The Influence of Nurse–Colleague Relationships on the Mental Wellness of Nurses in Embu and Tharaka-Nithi Counties, Kenya

Margaret Gatavi Njeru[1*], Jane Marete[1], Damaris Rukahu[1]

[1] *Kenya Methodist University, Kenya*

[*]*Correspondence email*: mnjeru0067@stu.kemu.ac.ke

Abstract

Relationships among colleagues shape the psychological well-being of nurses, yet evidence from Kenyan county hospitals is limited. This study examined the influence of nurse–colleague relationships on the mental wellness of nurses in Embu and Tharaka-Nithi Counties, Kenya. A mixed-methods, cross-sectional design was used, guided by the Therapeutic Engagement Stress Theory. The target population comprised 380 nurses and 50 doctors at Embu Level 5 Hospital and Chuka County Referral Hospital. A sample of 253 nurses, determined using the Yamane formula, was invited to complete self-administered questionnaires based on the PTSD Checklist for DSM-5 (PCL-5), the Depression Anxiety Stress Scales (DASS-21), and the NIOSH Worker Well-Being Questionnaire; 245 nurses (96.8%) responded. Ten doctors were purposively selected for interviews. Quantitative data were analyzed in SPSS version 27.0 using descriptive statistics, Pearson's correlation, and simple linear regression; interview data were analyzed thematically using a deductive approach. Nurses generally reported positive relationships with colleagues, but substantial minorities reported unequal duty sharing, limited autonomy in multidisciplinary teams, and fatigue. Psychological distress was high: 75.9% of nurses scored in the probable-PTSD range, and 64.1%, 66.5%, and 71.8% reported severe or extremely severe depression, anxiety, and stress, respectively. Nurse–colleague relationship significantly predicted mental wellness ($\beta = 0.437$, $p < .001$) and accounted for 19.1% of its variance. Doctors' accounts emphasized teamwork, shared workload, and poorly managed shift work. The study concludes that nurse–colleague relationships are a significant predictor of nurses' mental wellness. Hospitals should adopt policies that promote equitable duty sharing, effective shift management, teamwork, and conflict management.

Keywords: *psychological well-being; nurse–colleague relationship; mental wellness; mental health; workplace stress*

IJPP 14(8); 31-45

1.0 Introduction

Mental health problems among healthcare workers are a global concern, and a considerable number of nurses experience one or more forms of mental disorder. Mental wellness is a state of mental well-being that enables people to cope with the stresses of life, realize their abilities, and work well (World Health Organization [WHO], 2025); it also reflects the capacity to build resilience and deal with adversity (Global Wellness Institute, 2023). Understanding mental wellness in the nursing profession helps to identify key mental health problems and to design effective interventions. Nursing is among the most demanding services in the healthcare sector and is increasingly affected by stress, anxiety, and depression (Lee et al., 2020). Melnyk et al. (2025) noted that nurses' mental health is increasingly recognized as shaping not only their own well-being and job satisfaction but also the quality of patient care and the overall efficiency of the healthcare system. In Kenya, nurses are central to health service delivery, particularly in public hospitals, where patient loads are heavy and resources are limited (Mbuthia et al., 2023). These conditions may affect nurses' mental wellness.

Nurse–colleague relationships are among the most important yet least studied influences on nurses' mental health. A nurse–colleague relationship is the association between a nurse and co-workers in the workplace, and it can influence mental wellness positively or negatively. Good relationships can strengthen teamwork, create a supportive work atmosphere, and buffer the pressures of the job (Saud & Rice, 2024; Wang et al., 2023). Conversely, strained relationships can harm patient outcomes and organizational performance by increasing stress, job dissatisfaction, and burnout (Anyango et al., 2023). Kakshapati et al. (2021) similarly reported that poor relationships with colleagues impair nurses' performance, including decision-making and client care, and undermine their mental well-being. The strength of the bonds between nurses and their co-workers is therefore central to how well nurses manage stress and preserve their mental health (Babapour et al., 2022).

