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Problem-Solving as the Predominant Coping Strategy Among Nurses: A Cross-Sectional Study in the Second Health Cluster of Riyadh

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Abstract **Background:** Nursing is a demanding profession often associated with high occupational stress, which can negatively influence nurses' well-being and compromise patient care. Assessing how nurses cope with workplace stress is crucial for developing strategies that enhance resilience and clinical performance. **Objective:** This study aimed to evaluate the coping strategies used by nurses working in the Riyadh Region and to examine the association between these coping mechanisms and key demographic variables. **Methods:** A cross-sectional, quantitative descriptive study was conducted at the second cluster hospital in Riyadh Region (King Fahad Medical City, Prince Mohamed and King Khalid Majmaah Hospital. A total of 425 nurses employed in major hospitals across the Riyadh Region, Saudi Arabia, participated in the study. Data were collected using the validated Coping Strategy Indicator (CSI) tool. **Results:** Problem-solving emerged as the predominant coping strategy, with 56.2% of nurses demonstrating high usage (mean score: 26.1±4.6). Seeking social support was moderately utilized, with 53.6% reporting moderate use (mean score: 24.2±5.1), while avoidance strategies were also used at moderate levels (58.4%; mean score: 23.4±4.6). Significant associations were observed between problem-solving coping and age, educational level, work experience and clinical work area ($p<0.05$). Seeking social support was significantly associated with age ($p = 0.028$), whereas avoidance coping showed significant associations with educational level, work experience and work area ($p<0.05$). **Conclusion:** Nurses predominantly adopt adaptive coping strategies; however, younger and less-experienced nurses remain more vulnerable to stress and are more likely to rely on avoidance mechanisms. Strengthening coping skills through targeted interventions may promote psychological wellbeing and enhance patient care outcomes.

Key Words Coping Strategies, Nurses, Stress Management, Problem Solving, Social Support, Saudi Arabia

INTRODUCTION

Nursing is a cornerstone of healthcare systems and is widely recognised as a profession associated with high levels of occupational stress due to heavy workloads, emotional demands, staff shortages and complex clinical responsibilities [1]. Prolonged exposure to such stressors has been linked to burnout, reduced job satisfaction, increased turnover and compromised patient safety [2]. In Saudi Arabia, nurses face additional challenges related to cultural expectations, workforce shortages and rapid healthcare transformation aligned with Vision 2030 [3]. Coping strategies such as problem-solving, seeking social support and avoidance play a critical role in mitigating the negative effects of stress. However, limited research has explored coping strategies among nurses in the Riyadh Region. This study aims to address this gap [4]. Despite efforts to improve nursing in Saudi Arabia, significant challenges remain. One major issue is the dependence on expatriate nurses. The healthcare system relies heavily on foreign-trained nurses. However, recruiting and retaining them is difficult due to cultural differences, language barriers and adapting to the local healthcare system [5]. Additionally, geopolitical issues and visa policy changes exacerbate workforce shortages, adding pressure to the existing staff. Cultural and religious values in Saudi Arabia strongly impact the coping strategies used by nurses in the country [6]. Saudi nurses, especially women, seek emotional and spiritual support in their families as family is the core of Saudi society. Psychological comfort is also found in religious coping, e.g., praying and reciting the Quran. Saudi nurses perceive Stress with the belief of

being patient and faithful, which are Islamic principles [7]. Otherwise, expatriate nurses have a higher tendency to resort to peer support because of the cultural differences and distance from home. They tend to create support groups among fellow members who have the same background to alleviate one's feeling of isolation. Expatriates can also employ more problem-focused approaches as they rely on different experiences in their work. Although there are cases of avoidant strategies, social support is one of the primary coping mechanisms among local and expatriate nurses [8,9]. Problem-solving is one of the most proactive and best coping strategies in a nursing environment. It is founded on taking the stressor as it is, rather than avoiding or postponing it. The process of problem-solving begins with the identification and definition of the stressor. In the case of nursing, a stressor might involve things such as heavy patient loads, lack of resources or the emotional nature of the stressor, such as critically ill patients [10]. Once the definition of the stressor has been established, the next step for the nurse is brainstorming possible solutions to the identified issue. If, for example, time management is a stressor, nurses might seek to implement shift-based priority lists, delegate minor tasks when possible or revise their workflow [11-13]. Therefore, this study aims to evaluate the coping strategies employed by nurses working in the Second Health Cluster of Riyadh and to examine their association with key demographic and professional characteristics. By addressing this gap, the study seeks to provide context-specific evidence that can inform targeted interventions to enhance coping capacity, improve psychological well-being and ultimately strengthen patient care outcomes.

Objective

This study aimed to evaluate the coping strategies used by nurses working in the Riyadh Region and to examine the association between these coping mechanisms and key demographic variables.

