity and mortality, occupational stresses from insecurity, and social-cultural factors that make the workplace a source of occupational trauma. Maternity nurses in Garissa County are constantly exposed to obstetric emergencies, cases of maternal death, and high-risk deliveries. The purpose of this study was to examine the relationship between traumatic work events and negative affect among maternity nurses in public hospitals in Garissa Township. It was guided by the Transactional Model of Stress and Coping. A convergent parallel mixed-methods design was used, targeting 110 maternity nurses and 3 maternity unit managers from 3 purposively selected public hospitals. Census sampling was used for nurses, while purposive sampling was used to select managers for key informant interviews. Quantitative data were collected using questionnaires, while qualitative data were obtained through interviews. Data analysis was conducted using SPSS version 27, with descriptive statistics, Pearson correlation, and regression analyses used to examine relationships among study variables. Qualitative data were collected through semi-structured interviews and were analyzed thematically. Results revealed that traumatic work events had a positive and statistically significant negative affect ($\beta = 0.161$, $t = 3.3$, $p < 0.05$). The study concludes that obstetric emergencies, maternal deaths, stillbirths, verbal abuse, and resource constraints cause emotional exhaustion, frustration, sadness, and occasional sleep disturbances. The county government of Garissa should increase staffing levels, improve the availability of essential maternity supplies, and strengthen emergency referral systems to reduce the stress of managing obstetric emergencies under constrained resources. Additionally, hospital management should institutionalize structured psychosocial support systems to promote maternity nurses' well-being.

Keywords: Garissa Township, Maternity nurses, Negative affect, Traumatic work events

INTRODUCTION

Background

Maternity nursing is one of the most challenging fields in nursing practice, as nurses must navigate a stressful environment, emergencies, overload, understaffing, and the constant need to support mothers and their families (Schuster & Dwyer, 2020). Complicated deliveries, complications with mothers or babies, long hours of work, and a shortage of supplies exacerbate negative affect (Maben & Bridges, 2020). Indeed, chronic negative affect may lower nurses' satisfaction with work, influence interpersonal communication, and affect the quality and safety of care provided to mothers and newborns (Kelly, 2020). It's thus important to examine traumatic work events and negative affect among maternity nurses.

Traumatic work events arise from exposure to threatening or horrific situations, leading to symptoms like flashbacks, nightmares, avoidance, and threat perception (Ermiş, 2023). Traumatic experiences may cause

irritability, emotional numbness, feelings of worthlessness, guilt, shame, and relationship challenges (Çankaya & Dikmen, 2020). Trauma may be conceptualized as a probable diagnosis based on symptom scores that meet thresholds, and as a continuum of symptoms assessed on a continuous scale (Nieuwenhuijze et al., 2024). This study employed these methodologies to examine traumatic work events and negative affect among maternity nurses.

Maternity nurses in Kenya practice under stressful circumstances with crowded hospitals, understaffing, and frequent instances of maternal or child deaths. Kibunja et al. (2021) conducted a study on the prevalence of workplace violence among nurses in the emergency units and found that nurses were verbally abused, physically assaulted, or sexually harassed; these had a negative effect on nurses' mental well-being and job satisfaction. A study conducted by Awadh and Suleiman (2024) found a significant prevalence of mental illness among maternity nurses, related to mental distress and depression.

Previous studies have investigated the nature of workplace trauma, nurses' well-being, and other occupational factors within other counties in Kenya. However, there's a dearth of literature on the relationship between traumatic work events and negative affect among maternity nurses within Garissa County. This presents a knowledge gap that the current study sought to fill.

Statement of the Problem

Garissa Township is characterized by a lack of resources, a high level of maternal morbidity and mortality, occupational stresses emanating from security considerations, and social-cultural factors that make the workplace a source of occupational trauma. Maternity nurses in Garissa Township are constantly exposed to obstetric emergencies, cases of maternal death, and high-risk deliveries within a challenging setting that does not provide psychosocial interventions or benefit from trauma-informed interventions.