Although the importance of nurse–colleague relationships for nurses' mental wellness is widely acknowledged (Hassmiller & Wakefield, 2022; Hussein et al., 2024; Raun et al., 2025), little research has examined how these relationships affect nurses' mental wellness in Kenya, particularly in Embu and Tharaka-Nithi Counties. This study addressed that gap in order to inform evidence-based recommendations for healthcare administrators who seek to create workplaces that promote nurses' mental wellness.

Theoretical framework

The study was anchored on the Therapeutic Engagement Stress Theory (TEST), which proposes that the perceived capacity of health and social care professionals to engage therapeutically with the people in their care influences the stress they experience at work (Rippon et al., 2020). TEST thus treats occupational stress as bound up with the quality of professional relationships. The present study extended this relational perspective to the relationships among nurses and their colleagues.

Objective and hypothesis

The objective of the study was to determine the influence of nurse–colleague relationships on the mental wellness of nurses in Embu and Tharaka-Nithi Counties, Kenya. The following null hypothesis was tested:

H_0: Nurse–colleague relationships have no statistically significant influence on the mental wellness of nurses in Embu and Tharaka-Nithi Counties, Kenya.

2.0 Materials and Methods

Research design

A mixed-methods approach was used. The quantitative component followed a cross-sectional design, and the qualitative component used interviews with doctors. A cross-sectional design makes it possible to examine associations between variables by collecting data from a large sample at a single point in time (Wang & Cheng, 2020).

Study setting and population

The study was conducted at Embu Level 5 Hospital (Embu County) and Chuka County Referral Hospital (Tharaka-Nithi County). According to 2023 statistics (Momanyi et al., 2024), Embu Level 5 Hospital had 200 nurses and 30 doctors, and Chuka County Referral Hospital had 180 nurses and 20 doctors. The target population therefore comprised 380 nurses (200 and 180, respectively) and 50 doctors (30 and 20, respectively).

Sampling procedure and sample size

The sample size for nurses was determined using the Yamane (1967) formula (Equation 1), and doctors were selected using purposive sampling.

$$n = N / (1 + Ne\ 2\ ) \quad (1)$$

Where n is the sample size, N is the study population, and e is the margin of error (0.05). The resulting allocation was 133 nurses from Embu Level 5 Hospital and 120 nurses from Chuka County Referral Hospital, giving a sample of 253 nurses.

Purposive sampling allows researchers to select participants who have the characteristics and knowledge most relevant to the study objectives (Memon et al., 2025; Palinkas et al., 2015). A proportion of 20% of the doctors at each hospital was selected using Equation 2:

$$n\ d = (20/100) \times N\ d \quad (2)$$

where n_d is the number of doctors sampled and N_d is the number of doctors in the hospital. This gave 6 doctors at Embu Level 5 Hospital (20/100 × 30) and 4 doctors at Chuka County Referral Hospital (20/100 × 20), a total of 10 doctors.

Data collection

Quantitative data were collected from nurses using structured, self-administered questionnaires that incorporated the PTSD Checklist for DSM-5 (PCL-5), the Depression Anxiety Stress Scales (DASS-21), and the NIOSH Worker Well-Being Questionnaire. PCL-5 items were rated from 0 (not at all) to 4 (extremely), and DASS-21 scores were classified as normal, mild, moderate, severe, or extremely severe. Nurse–colleague relationship was measured with six statements rated from 1 (strongly disagree) to 5 (strongly agree). Qualitative data were collected from doctors through scheduled face-to-face interviews.

Data analysis

Quantitative data were coded and entered into SPSS version 27.0. Descriptive statistics (frequencies, percentages, means, and standard deviations) were used to summarize the data. The research hypothesis was tested at the 5% significance level ($\alpha = 0.05$) using Pearson's correlation and simple linear regression, modeled as Equation 3:

$$Y = \beta\ 0 + \beta\ 1\ X\ 1 + \varepsilon \quad (3)$$

where Y is the mental wellness of nurses, β_0 is the intercept, β_1 is the regression coefficient, X_1 is the nurse–colleague relationship, and ε is the error term.