METHODS

A cross-sectional, quantitative descriptive study was conducted at the second cluster hospital in Riyadh Region-(King Fahad Medical City, Prince Mohamed bin-Abdaziz, King Khalid ALMajmaah Hospital from Nursing-Staff. The study population consists of healthcare workers employed as nurses within the Second Health Cluster in Riyadh City. A total sample of 425 nurses was recruited. The sample size was calculated using Richard Geiger's equation, based on a total nursing population of 6,300, a 95% confidence level and an assumed 50% response distribution to ensure adequate representativeness. The study utilized the Coping Strategy Indicator (CSI), an empirically derived tool used to measure coping behaviors across three domains: Problem-solving, seeking social support and avoidance. The CSI consists of 33 items rated on a three-point scale (not at all, a little, a lot), with 11 items per subscale. Higher scores reflect greater use of each coping strategy. The CSI has established content, face and construct validity and its three-factor structure has been consistently supported in international studies.

All full-time registered nurses working in major hospitals within the Second Health Cluster in Riyadh were eligible for inclusion. Nurses with a minimum of six months of clinical experience were included to ensure adequate exposure to workplace stressors and coping mechanisms. Both bedside and managerial nurses were invited to participate; however, no subgroup analysis based on role was performed. Nurses who were on leave during the data collection period, part-time or contractual staff and those with less than six months of experience were excluded. Additionally, questionnaires that were incomplete or had missing key responses were excluded from the final analysis; however, the exact number of excluded responses was not separately analyzed.

Data Collection

Ethical approval was obtained from the Institutional Review Board of the Ministry of Health and the Faculty of Nursing at Majmaah University. Eligible full-time nurses working in major hospitals within the Riyadh Region were invited to participate. The study purpose, procedures, potential risks and benefits were clearly explained and informed consent was obtained from all participants. The CSI questionnaire was provided in both paper and electronic formats to accommodate varying schedules. Research assistants were available to clarify questions without influencing responses. Completed questionnaires were anonymized, securely stored and later entered into a database for analysis.

Data Analysis

Data were analyzed using SPSS version 28. Descriptive statistics, including frequencies and percentages for categorical variables and means with standard deviations for continuous variables, were used to summarize demographic characteristics and coping strategy scores. CSI scores were categorized into low (11-18), moderate (19-25) and high (26-33) usage levels. Inferential statistics, including the Pearson Chi-square test and exact probability tests when required, were used to examine associations between coping strategies and demographic variables. A p-value of less than 0.05 was considered statistically significant.

RESULTS

A total of 425 nurses were included in the study. The majority were aged 20-30 years (n = 330, 77.6%), followed by 31-40 years (n = 77, 18.1%), while a smaller proportion were aged 41-50 years (n = 15, 3.5%) and over 50 years (n = 3, 0.7%). Regarding gender, 308 nurses (72.5%) were female and 117 (27.5%) were male. Regarding educational attainment, most were Bachelor of Nursing Science (BNS) graduates (n = 253, 59.5%), followed by Diploma graduates (n = 91, 21.4%), those with a Master's degree (n = 57, 13.4%) and a smaller group holding a PhD degree (n = 24, 5.6%). For work experience, a majority had less than 5 years (n = 267, 62.8%), with smaller groups reporting 5-10 years (n = 78, 18.4%), 11-15 years (n = 42, 9.9%), 16-20 years (n = 27, 6.4%) and more than 20 years (n = 11, 2.6%). Concerning work area, the highest proportion worked in the Emergency Department (ED) (n = 138, 32.5%), followed

by the Intensive Care Unit (ICU) (n = 98, 23.1%), Outpatient Department (OPD) (n = 48, 11.3%) and Neonatal Intensive Care Unit (NICU) (n = 36, 8.5%). Other areas included Medical and Female Medical Wards (MMW, FMW) (n = 33, 7.8%), Maternity (MAT) (n = 31, 7.3%), Medical and Surgical Wards (MSW, FSW) (n = 24, 5.6%) and AKU (n = 17, 4.0%) (Table 1).

Table 2 presents the distribution of responses on the Problem-Solving coping strategy among nurses (N = 425). A significant proportion of participants consistently reported high engagement in problem-solving behaviors, with over half indicating "a lot" of involvement in several key items. Exactly 52.9% (n = 225) reported that they had tried to solve the problem and 52.2% (n = 222) formed a plan of action in their minds. Likewise, 50.8% of participants stated that they rearranged things around them to resolve the issue, turned their full attention to solving the problem or tried different ways until they found a solution. On the other hand, a smaller percentage reported little or no engagement with problem-solving strategies, where only 7.5% (n = 32) had not thought about what needed to be done to straighten things out. The overall mean score for the problem-solving subscale was 26.1±4.6.

Table 3 illustrates nurses' responses to the Seeking Social Support coping strategy (N = 425). Overall, the data reflect a moderate to high tendency to engage in support-seeking behaviors. A considerable number of participants reported frequently engaging in this strategy, with 41.2% (n = 175) seeking reassurance from those who know them best and 40.7% (n = 173) confiding fears and worries to friends or relatives. Additionally, around one-third to nearly 40% of nurses reported "a lot" of engagement in other supportive behaviors, such as talking to others about the situation (37.6%), accepting help from friends or relatives (36.0%) or going to friends for advice (35.1%). However, there was some variation in responses, with some portion reporting limited use of support-seeking strategies, where 22.6% (n = 96) indicated they had not at all gone to someone for emotional support and 18.8% (n = 80) had not confided their worries. Despite this, the overall mean score of 24.2±5.1.