Purpose of the Study

The study determined the relationship between traumatic work events and negative affect among maternity nurses in public hospitals in Garissa Township, Kenya.

LITERATURE REVIEW

Theoretical Framework

The Transactional Model of Stress and Coping was proposed by Richard Lazarus and Susan Folkman in 1984. It describes stress and coping processes as continuous and dynamic interactions between the individual and their environment. This model argues that stress is not an attribute of certain events; it is the cognitive appraisal and perception of one's ability to cope with the situation that determines whether it is stressful (Lazarus & Folkman, 1984). Primary cognitive appraisal is the assessment of the stimulus's relevance to the individual's well-being, categorized as irrelevant, benign, or threatening, whereas secondary cognitive appraisal is the assessment of the available resources to cope with the stressor (Obbarius et al., 2021). Stressful incidents at work are perceived as threatening or overwhelming. Negative affect is the emotional response characterized by fear, sadness, anxiety, and distress after such an experience. The model links nurses' perception of traumatic events at work to their emotions.

Empirical Literature

In the Kingdom of Saudi Arabia, Almadani et al. (2023) conducted a large-scale cross-sectional study involving 678 healthcare professionals. The study used the Professional Quality of Life Scale and employed descriptive and inferential statistics. It concluded that 63.9% of the participants had moderate secondary traumatic stress. The study was not specific to nursing specialties, thus creating a contextual gap in maternity nurses.

In Nigeria, Adebayo et al. (2022) conducted a study on the predictors of burnout and secondary traumatic stress among 312 nurses working in the country's tertiary hospitals. In a descriptive cross-sectional study, the data

were analyzed using multiple regression. Findings revealed that workload intensity and emotional exhaustion were significant predictors of burnout ($\beta = .41, p < .01$), with supervisory support a significant predictor of compassion satisfaction. This study failed to categorize nurses by department, thereby limiting the study's generalizability to maternity nursing practice.

In Ghana, Mensah et al. (2021) examined the moderating effects of resilience on the relationship between traumatic stress and burnout among 250 hospital-based nurses. Using standardized research instruments, hierarchical regression analysis showed that resilience moderated the relationship between secondary traumatic stress and burnout, thereby decreasing its effects ($\Delta R^2 = .18, p < .05$). The study examined general hospital-based staff, but not those in high-trauma areas such as maternity wards; hence, a contextual gap.

In the South African context, Maphumulo and Bhengu (2022) conducted a study on the relationship between traumatic experiences, professional quality of life, and occupational stress among nurses working in public hospitals. Using a correlational study design, the researchers found a significant correlation between traumatic experiences and burnout ($r = .49, p < .01$), with a moderate level of compassion satisfaction. Maternity nurses were not considered specifically, thus, a methodological gap.

Tesfaye and Abera (2023) examined compassion satisfaction, burnout, and secondary traumatic stress in public hospital nurses. The research used the ProQOL method. The findings from inferential analyses using an independent t-test and logistic regression indicated that nurses in high-demand settings have a higher level of negative affect than those in less-demand settings. The study only used a quantitative research paradigm; thus, a methodological gap.

More specifically focusing on maternal healthcare, Wanjiku and Muturi (2022) investigated secondary traumatic stress among maternal and child healthcare nurses working in Kiambu County in Kenya. In their cross-sectional study using logistic regression analysis, they found that high exposure to maternal emergencies had significantly increased the risk for secondary traumatic stress ($OR=2.31, p<.05$). However, the study only focused on negative psychological consequences without examining the possibility of posttraumatic growth; thus, an empirical gap.

Furthermore, Kamau et al. (2023) employed mixed methods to investigate traumatic work exposure and professional quality of life of maternity nurses in selected county hospitals. Descriptive and regression analyses were conducted on quantitative data, and thematic analysis was conducted on qualitative data. Results indicated a moderate level of burnout, with themes of resilience, professional fulfillment, and emotional development.