The data were also subjected to diagnostic tests for normality and linearity, presented using a histogram and a scatter plot. Interview data were analyzed using thematic analysis with a deductive approach, in which the data were compiled and coded to identify patterns in relation to the study's theoretical focus (Fife & Gossner, 2024). Interview excerpts are identified by participant number and have been lightly edited for grammar.

3.0 Results and Discussion

Response rate and demographic characteristics

Table 1 shows the response rates. Of the 253 nurses sampled, 245 responded (96.8%): 126 of 133 (94.7%) at Embu Level 5 Hospital and 119 of 120 (99.2%) at Chuka County Referral Hospital, which therefore had the higher response rate. All 10 doctors took part in the interviews.

Table 1

Participants' Response Rate

	Nurses			Doctors		
Hospital	**Sample size**	**Respondents**	**Response rate (%)**	**Sample size**	**Respondents**	**Response rate (%)**
Embu Level 5 Hospital	133	126	94.7	6	6	100.0
Chuka County Referral Hospital	120	119	99.2	4	4	100.0
Total	253	245	96.8	10	10	100.0

Table 2 presents the demographic characteristics of the nurses. Most respondents were female (73.1%) and married (64.9%), and the largest group had 6–10 years of working experience (38.4%).

Table 2

Demographic Characteristics of Nurses

Characteristic	Category	*f*	%
Gender	Female	179	73.1
	Male	50	20.4
	Prefer not to say	16	6.5
	Total	**245**	**100.0**
Marital status	Married	159	64.9
	Never married	3	1.2
	Divorced	15	6.1
	Widowed	55	22.4
	Separated	13	5.3
	Total	**245**	**100.0**
Years of working experience	Less than 1 year	18	7.3
	1–5 years	55	22.4
	6–10 years	94	38.4
	11–20 years	58	23.7
	Over 20 years	20	8.2
	Total	**245**	**100.0**

Note. $N = 245$.

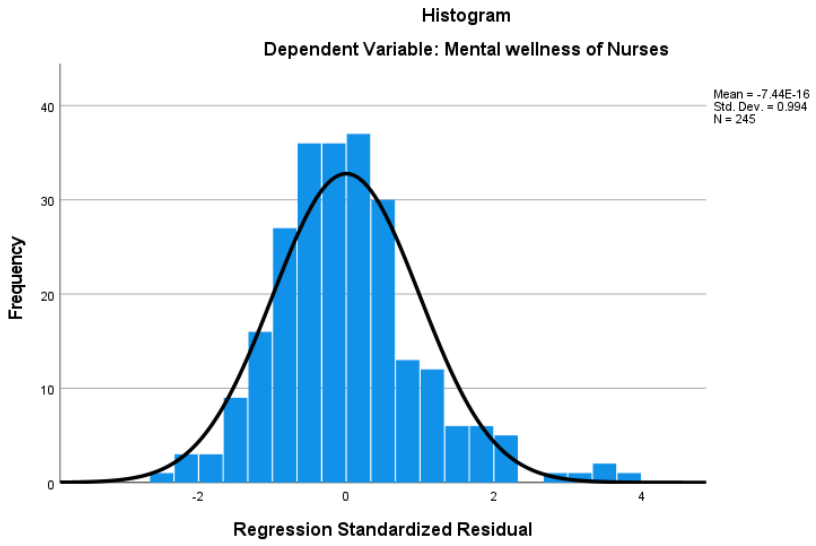
Diagnostic tests

Diagnostic tests for normality and linearity were conducted to determine whether the data met the assumptions of simple linear regression. Normality of the regression residuals was assessed using a histogram with a normal curve (Figure 1). Most standardized residuals clustered around zero ($M \approx 0$, $SD = 0.994$, $N = 245$) and the distribution was approximately normal, although it showed slight positive skew and a few residuals above +3. The normality assumption was therefore considered satisfied (Yan & Su, 2009), and the skew is noted as a limitation