Table 4 illustrates the distribution of responses related to the Avoidance coping strategy among nurses (N = 425). The data shows that avoidance coping is moderately utilized, with participants often engaging in strategies such as distracting themselves from the problem (39.5%) and daydreaming about better times (34.8%). A significant proportion also reported spending more time alone (34.6%) or watching television more than usual (27.8%), indicating a preference for disengagement or distraction from the stressor. However, there were also notable responses indicating low engagement in avoidance strategies, with 26.1% (n = 111) stating that they did not at all watch television more than usual and 24.7% (n = 105) not sleeping more than usual. Additionally, while some nurses indicated avoiding others (27.5%), a larger percentage (51.3%, n = 218) reported doing so only to a moderate extent. The overall mean score of 23.4±4.6.

Table 1: Socio-Demographic Characteristics of the Nurses Working in Hospitals in Riyadh Region (N = 425)

Personal data	No.	Percentage
Age in years		
20-30	330	77.6
31-40	77	18.1
41-50	15	3.5
>50	3	0.7
Gender		
Male	117	27.5
Female	308	72.5
Educational Attainment		
BNS graduate	253	59.5
Diploma graduate	91	21.4
Master Degree	57	13.4
PhD degree	24	5.6
Work Experience		
<5 years	267	62.8
5-10 years	78	18.4
11-15 years	42	9.9
16-20 years	27	6.4
>20 years	11	2.6
Work area		
ED	138	32.5
ICU	98	23.1
OPD	48	11.3
NICU	36	8.5
MMW, FMW	33	7.8
MAT	31	7.3
MSW, FSW	24	5.6
AKU	17	4.0

Table 2: Distribution of Responses on Problem-Solving Coping Strategy Among Study Nurses (N = 425)

	Not at all		A little		A lot	
Problem Solving	No.	%	No.	%	No.	%
Rearranged things around you so that your problem had the best chance of being resolved	38	8.9	171	40.2	216	50.8
Brainstormed all possible solutions before deciding what to do	37	8.7	215	50.6	173	40.7
Have you set some goals for yourself to deal with the situation	65	15.3	142	33.4	218	51.3
Have you weighed your options very carefully	58	13.6	160	37.6	207	48.7
Have you tried different ways to solve the problem until you found one that worked	59	13.9	150	35.3	216	50.8
Have you thought about what needs to be done to straighten things out	32	7.5	195	45.9	198	46.6
Have you turned your full attention to solving the problem	51	12.0	158	37.2	216	50.8
Have you formed a plan of action in your mind	40	9.4	163	38.4	222	52.2
Have you stood firm and fought for what you wanted in the situation	56	13.2	159	37.4	210	49.4
Have you tried to carefully plan a course of action rather than acting on impulse	65	15.3	174	40.9	186	43.8
Have you tried to solve the problem	50	11.8	150	35.3	225	52.9
Overall score						
Range	11-33					
Mean±SD	26.1±4.6					

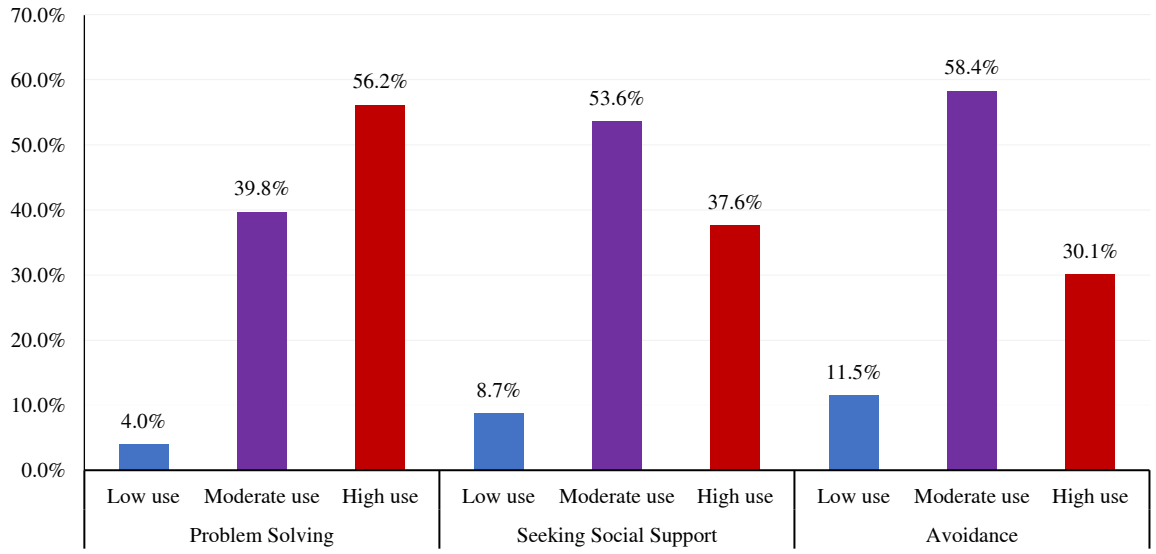

Figure 1: The Frequency Distribution of Coping Strategy

Table 3: Distribution of Responses on Seeking Social Support Coping Strategy Among Study Nurses (N = 425)