RESEARCH METHODOLOGY

Research Design

This study used a convergent parallel mixed-methods research design informed by a pragmatic paradigm. This entailed the use of both qualitative and quantitative methods to produce findings independently before combining them for a better interpretation and explanation of findings

Study Location

The study was conducted in Garissa Township, an administrative and commercial center of Garissa County, located in the north-eastern part of Kenya. Garissa County has an estimated area of about 44,000 square kilometers, while Garissa Township occupies a relatively small urban area with a high population concentration and increased demand for public services. According to the 2019 national census data, Garissa County has an estimated population of over 184,000 women of reproductive age, thereby increasing the demand for maternal and neonatal health services.

Target Population of the Study

The target population included three public hospitals in Garissa Township, 110 maternity nurses, and three maternity unit managers working within the selected hospitals.

Sampling Procedure and Sample Size

A census approach was used to include all 110 maternity nurses working in the three selected hospitals. The census method ensured that the entire population of maternity nurses was represented in the study without sampling error. Purposive sampling was used to select three maternity unit managers for interviews. Purposive sampling was appropriate for identifying participants with relevant knowledge and experience regarding traumatic work-related issues and institutional support systems.

Data Collection Instruments

Data collection instruments were tools used to gather primary data related to the study's objectives. Data for the study were collected using questionnaires for maternity nurses and an interview guide for managers.

Pilot study

Pilot testing was conducted at Dadaab Subcounty Hospital for instrument validity and reliability. A sample of 10 nurses was used for the quantitative tools, while one manager participated in the qualitative pilot. Pilot testing ensured that valid and accurate data were collected for the study. It also helped assess the clarity and relevance of the research instruments.

Data Collection Procedures

The researcher obtained an introduction letter from the Catholic University of Eastern Africa. Permission was then obtained from the National Commission for Science, Technology, and Innovation (NACOSTI) and from the administrations of the selected hospitals. Questionnaires were then administered to maternity nurses during breaks after obtaining informed consent. Completed questionnaires were collected using sealed envelopes to ensure confidentiality. Interviews with maternity unit managers were conducted in hospital settings at a mutually convenient time.

Data Analysis Procedure

Quantitative data were analyzed using SPSS version 27. Descriptive statistics such as frequencies, means, and standard deviations were used, while inferential analyses were conducted using Pearson correlation and regression analysis. Statistical significance was determined at the 0.05 level. Results were presented using tables. Qualitative data were analyzed thematically. Findings were presented narratively with supporting quotations and integration of results.

Ethical Considerations

Ethical principles were upheld in accordance with university and national research guidelines. Ethical approval was obtained from the Catholic University of Eastern Africa, NACOSTI, and hospital administrations before data collection. Participants were fully informed about the study. Participation was voluntary, anonymity was maintained through coding, and privacy was ensured during questionnaire administration. For sensitive issues such as trauma exposure, a standby counselor was made available through hospital counseling services in case of emotional distress. All data were securely stored with restricted access and were used solely for academic purposes without misrepresentation.

RESULTS

Results indicated that all the maternity nurses had ever encountered a traumatic event in their maternity ward duties. The study analyzed these traumatic work events among maternity nurses in selected public hospitals in Garissa township. Respondents were required to indicate their level of agreement with a 5-point Likert scale on the negative affect of the frequency of traumatic work events. Results indicated that maternity nurses had experienced several traumatic work events, with an aggregate mean of 3.61 (SD = 1.114). Respondents reported that they had witnessed maternal deaths ($M = 2.45$, $SD = 1.138$) and had witnessed stillbirths ($M = 3.16$, $SD = 0.904$). They indicated that they had managed severe obstetric emergencies such as postpartum hemorrhage