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Figure 1

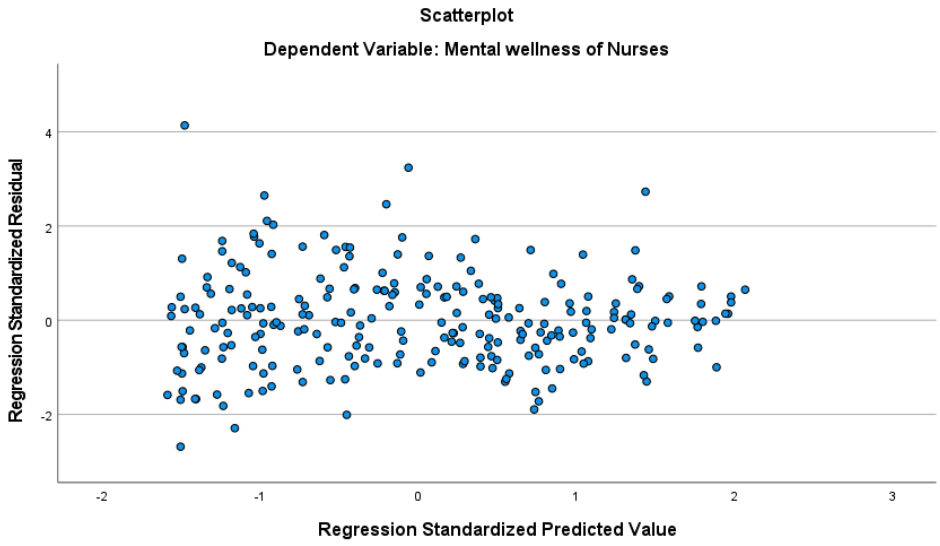
Histogram of Regression Standardized Residuals



Linearity was assessed using a scatter plot of the standardized residuals against the standardized predicted values (Figure 2). The residuals were scattered evenly around zero with no systematic pattern, indicating a linear relationship between nurse–colleague relationship and mental wellness. The linearity assumption was therefore accepted.

Figure 2

Scatter Plot of Standardized Residuals Against Standardized Predicted Values



Mental wellness of nurses

Mental wellness, the dependent variable, was assessed using the PCL-5 to identify probable post-traumatic stress disorder (PTSD) and the DASS-21 to establish the severity of depression, anxiety, and stress.

Table 3 shows the responses to the PCL-5 items. Mean item scores ranged from 1.72 to 2.92 on the 0–4 scale. The highest means were for feeling very upset when reminded of the stressful experience (M = 2.92), strong negative beliefs about oneself, other people, or the world (M = 2.73), and strong physical reactions to reminders (M = 2.72). The lowest means were for repeated, unwanted memories (M = 1.86) and suddenly feeling as if the experience were happening again (M = 1.72).

Table 3

PTSD Checklist (PCL-5) Item Responses

Item	Not at all (0)	A little bit (1)	Moderately (2)	Quite a bit (3)	Extremely (4)	*M*	*SD*
Repeated, disturbing, and unwanted memories of the stressful experience	0 (0.0)	50 (20.4)	179 (73.1)	16 (6.5)	0 (0.0)	1.86	0.50
Suddenly feeling or acting as if the stressful experience were actually happening again	15 (6.1)	159 (64.9)	3 (1.2)	16 (6.5)	52 (21.2)	1.72	1.32
Feeling very upset when something reminds you of the stressful experience	0 (0.0)	20 (8.2)	55 (22.4)	94 (38.4)	76 (31.0)	2.92	0.93
Having strong physical reactions when something reminds you of the stressful experience	1 (0.4)	24 (9.8)	86 (35.1)	66 (26.9)	68 (27.8)	2.72	0.99
Avoiding memories, thoughts, or feelings related to the stressful experience	1 (0.4)	38 (15.5)	85 (34.7)	66 (26.9)	55 (22.4)	2.56	1.02
Avoiding external reminders of the stressful experience	2 (0.8)	36 (14.7)	73 (29.8)	60 (24.5)	74 (30.2)	2.69	1.08
Trouble remembering important parts of the stressful experience	1 (0.4)	55 (22.4)	70 (28.6)	58 (23.7)	61 (24.9)	2.50	1.11
Having strong negative beliefs about yourself, other people, or the world	1 (0.4)	32 (13.1)	73 (29.8)	66 (26.9)	73 (29.8)	2.73	1.04
Blaming yourself or someone else for the stressful experience or what happened after it	1 (0.4)	48 (19.6)	55 (22.4)	72 (29.4)	69 (28.2)	2.65	1.10
Having strong negative feelings such as fear, horror, anger, guilt, or shame	1 (0.4)	51 (20.8)	78 (31.8)	67 (27.3)	48 (19.6)	2.45	1.04
Loss of interest in activities that you used to enjoy	1 (0.4)	61 (24.9)	73 (29.8)	58 (23.7)	52 (21.2)	2.40	1.09
Feeling distant or cut off from other people	2 (0.8)	64 (26.1)	80 (32.7)	48 (19.6)	51 (20.8)	2.33	1.10
Trouble experiencing positive feelings	1 (0.4)	56 (22.9)	83 (33.9)	57 (23.3)	48 (19.6)	2.39	1.06
Irritable behavior, angry outbursts, or acting aggressively	3 (1.2)	62 (25.3)	65 (26.5)	66 (26.9)	49 (20.0)	2.39	1.11