Seeking Social Support	Not at all		A little		A lot	
	No	%	No	%	No	%
Have you let your feelings out to a friend	74	17.40	199	46.80	152	35.80
Have you accepted sympathy and understanding from someone	55	12.90	213	50.10	157	36.90
Have you talked to people about the situation, because talking about it helped you to feel better	72	16.90	193	45.40	160	37.60
Have you confided your fears and worries to a friend or relative	80	18.80	172	40.50	173	40.70
Have you told people about the situation, because just talking about it helped you to come up with solutions	75	17.60	202	47.50	148	34.80
Have you gone to someone (friend or professional) to help you feel better	96	22.60	192	45.20	137	32.20
Have you gone to a friend to help you feel better about the problem	76	17.90	178	41.90	171	40.20
Have you gone to a friend for advice on how to change the situation	70	16.50	206	48.50	149	35.10
Have you accepted sympathy and understanding from friends who had the same problem	69	16.20	187	44.00	169	39.80
Have you accepted help from a friend or relative	64	15.10	208	48.90	153	36.00
Have you sought reassurance from those who know you best	62	14.60	188	44.20	175	41.20
Overall score						
Range	Nov-33					
Mean±SD	24.2±5.1					

Table 4: Distribution of Responses on Avoidance Coping Strategy Among Study Nurses (N = 425)

Avoidance	Not at all		A little		A lot	
	No	%	No	%	No	%
Have you tried to distract yourself from the problem	68	16.0	189	44.5	168	39.5
Have you done all you could to keep others from seeing how bad things were	69	16.2	223	52.5	133	31.3
Have you daydreamed about better times	64	15.1	213	50.1	148	34.8
Did you spend more time than usual alone	85	20.0	193	45.4	147	34.6
Did you watch television more than usual	111	26.1	196	46.1	118	27.8
Did you avoid being with people in general	90	21.2	218	51.3	117	27.5
Did you bury yourself in a hobby or sports activity to avoid the problem	88	20.7	208	48.9	129	30.4
Did you sleep more than usual	105	24.7	209	49.2	111	26.1
Did you fantasize about how things could have been different	71	16.7	201	47.3	153	36.0
Did you identify with characters in novels or movies	86	20.2	203	47.8	136	32.0
Did you wish that people would leave you alone	88	20.7	183	43.1	154	36.2
Overall score						
Range	11-33					
Mean±SD	23.4±4.6					

Figure 1 presents the frequency distribution of coping strategy use among study nurses (N = 425). For Problem-Solving, the majority of participants reported high use (56.2%, n = 239), with a smaller proportion engaging in moderate use (39.8%, n = 169) and only 4.0% (n = 17) reporting low use of problem-solving strategies. Regarding Seeking Social Support, the majority of nurses reported moderate use (53.6%, n = 228), with 37.6% (n = 160) engaging in high use and 8.7% (n = 37) reporting low use. As for Avoidance coping strategy, most participants reported moderate use (58.4%, n = 248), with 30.1% (n = 128) showing high use and 11.5% (n = 49) reporting low use.

Table 5 examines the relationship between demographic factors and the Problem-Solving coping strategy use among study nurses (N = 425). Age was significantly associated with problem-solving strategy use (p = 0.001). Nurses aged

Table 5: Relationship Between Demographic Factors and Problem-Solving Coping Strategy Use Among Study Nurses (N = 425)

	Problem Solving						
	Low use		Moderate use		High use		
Factors	No.	Percentage	No.	Percentage	No.	Percentage	p-value
Age in years							
20-30	12	3.6	138	41.8	180	54.5	0.001*^
31-40	1	1.3	25	32.5	51	66.2	
41-50	4	26.7	3	20.0	8	53.3	
> 50	0	0.0	3	100.0	0	0.0	
Gender							
Male	5	4.3	53	45.3	59	50.4	0.326
Female	12	3.9	116	37.7	180	58.4	
Educational Attainment							
BNS graduate	4	1.6	92	36.4	157	62.1	0.001*^
Diploma graduate	10	11.0	36	39.6	45	49.5	
Master Degree	2	3.5	29	50.9	26	45.6	
PhD degree	1	4.2	12	50.0	11	45.8	
Work Experience							
< 5 years	4	1.5	107	40.1	156	58.4	0.001*^
5-10 years	4	5.1	27	34.6	47	60.3	
11-15 years	6	14.3	13	31.0	23	54.8	
16-20 years	1	3.7	17	63.0	9	33.3	
> 20 years	2	18.2	5	45.5	4	36.4	
Work area							
AKU	1	5.9	9	52.9	7	41.2	0.018*^
ED	3	2.2	53	38.4	82	59.4	
ICU	4	4.1	35	35.7	59	60.2	
MAT	0	0.0	17	54.8	14	45.2	
MMW, FMW	0	0.0	7	21.2	26	78.8	
MSW, FSW	2	8.3	8	33.3	14	58.3	
NICU	2	5.6	21	58.3	13	36.1	
OPD	5	10.4	19	39.6	24	50.0	