(PPH) ($M = 4.19$, $SD = 0.807$) and had provided care to critically ill mothers requiring emergency interventions ($M = 3.54$, $SD = 1.055$). They also reported that they had handled distressing reactions from family members following the loss of a loved one ($M = 3.36$, $SD = 1.155$) and had been involved in cases where complications occurred despite their best efforts ($M = 3.10$, $SD = 1.100$). Further findings showed that respondents had worked under severe staff shortages during obstetric emergencies ($M = 3.95$, $SD = 1.107$) and had experienced verbal abuse from patients or relatives ($M = 4.27$, $SD = 0.789$). They also indicated that they had felt emotionally affected after witnessing severe pain and suffering among mothers ($M = 3.85$, $SD = 1.221$). In addition, respondents had considered leaving the profession after experiencing traumatic work events ($M = 3.28$, $SD = 1.409$). This is summarised in Table 1:

Table 1: Descriptives for traumatic work events

Statement	n	Mean	Std. Deviation
Witnessing maternal death	110	2.45	1.138
Witnessing stillbirth	110	3.16	0.904
Managing severe obstetric emergencies.	110	4.19	0.807
Providing care to critically ill mothers.	110	3.54	1.055
Handling reactions from family members after loss.	110	3.36	1.155
Being involved in cases where complications occurred.	110	3.10	1.100
Working under severe staff shortages in obstetric emergencies.	110	3.95	1.107
Experiencing verbal abuse from patients or relatives.	110	4.27	0.789
Feeling emotionally affected after witnessing severe pain.	110	3.85	1.221
Considering leaving the profession after a traumatic work event.	110	3.28	1.409
Aggregate Mean		3.61	1.114

Respondents indicated that the most needed support when faced with traumatic events was emotional and psychological support. They noted that counseling services would help them cope with distressing experiences such as maternal deaths and obstetric complications. They indicated that debriefing sessions after difficult cases would help them process emotions and reduce stress. Respondents also indicated that peer support from colleagues was important, as sharing experiences helped them feel understood and less isolated. They further indicated that supportive supervision from nurse managers and encouragement from hospital leadership were necessary in managing emotional strain. In addition, they indicated that adequate staffing was important to reduce workload pressure during and after traumatic events. Some respondents also indicated that having time to rest after critical incidents would help with emotional recovery.

Respondents explained that maternal deaths and stillbirths were the most emotionally distressing traumatic events in their work. They indicated that witnessing mothers or babies die despite all efforts was difficult and had a lasting emotional impact. Respondents also indicated that severe obstetric emergencies, such as postpartum hemorrhage, were highly stressful due to the urgency and unpredictability of the situations. They further indicated that witnessing the suffering of mothers and the emotional reactions of family members after loss was deeply affecting. Additionally, respondents indicated that cases involving sudden complications despite best efforts were emotionally challenging.

The study analyzed how traumatic work events affect the frequency of negative affect among maternity nurses in selected public hospitals in Garissa township. Respondents were required to indicate their level of agreement with a 5-point Likert scale on the negative effects of traumatic work events. Results indicated that maternity nurses experienced a low to moderate level of negative affect related to traumatic work events, as reflected by an aggregate mean score of 2.64 ($SD = 0.768$). Respondents agreed that they often felt emotionally exhausted after their shift ($M = 3.40$, $SD = 0.719$) and that they felt helpless or frustrated when they could not save a patient ($M = 3.59$, $SD = 0.681$). They also reported occasional experiences of sleep disturbances due to work-related stress ($M = 2.62$, $SD = 0.986$) and feelings of sadness or hopelessness during the working week ($M = 2.56$, $SD = 0.819$). There was disagreement with low irritability at work ($M = 2.16$, $SD = 0.736$) and feeling withdrawn or emotionally numb while at work ($M = 1.92$, $SD = 0.706$). This is summarised in Table 2