Note. Cells show frequency (percentage). $N = 245$. *M* and *SD* were calculated on the 0–4 scale.

Individual PCL-5 total scores were grouped into 0–30 and 31 or above, the range suggestive of probable PTSD. Table 4 shows that 186 nurses (75.9%) scored 31 or above, comprising 38 male nurses, 136 female nurses, and 12 nurses who preferred not to state their gender; 59 nurses (24.1%) scored 0–30. The proportion above the threshold was similar across gender groups (about 76%). Because the PCL-5 is a screening tool, these scores indicate probable PTSD rather than a clinical diagnosis. The high proportion is consistent with Jaika et al. (2022), who documented a substantial burden of mental health disorders among healthcare workers in Western Kenya during the COVID-19 pandemic.

Table 4

Prevalence of Probable PTSD by Gender

	PCL-5 score 0–30		PCL-5 score ≥ 31	
Gender	***n***	**%**	***n***	**%**
Male	12	4.9	38	15.5
Female	43	17.6	136	55.5
Prefer not to say	4	1.6	12	4.9
Total	**59**	**24.1**	**186**	**75.9**

Note. Percentages are based on $N = 245$.

The interviews with doctors supported these findings. One doctor observed:

"Generally, nurses in Embu Level 5 hospital face mental health struggles" (Participant 3)

Another described a mixture of resilience and strain:

"The mental wellness of nurses at Chuka County Referral Hospital appears to be a mix of resilience and strain. … Personal interaction with nurses often reveals signs of burnout, such as fatigue and reduced job satisfaction" (Participant 6)

These accounts are consistent with Berlin et al. (2023), who documented persistently high burnout among surveyed nurses in the United States and cited contributors such as insufficient staffing. A third doctor identified the sources of strain:

"Some of these mental health challenges include long working hours, high patient loads, limited resources, and also emotional demands from treating patients with complex and chronic issues" (Participant 10)

This view agrees with Watermeyer et al. (2023), who identified heavy workloads as a contributor to stress and burnout among healthcare workers in South Africa.

Table 5 shows the severity of depression, anxiety, and stress measured by the DASS-21. Severe or extremely severe symptoms were reported by 157 nurses (64.1%) for depression, 163 (66.5%) for anxiety, and 176 (71.8%) for stress. Extremely severe symptoms alone were reported by 47.3% of nurses for depression, 53.9% for anxiety, and 56.7% for stress. These results are in line with Lee et al. (2020), who described nursing as a demanding profession that exposes nurses to experiences that can cause stress, depression, and anxiety. Taken together, the PCL-5 and DASS-21 results indicate a high level of psychological distress among the nurses, although, as screening instruments, they measure symptom burden rather than clinical disorder.

Table 5

Severity of Depression, Anxiety, and Stress Among Nurses (DASS-21)

DASS-21 subscale	Normal	Mild	Moderate	Severe	Extremely severe
Depression	12 (4.9)	22 (9.0)	54 (22.0)	41 (16.7)	116 (47.3)
Anxiety	10 (4.1)	20 (8.2)	52 (21.2)	31 (12.7)	132 (53.9)
Stress	8 (3.3)	17 (6.9)	44 (18.0)	37 (15.1)	139 (56.7)

Note. Cells show frequency (percentage). $N = 245$.