P: Pearson X^2 test, ^: Exact probability test, *p<0.05 (significant)

31-40 years showed the highest proportion of high use of problem-solving strategies (66.2%, n = 51), compared to the younger (54.5%, n = 180) and older age groups. Nurses aged >50 years did not report high use of problem-solving strategies, with 100% (n = 3) reporting moderate use. Educational attainment was also a significant factor (p = 0.001). Nurses with a Bachelor of Nursing Science (BNS) degree showed the highest percentage of high use of problem-solving strategies (62.1%, n = 157), followed by Diploma graduates (49.5%, n = 45). In contrast, PhD graduates reported the lowest proportion of high problem-solving use (45.8%, n = 11) and Master's degree holders had a similar trend with 45.6% (n = 26) engaging in high use. Work experience also displayed a significant relationship with problem-solving strategy use (p = 0.001). Nurses with less than 5 years of experience had the highest proportion of high use (58.4%, n = 156), followed by those with 5-10 years (60.3%, n = 47) and 11-15 years (54.8%, n = 23). Interestingly, nurses with 16-20 years of experience reported the highest proportion of moderate use (63.0%, n = 17). Work area was significantly related to the use of problem-solving strategies (p = 0.018). Nurses working in the Emergency Department (ED) had the highest percentage of high use (59.4%, n = 82) compared to other areas. Similarly, Intensive Care Unit (ICU) nurses also showed a high proportion of high use (60.2%, n = 59), while nurses in Maternity (MAT) had a slightly lower proportion (45.2%, n = 14).

Table 6 explores the relationship between demographic factors and the Seeking Social Support coping strategy use among study nurses (N = 425). Age was significantly associated with the use of seeking social support (p = 0.028). Nurses aged 31-40 years had the highest proportion of high use of social support (54.5%, n = 42), followed by those aged 20-30 years (34.2%, n = 113). Interestingly, nurses aged >50 years did not report high use of social support, with 100% (n = 3) engaging in moderate use. Gender did not show a significant relationship with seeking social support (p = 0.544). Both male and female nurses reported similar patterns of social support use, with females slightly more likely to report moderate use (55.2%, n = 170) compared to males (49.6%, n = 58). However, the proportions of high use were also similar, with 40.2% of males and 36.7% of females using social support extensively. Educational attainment showed no significant association with seeking social support (p = 0.263). Nurses across all educational levels (BNS, Diploma, Master's, PhD) demonstrated similar patterns of moderate and high use, with BNS graduates reporting the highest proportion of moderate use (57.3%, n = 145). Work experience was not significantly associated with seeking social support (p = 0.361), with similar proportions of moderate use across the experience categories. However, nurses with 16-20 years of experience had the highest proportion of moderate use (63.0%, n = 17). Work area also did not show a significant association with seeking social support (p = 0.171), though nurses in areas like Maternity (MAT) reported a higher proportion of moderate use (74.2%, n = 23), compared to other areas.

Table 7 examines the relationship between demographic factors and the Avoidance Coping Strategy among study

Table 6: Relationship Between Demographic Factors and Seeking Social Support Coping Strategy Use Among Study Nurses (N = 425)

	Seeking Social Support						
	Low use		Moderate use		High use		
Factors	No.	Percentage	No.	Percentage	No.	Percentage	p-value
Age in years							
20-30	31	9.4%	186	56.4%	113	34.2%	0.028*^
31-40	4	5.2%	31	40.3%	42	54.5%	
41-50	2	13.3%	8	53.3%	5	33.3%	
> 50	0	0.0%	3	100.0%	0	0.0%	
Gender							
Male	12	10.3%	58	49.6%	47	40.2%	0.544
Female	25	8.1%	170	55.2%	113	36.7%	
Educational Attainment							
BNS graduate	16	6.3%	145	57.3%	92	36.4%	0.263
Diploma graduate	12	13.2%	47	51.6%	32	35.2%	
Master Degree	6	10.5%	25	43.9%	26	45.6%	
PhD degree	3	12.5%	11	45.8%	10	41.7%	
Work Experience							
< 5 years	18	6.7%	145	54.3%	104	39.0%	0.361^
5-10 years	11	14.1%	38	48.7%	29	37.2%	
11-15 years	5	11.9%	20	47.6%	17	40.5%	
16-20 years	3	11.1%	17	63.0%	7	25.9%	
> 20 years	0	0.0%	8	72.7%	3	27.3%	
Work area							
AKU	1	5.9%	10	58.8%	6	35.3%	0.171^
ED	10	7.2%	71	51.4%	57	41.3%	
ICU	6	6.1%	55	56.1%	37	37.8%	
MAT	0	0.0%	23	74.2%	8	25.8%	
MMW, FMW	5	15.2%	12	36.4%	16	48.5%	
MSW, FSW	3	12.5%	13	54.2%	8	33.3%	
NICU	5	13.9%	22	61.1%	9	25.0%	
OPD	7	14.6%	22	45.8%	19	39.6%	