Table 2: Descriptives for negative affect

Statement	n	Mean	Std. Deviation
I often feel emotionally exhausted after my shift.	110	3.40	0.719
I feel helpless or frustrated when I can't save a patient	110	3.59	0.681
I experience sadness or hopelessness during my working week	110	2.56	0.819
I am very irritable when am at work	110	2.16	0.736
I experience sleep disturbances due to work-related stress	110	2.62	0.986
I feel withdrawn or emotionally numb at work	110	1.92	0.706
Aggregate Mean		2.64	0.768

Regression analysis was conducted to analyze the negative affect of traumatic work events on maternity nurses in Garissa township. The model summary indicated a correlation coefficient ($R = 0.303$), which indicated a weak negative effect of traumatic work events. The coefficient of determination ($R^2 = 0.092$) showed that 9.2% of the variation in the negative effect was explained by traumatic work events. ANOVA results revealed that the regression model was statistically significant ($F(1,108) = 10.889$, $p < 0.05$). Thus, the model significantly predicted maternity nurses' negative effect.

The coefficients table showed that traumatic work events had a positive and statistically significant effect ($\beta = 0.161$, $t = 3.3$, $p < 0.05$). Table 3 summarises the regression results.

Table 3: Regression results on traumatic work events and negative affect

R	R Square	Adjusted R-Square	Std. Error of the Estimate	Durbin-Watson	
.303 ^a	0.092	0.083	0.39827	2.085	
ANOVA ^a	Sum of Squares	Df	Mean Square	F	Sig.
Regression	1.727	1	1.727	10.889	.001 ^b
Residual	17.130	108	0.159		
Total	18.858	109			
Coefficients ^a	Unstandardized Coefficients	Std. Error	Standardized Coefficients	t	Sig.
(Constant)	2.144	0.175		12.223	0.000
Traumatic work events	0.161	0.049	0.303	3.300	0.001
a. Predictors: (Constant), Traumatic work events					
b. Dependent Variable: negative effects					

Key informants' findings revealed that maternity nurses frequently encountered potentially traumatic work events, including obstetric emergencies, maternal and neonatal deaths, stillbirths, severe complications, and interactions with bereaved families. Interviewees reported that such experiences may be associated with stress, sadness, anxiety, frustration, emotional exhaustion, reduced concentration, and negative emotions. Frequent traumatic work events may be related to burnout and reduced job satisfaction, although nurses often strive to maintain professionalism and continue providing patient care.

KI-1 asserted, "Maternity nurses are expected to encounter traumatic events quite frequently, especially during busy shifts. Cases such as obstetric emergencies, stillbirths and complications are common in the unit."

KI-2 also noted, "Traumatic events are expected to occur often in the maternity unit due to the nature of the work.... In high-risk cases, nurses may face such events almost daily...."

The types of traumatic events that were likely to occur among maternity nurses, according to KI-3, were "... maternal deaths, stillbirths and severe obstetric complications such as postpartum haemorrhage. In some cases, complications occur despite all efforts to save the patient. These experiences are emotionally distressing for nurses."

KI-2 said, "Traumatic events include difficult deliveries, maternal or neonatal deaths and emergency obstetric conditions.... In addition, exposure to emotional reactions from families after loss is very challenging. These events form part of daily maternity practice."

The KI-3 anticipated traumatic work events to affect nurses' work performance and emotional state, as "... by causing stress, sadness and emotional exhaustion. In some cases, concentration may be reduced after difficult incidents. Repeated exposure may also lead to burnout over time."

Additionally, it was explained, KI-3 stated, "Nurses may feel anxious, frustrated, or emotionally drained after traumatic cases.... many nurses try to remain professional despite these feelings. Continuous exposure without support may increase burnout and reduce job satisfaction."

The interviews assessed respondents' expectations that traumatic work events would contribute to negative emotions. KI-1 highlighted, "Traumatic work events are expected to contribute significantly to negative emotions among nurses. Witnessing deaths or complications can lead to sadness and emotional distress..."

Additionally, KI-2 explained, "Exposure to traumatic events is likely to increase feelings of anxiety and sadness among maternity nurses. Nurses often become emotionally affected after losing patients despite their efforts. These emotions may persist beyond the workplace."