Doctors' accounts pointed to workplace relationships and workload as sources of this distress. One doctor stated:

"Workplace bullying and harassment, and excessive workloads are common stress predictors that nurses experience at hospitals" (Participant 8)

Another emphasized the role of hospital management:

"The lack of the hospital management to act on the improvement of personal and labor resources, promotion of widespread and professional relationship of nurses affects their work output leading to poor professional satisfaction" (Participant 5)

This concern echoes the emphasis placed by the International Council of Nurses (2021) on organizational support for the psychosocial well-being of healthcare workers in Kenya.

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Nurse–colleague relationship and mental wellness

Table 6 presents the nurses' responses on six aspects of the nurse–colleague relationship. Mean scores ranged from 2.72 to 3.61 on the five-point scale. Equal duty sharing had the highest mean ($M = 3.61$, $SD = 1.34$): 148 nurses (60.4%) agreed or strongly agreed that they could share duties equally, although 62 (25.3%) disagreed. Support from co-workers ($M = 3.48$), job security when working in teams ($M = 3.53$), and respectful treatment ($M = 3.33$) were also rated positively, with 58.4%, 55.9%, and 53.1% of nurses agreeing, respectively. In contrast, 85 nurses (34.7%) disagreed that they had freedom to make choices in a multidisciplinary approach ($M = 3.13$), and 114 (46.5%) disagreed that they did not experience fatigue when working with their colleagues in similar wards ($M = 2.72$), which means that nearly half experienced fatigue

Table 6

Nurses' Responses on Nurse–Colleague Relationship

Statement	Strongly disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Strongly agree	*M*	*SD*
I can share duties with my co-workers equally	18 (7.3)	44 (18.0)	34 (13.9)	63 (25.7)	85 (34.7)	3.61	1.34
I count on my co-workers for support when needed	21 (8.6)	53 (21.6)	26 (10.6)	68 (27.8)	75 (30.6)	3.48	1.38
I feel my job is secure when working as a team with my co-workers	16 (6.5)	52 (21.2)	39 (15.9)	58 (23.7)	79 (32.2)	3.53	1.33
I have freedom to make choices when in a multidisciplinary approach	30 (12.2)	55 (22.4)	51 (20.8)	62 (25.3)	45 (18.4)	3.13	1.33
I do not experience fatigue when working in similar wards with my colleagues	49 (20.0)	65 (26.5)	56 (22.9)	50 (20.4)	24 (9.8)	2.72	1.28
My colleagues treat me with respect	21 (8.6)	44 (18.0)	43 (17.6)	73 (29.8)	57 (23.3)	3.33	1.38

Note. Percentages are of $N = 245$. *M* and *SD* were calculated on the 1–5 scale.

The relatively low scores for autonomy in multidisciplinary teams and the high prevalence of fatigue suggest that collaboration across professions and the organization of work remain weak points. This is consistent with Sagahutu et al. (2020), who emphasized the need for a framework to guide communication and collaboration among health professionals in Rwandan hospitals, and with Melnyk et al. (2025), who reported that supportive workplace cultures are associated with less burnout, better mental health, and higher job satisfaction among nurses. The favorable ratings for respectful treatment, support, and duty sharing accord with Anyango et al. (2023), who reported that positive interactions between nurses and their colleagues are associated with a more productive workforce and better mental wellness.

Doctors' accounts supported the view that collegial support protects nurses from stress. One doctor noted:

"Positive relationship fosters team work and reduces stress, as nurses can rely on one another and other colleagues for support" (Participant 4)

Another added:

"Nurses working in supportive cohesive teams often feel less stressed and more motivated. A culture of teamwork allows nurses to share workload and emotionally support each other during challenging times" (Participant 10)

These statements are in line with Saud and Rice (2024), who linked teamwork to lower burnout in public sector organizations. Doctors also identified shift management as a source of strain:

"Poor management of shift work makes nurses have disrupted and incomplete resting hours leading to physical exhaustion and challenges meeting job demands" (Participant 10)

This observation fits the questionnaire finding that nearly half of the nurses experienced fatigue (Table 6) and is consistent with evidence that job stress undermines nurses' quality of life and caring behaviors (Babapour et al., 2022).