P: Pearson X^2 test, ^: Exact probability test, *p<0.05 (significant)

Table 7: Relationship Between Demographic Factors and Avoidance Coping Strategy Use Among Study Nurses (N = 425)

	Avoidance						
	Low use		Moderate use		High use		
Factors	No	Percentage	No	Percentage	No	Percentage	p-value
Age in years							
20-30	34	10.3%	194	58.8%	102	30.9%	0.145^
31-40	11	14.3%	41	53.2%	25	32.5%	
41-50	4	26.7%	10	66.7%	1	6.7%	
> 50	0	0.0%	3	100.0%	0	0.0%	
Gender							
Male	15	12.8%	70	59.8%	32	27.4%	0.703
Female	34	11.0%	178	57.8%	96	31.2%	
Educational Attainment							
BNS graduate	15	5.9%	163	64.4%	75	29.6%	0.001*
Diploma graduate	19	20.9%	48	52.7%	24	26.4%	
Master Degree	11	19.3%	25	43.9%	21	36.8%	
PhD degree	4	16.7%	12	50.0%	8	33.3%	
Work Experience							
< 5 years	19	7.1%	154	57.7%	94	35.2%	0.001*^
5-10 years	18	23.1%	44	56.4%	16	20.5%	
11-15 years	7	16.7%	22	52.4%	13	31.0%	
16-20 years	5	18.5%	21	77.8%	1	3.7%	
> 20 years	0	0.0%	7	63.6%	4	36.4%	
Work area							
AKU	1	5.9%	13	76.5%	3	17.6%	0.031*^
ED	19	13.8%	70	50.7%	49	35.5%	
ICU	6	6.1%	66	67.3%	26	26.5%	
MAT	1	3.2%	19	61.3%	11	35.5%	
MMW, FMW	5	15.2%	19	57.6%	9	27.3%	
MSW, FSW	0	0.0%	16	66.7%	8	33.3%	
NICU	9	25.0%	21	58.3%	6	16.7%	
OPD	8	16.7%	24	50.0%	16	33.3%	

P: Pearson X^2 test, ^: Exact probability test, *p<0.05 (significant)

nurses (N = 425). The results indicate that age did not show a statistically significant relationship with avoidance coping (p = 0.145). Nurses in the 20-30 years age group exhibited the highest proportion of moderate use of avoidance strategies (58.8%, n = 194) and a relatively high proportion of high use (30.9%, n = 102). Nurses aged 31-40 years followed a similar pattern, with moderate use at 53.2% and high use at 32.5%. The gender variable also did not demonstrate a significant relationship with avoidance coping (p = 0.703), with both male and female nurses showing similar patterns of moderate and high use. Specifically, 59.8% of male nurses (n = 70) and 57.8% of female nurses (n = 178) reported moderate use and a comparable proportion of males (27.4%) and females (31.2%) engaged in high use of avoidance strategies. Significant associations were found for educational attainment (p = 0.001), with nurses holding BNS degrees reporting the highest proportion of moderate use of avoidance coping (64.4%, n = 163), followed by Master's degree nurses at 43.9% (n = 25). Nurses with a Diploma and PhD degrees had lower proportions of moderate use. In contrast, those with BNS degrees reported the lowest proportion of low use (5.9%), compared to Diploma (20.9%) and Master's degree nurses (19.3%). Work experience also demonstrated a significant relationship with avoidance coping (p = 0.001). Nurses with <5 years of experience reported the highest proportion of moderate use (57.7%, n = 154) and high use (35.2%, n = 94). Nurses with 5-10 years of experience showed a higher tendency for low use (23.1%, n = 18) compared to other groups, while those with 16-20 years of experience exhibited the highest proportion of moderate use (77.8%, n = 21). Regarding the work area, significant differences were observed (p = 0.031). Nurses working in areas such as the Emergency Department (ED) and Intensive Care Unit (ICU) showed high proportions of moderate use (50.7% and 67.3%, respectively), while nurses in Maternity (MAT) reported the highest proportion of high use (35.5%, n = 11). In contrast, nurses in areas like AKU and MSW and FSW showed a lower proportion of moderate use of avoidance coping.