Maternity nurses in charge outlined signs of stress, burnout, or emotional fatigue among maternity nurses and how they were expected to be addressed by hospital management. KI-2 said, "Signs of stress and emotional fatigue are expected among maternity nurses due to frequent exposure to traumatic cases. Some nurses may appear tired, less motivated, or emotionally drained after shifts." KI-2 added, "Hospital management is expected to address this through counseling services and supportive supervision. Adequate staffing is also important to reduce workload pressure."

KI-3 explained, "There are expected signs of burnout such as fatigue, stress and emotional exhaustion among maternity nurses. Some nurses may show reduced energy or difficulty coping after difficult cases." KI-3 added, "Management is expected to support staff through psychological counseling and stress management programs."

The findings are consistent with those of Wanjiku and Muturi (2022), who found that maternal healthcare nurses have high levels of secondary traumatic stress due to repeated exposure to maternal emergencies in Kiambu county hospitals. Similarly, Kamau et al. (2023) reported that maternity nurses regularly encounter traumatic events arising from emergency obstetric care and adverse maternal outcomes, highlighting the emotionally demanding nature of maternal healthcare services.

The finding that respondents frequently experienced verbal abuse from patients and relatives also resonates with the work of Jiao et al. (2023), who examined traumatic workplace events and workplace bullying among 297 clinical nurses working in two hospitals in Wuhan, China, who established that adverse workplace experiences significantly contributed to emotional distress, burnout, and reduced compassion satisfaction among nurses. Although their study focused on workplace bullying rather than maternity-specific trauma, it demonstrates that hostile interactions within the work environment can exacerbate the psychological burden experienced by healthcare workers.

Study respondents had considered leaving the profession after traumatic work events; thus, repeated exposure to distressing events may influence career intentions and workforce retention. Similar concerns were highlighted by Tesfaye and Abera (2023), who found that nurses working in high-demand settings experienced greater psychological strain and negative affect than those in lower-demand settings. Likewise, Adebayo et al. (2022) reported that workload intensity and emotional exhaustion significantly predicted burnout among nurses,

indicating that repeated exposure to emotionally demanding situations may undermine professional commitment over time.

The finding of emotional exhaustion and frustration following unsuccessful patient outcomes is consistent with that of Almadani et al. (2023), who found that a majority of healthcare professionals experienced moderate secondary traumatic stress. Additionally, Maphumulo and Bhengu (2022) reported a significant relationship between traumatic experiences and burnout among nurses in South Africa.

However, the relatively low levels of emotional numbness and withdrawal observed in the present study suggest the presence of protective factors that may have reduced the severity of negative affect. This interpretation is supported by Mensah et al. (2021), who found that resilience moderated the relationship between traumatic stress and burnout among nurses.

CONCLUSION AND RECOMMENDATIONS

Conclusion

The study also concludes that traumatic work events are a routine part of maternity nursing practice and significantly influence emotional well-being. Exposure to obstetric emergencies, maternal deaths, stillbirths, verbal abuse, and resource constraints generates emotional exhaustion, frustration, sadness, and occasional sleep disturbances. However, more severe manifestations, such as emotional withdrawal and persistent irritability, are limited.

Recommendations

The County Government of Garissa should improve working conditions in public hospitals. This should include increasing staffing levels, improving the availability of essential maternity supplies, and strengthening emergency referral systems. Hospital management in public hospitals within Garissa Township should institutionalize structured psychosocial support systems. These should include routine debriefing sessions after traumatic events, accessible counseling services, regular mental health screening, and formal peer-support programs.

Suggestions for Further Research

Further studies could be conducted in Garissa County to better comprehend traumatic work events and negative affect among maternity nurses. The study included only a questionnaire and an interview guide to collect data. Further studies could use a focus group discussion, an observation guide, and document analysis. This study involved maternity nurses and nurses in charge. Further studies could include county and Ministry of Health officials.

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