Regression analysis

Inferential statistics were used to test the study hypothesis. Table 7 summarizes the regression of mental wellness on nurse–colleague relationship. The correlation between the two variables was moderate and positive (R = 0.437). The R^2 of 0.191 indicates that nurse–colleague relationship accounted for 19.1% of the variance in the mental wellness of nurses in Embu and Tharaka-Nithi Counties. The adjusted R^2 was 0.188, and the standard error of the estimate was 0.467 on the scale of the outcome measure.

Table 7

Model Summary: Nurse–Colleague Relationship and Mental Wellness of Nurses

Model	*R*	R^2	Adjusted R^2	*SE* of the estimate
1	0.437	0.191	0.188	0.467

Note. Predictor: (Constant), nurse–colleague relationship. Dependent variable: mental wellness of nurses.

Table 8 presents the model coefficients. Nurse–colleague relationship was a significant predictor of mental wellness (B = 0.240, SE = 0.032, β = 0.437, t = 7.566, p < .001). On average, a one-unit increase in the nurse–colleague relationship score was associated with a 0.240-unit increase in the mental wellness score, holding other factors constant. The null hypothesis that nurse–colleague relationships have no statistically significant influence on the mental wellness of nurses in Embu and Tharaka-Nithi Counties was therefore rejected at the 5% significance level. The fitted model was:

Table 8

Model Coefficients: Nurse–Colleague Relationship and Mental Wellness of Nurses

	Unstandardized coefficients		Standardized coefficients		
Predictor	***B***	***SE***	**β**	***t***	***p***
(Constant)	1.660	0.113		14.667	< .001
Nurse–colleague relationship	0.240	0.032	0.437	7.566	< .001

Note. Dependent variable: mental wellness of nurses.

$$Y = 1.660 + 0.240X_1 \quad (4)$$

where Y is the predicted mental wellness score and X_1 is the nurse–colleague relationship score.

This finding supports the relational premise of the Therapeutic Engagement Stress Theory, namely that the quality of professional relationships is linked to the stress that health professionals experience (Rippon et al., 2020), and extends it to relationships among colleagues. Because nurse–colleague relationship explained 19.1% of the variance, other factors, such as the workload, resource, and management issues raised by the doctors, probably account for much of the remainder.

Limitations

Several limitations should be considered. The cross-sectional design shows association but cannot establish causation. The PCL-5 and DASS-21 are self-report screening instruments and do not provide clinical diagnoses. The study covered two hospitals in two counties, which limits generalization to other settings. The regression model included a single predictor, so the influence of other workplace factors was not controlled. The qualitative data came from doctors rather than from nurses themselves. Finally, the residuals showed slight positive skew with a few high values.

4.0 Conclusion

The study concluded that nurse–colleague relationships significantly influence the mental wellness of nurses in Embu and Tharaka-Nithi Counties, Kenya. Nurses generally reported positive interactions with colleagues, but gaps were evident in equal duty sharing, freedom to make choices in multidisciplinary teams, and fatigue. Psychological distress was high, with three-quarters of nurses scoring in the probable-PTSD range and most reporting severe or extremely severe depression, anxiety, or stress. Doctors identified teamwork, shared workload, shift management, and workplace bullying as factors shaping nurses' stress. Poor nurse–colleague relationships may therefore increase psychological and emotional strain among nurses.

5.0. Recommendations

Health organizations should promote positive workplace relationships by encouraging good communication and strengthening teamwork. Hospital managers should adopt strategies that improve teamwork and equitable duty sharing, such as training, workshops, and capacity-building programs, and should manage shift schedules so that nurses have adequate rest. Health-sector policymakers should establish policies that prioritize conflict management, the prevention of workplace bullying, and team building, in order to promote a healthier and more productive workforce. Future research should use longitudinal designs, include examine other predictors of nurses' mental wellness.

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