DISCUSSION

The study aimed to investigate the coping strategies of nurses working in hospitals in the Riyadh Region, specifically how they cope with stressors and issues related to their work environments. Nursing is a demanding profession, so nurses must employ effective coping strategies to help them achieve optimal performance at work and optimise their overall well-being. This chapter contains the study findings, a comparison with the literature, unique aspects related to nursing practice and the implications for future research. The results of this study showed very specific coping strategies nurses employ when faced with stressors in their work environment [14]. The most common strategy was problem-solving, followed by moderate use of social support and low use of avoidant strategies. Problem-solving included younger and less experienced nurses due to their focus on clinical decision-making related to stressors [15]. Social support was also moderate; many nurses sought reassurance or shared concerns with colleagues or family members. Avoidance strategies were acknowledged to a lesser extent, including distraction and short withdrawal from the situation but were still used to measure acute stress. These results imply that nurses, particularly in high-stress clinical areas, like Emergency Departments (ED) and intensive care units (ICU), are positively taking an active and solutions-focused approach to managing stress [16]. However, the use of social support and avoidance behaviours also creates questions about engagement with emotional responses and potentially detrimental long-term impacts of coping strategies. Utilizing problem-solving strategies corroborates findings from past studies in Saudi Arabia and beyond, particularly in high-acuity environments [17]. Other research also supports findings that critical care nurses often use active coping strategies to cope with stressors. This study showed that nurses in the EDs and ICUs used problem-solving to deal with patient emergencies, emphasising the significance of good clinical decision-making skills for maintaining patient safety and the quality of care. The reasonable utilisation of social support proves that healthcare organisations should create systems of peer support that can be adopted [18]. Incentives: the incentives that institutional support can offer to nurses to encourage them to seek emotional support more frequently can be the benefit of institutional support, which can be in the form of mentoring programs or groupings of staff to debrief a team or any other type of support [19-22]. Regular support can alleviate emotional exhaustion and secondary traumatic stress, especially in high-stress areas such as Emergency Departments (EDs) and Intensive Care Units (ICUs). The work area also affected coping strategies. Nurses working in high-pressure areas, such as the ED and ICU, used more problem-focused strategies. In contrast, nurses working in moderate-pressure areas (such as maternity wards (MAT)) reported using more avoidant strategies [23]. The nature of the stressors nurses face in each area is likely also different. In contrast, emergency room and intensive care unit stressors are acute crises; stressors faced by staff working in maternity ward areas are likely emotional labour [24,25]. This study has several limitations that should be considered when interpreting the findings. First, the cross-sectional design limits the ability to establish causal relationships between demographic factors and coping strategies. Second, the study was conducted within hospitals of a single regional healthcare cluster in Riyadh, which may restrict the generalizability of the results to other regions or healthcare settings. Third, the use of self-reported data through questionnaires may introduce response bias, including social desirability bias. Additionally, the study included only full-time nurses, excluding part-time, contractual and rotating staff, whose coping experiences may differ. The lack of stratification by hospital and nursing role (e.g., managerial versus bedside) may also limit the assessment of variability across different work environments.

CONCLUSIONS

This study highlights how nurses in the Riyadh Region (Second Cluster) manage occupational stress. Problem-solving emerged as the most prevalent strategy, with social support used at moderate levels and avoidance used least and generally for short-term relief. Coping patterns varied by age, experience, education and clinical area, indicating that professional development and unit context shape how nurses respond to stressor mechanisms. Overall, the findings portray a workforce that primarily engages stressors directly while drawing on interpersonal support and limited, short-term disengagement when appropriate.

REFERENCES

[1] Balay-Odao, E.M. *et al.* "Hospital Preparedness, Resilience and Psychological Burden Among Clinical Nurses Addressing the COVID-19 Crisis in Riyadh, Saudi Arabia." *Frontiers in Public Health*, vol. 8, 2021. https://doi.org/10.3389/fpubh.2020.573932.

[2] Lee, T.S.H. *et al.* "Impact of Coping Strategies on Nurses' Wellbeing and Practice." *Journal of Nursing Scholarship*, vol. 51, no. 2, 2019, pp. 197-204. https://doi.org/10.1111/jnu.12467.

[3] Nazari, S. *et al.* "The Relationship Between Received and Perceived Social Support with Ways of Coping in Nurses." *Work*, vol. 78, no. 4, 2024, pp. 1247-1255. https://doi.org/10.3233/WOR-230337.

[4] Al Ma'mari, Q. *et al.* "Fatigue, Burnout, Work Environment, Workload and Perceived Patient Safety Culture Among Critical Care Nurses." *British Journal of Nursing*, vol. 29, no. 1, January 2020, pp. 28-34. https://doi.org/10.12968/bjon.2020.29.1.28.

[5] Riedel, B. *et al.* "Mental Health Disorders in Nurses During the COVID-19 Pandemic: Implications and Coping Strategies." *Frontiers in Public Health*, vol. 9, October 2021, p. 707358. https://doi.org/10.3389/fpubh.2021.707358.

[6] Buerhaus, P.I. *et al.* "Four Challenges Facing the Nursing Workforce in the United States." *Journal of Nursing Regulation*, vol. 8, no. 2, 2017, pp. 40-46. https://doi.org/10.1016/S2155-8256(17)30097-2.

[7] Ahmed, W.A. and B.M. Mohammed. "Nursing Students' Stress and Coping Strategies During Clinical Training in KSA." *Journal of Taibah University Medical Sciences*, vol. 14, no. 2, 2019, pp. 116-122. https://doi.org/10.1016/j.jtumed.2019.02.002.

[8] Elmorshedy, H. *et al.* "Contemporary Public Image of the Nursing Profession in Saudi Arabia." *BMC Nursing*, vol. 19, 2020, pp. 1-8. https://doi.org/10.1186/s12912-020-00457-3.

[9] Labrague, L.J. *et al.* "Influence of Toxic and Transformational Leadership Practices on Nurses' Job Satisfaction, Job Stress, Absenteeism and Turnover Intention: A Cross-Sectional Study." *Journal of Nursing Management*, vol. 28, no. 5, July 2020, pp. 1104-1113. https://doi.org/10.1111/jonm.13053.

[10] Alsadaan, N. *et al.* "Challenges Facing the Nursing Profession in Saudi Arabia: An Integrative Review." *Nursing Reports*, vol. 11, no. 2, May 2021, pp. 395-403. https://doi.org/10.3390/nursrep11020038.

[11] Pahlavanzadeh, S. *et al.* "Effects of Stress Management Program on the Quality of Nursing Care and Intensive Care Unit Nurses." *Iranian Journal of Nursing and Midwifery Research*, vol. 21, no. 3, May-June 2016, pp. 213-218. https://doi.org/10.4103/1735-9066.180376.

[12] Johansen, M.L. and J.L. O'Brien. "Decision Making in Nursing Practice: A Concept Analysis." *Nursing Forum*, vol. 51, no. 1, January-March 2016, pp. 40-48. https://doi.org/10.1111/nuf.12119.

[13] Booker, L.A. *et al.* "Nurse Rostering and Shift Work Fatigue Risks." *BMC Nursing*, vol. 23, no. 1, 2024. https://doi.org/10.1186/s12912-024-01850-5.

[14] Hamadi, H.Y. *et al.* "Stress and Coping Strategies Among Nursing Students in Clinical Practice During COVID-19." *Nursing Reports*, vol. 11, no. 3, August 2021, pp. 629-639. https://doi.org/10.3390/nursrep11030060.

[15] Wang, Q. *et al.* "Effects of a Mindfulness-Based Interventions on Stress, Burnout in Nurses: A Systematic Review and Meta-Analysis." *Frontiers in Psychiatry*, vol. 14, August 2023. https://doi.org/10.3389/fpsyt.2023.1218340.

[16] Alharbi, J. *et al.* "Compassion Fatigue in Critical Care Nurses." *Australian Critical Care*, vol. 33, no. 6, 2020, pp. 553-559. https://doi.org/10.1016/j.aucc.2019.08.002.

[17] Nowrouzi, B. *et al.* "Occupational Stress Management Interventions in Nursing." *Workplace Health & Safety*, vol. 63, no. 7, 2015, pp. 308-315. https://doi.org/10.1177/2165079915576611.

[18] Alruwaili, M.M. *et al.* "Experiences, Perceptions and Coping Patterns of Emergency Department Nurses with Occupational Stressors in Saudi Arabian Hospitals: Mixed-Method Study." *Healthcare*, vol. 10, no. 8, August 2022. https://doi.org/10.3390/healthcare10081504.

[19] Lorente, L. *et al.* "Nurses' Stressors and Psychological Distress During the COVID-19 Pandemic: The Mediating Role of Coping and Resilience." *Journal of Advanced Nursing*, vol. 77, no. 3, March 2021, pp. 1335-1344. https://doi.org/10.1111/jan.14695.

[20] Vanbelleghem, S. *et al.* "Barriers and Enablers of Second-Order Problem-Solving Behavior: How Nurses Can Break Away From the Workaround Culture." *Quality Management in Health Care*, vol. 31, no. 3, July-September 2022, pp. 130-142. https://doi.org/10.1097/QMH.0000000000000385.

[21] Sun, L. *et al.* "The Impact of Professional Identity on Role Stress in Nursing Students: A Cross-Sectional Study." *International Journal of Nursing Studies*, vol. 63, November 2016, pp. 1-8. https://doi.org/10.1016/j.ijnurstu.2016.08.010.

[22] Taylor, S.E. "Social Support: A Review." *Oxford Handbook of Health Psychology*. Oxford University Press, 2011.

[23] Wiebe, D.J. "Avoidance Coping." *Encyclopedia of Behavioral Medicine*. Springer, 2020. https://doi.org/10.1007/978-3-030-39903-0_112.

[24] Rezakhani Moghaddam, H. *et al.* "Challenges Faced by Nursing Students to Work with Nursing Personnel: A Qualitative Study." *Advances in Medical Education and Practice*, vol. 11, April 2020, pp. 313-319. https://doi.org/10.2147/AMEP.S246901.