

## Relationship Between Emotional Intelligence and Coping Patterns with Stress among Nurses during COVID-19 Pandemic

Hoda Sayed Mohamed<sup>(1)</sup>, Azza .M.Khaled<sup>(2)</sup>

(1) Lecturer of Psychiatric / Mental Health Nursing

(2) Lecturer of Nursing Administration

### Abstract

**Background:** The coronavirus disease (COVID-19) outbreak poses huge stress for nurses and emotional intelligence (EI) is a prerequisite for adaptive coping with stressors during this Pandemic. **Aim:** This study aimed to assess the relationship between emotional intelligence and coping pattern with stress among nurses during the COVID-19 Pandemic. **Design:** A descriptive, correlational research design was utilized in this stud. **Setting:** This study was conducted at different units and departments in Ain shams University Hospital. **Subjects:** 241 nurses were included in the study. **Tools of data collection:** The data was collected using: **1)** Sociodemographic data questionnaire **2)** Schutte Self-Report Emotional Intelligence Test to assess the emotional intelligence of nurses during covid 19 pandemic; **3)** The Brief COPE scale to assess adaptive and maladaptive coping patterns with stress during covid 19 pandemic. **Results:** The current study results showed that 72.2% of the nurses in this study have low levels of emotional intelligence and that the highest mean of the studied sample was self-awareness, social skills, empathy, managing emotions, optimism, and utilization of other emotion subscales ( $27.1 \pm 17.04$ ,  $26.1 \pm 2.04$ ,  $15.3 \pm 12.04$ ,  $15.3 \pm 12.04$ ,  $15.0 \pm 2.05$  and  $6.1 \pm 2.03$ ) prospectively. The highest mean score was for maladaptive coping and there were statistically significant differences between levels of coping and level of emotional intelligence of studied nurses. **Conclusion:** the current study concluded that nearly three-quarters of the nurses in this study have low levels of emotional intelligence and had maladaptive coping patterns with stress during covid 19 pandemic and there were statistically significant differences between levels of coping of the studied sample and their level of emotional intelligence. **Recommendations:** Designing and implementing an emotional intelligence training program to empower the nurses to the conscious use of EI resources and use adaptive coping strategies during the time of pandemic and the years that will follow.

**Keywords:** Emotional Intelligence - Coping patterns – nurses - Covid 19 pandemic

### Introduction

The nursing profession, in general, is associated with many difficult and demanding situations and stress that make nurses vulnerable to greater stress, Stress is a situation with uncontrollable and negative results which arise from responsibility for the highest values – human life and health like exposure to harmful biological, chemical, physical, and psychological factors (Soto-Rubio, Giménez-Espert, & Prado-Gascó, 2020). Add to that the demographic changes in society, which make the current situation is much more dangerous. The pandemic situation initiated by COVID-19 (The covid 19 is an infectious disease caused by a newly discovered coronavirus and has a dramatic impact on societies and economies around the world) (Rupani et al.,2020). The fierce tragedy of the current epidemic, the risk of openness of infectious diseases, the expansion of immediate

challenges, the lack of personal defenses and other clinical supplies, the lack of testing, the limited choice of treatment, the concerns about pollution, to friends and family, all these exposed the nurses to long-term functioning in a stressful and fearful environment which poses a huge threat to the life and health of nurses. (Pfefferbaum & North, 2020).

Long-term functioning in a stressful working environment triggers the need for effective coping with these stressors (Vinkers et al.,2020). Coping with stressors refers to the specific efforts, both behavioral and psychological, that people employ to master, tolerate, reduce, or minimize stressful events. Two general coping types have been distinguished adaptive and maladaptive. Adaptive coping patterns are efforts to do something active to alleviate stressful circumstances (such as active coping, instrumental support, planning, acceptance,

emotional support humor, positive reframing, and religion). Maladaptive coping patterns (such as behavioral disengagement, denial, self-distraction, self-blame, substance use, and venting) Adaptive coping patterns require the great ability of emotional intelligence that strengthens nurses coping and exalt work engagement (**Baba, 2020**).

Emotional intelligence (EI) is the ability to know and manage one's own as well as others' emotions and enable individuals to cope better and experience less stress thus contributing to a healthy and stable workforce through enhancing professional skills in health care providers. Also, it helps nurses to improve relationships, manage their patients more effectively, make better decisions, and positively affect the quality of care provided to patients and families (**Kikanloo et al., 2019**). Emotional intelligence (EI) has been linked to coping particularly adaptive, rational / problem-focused coping. (**Shubhangi and Khokhar, 2018**). Emotional intelligence consists of five major domains, such as self-awareness, self-regulation, motivation, empathy, and social skills that allow nurses to create better decisions, manage their patients more effectively, improve relations, and positively influences the quality of care provided to patients and families (**Astralaga, 2018**).

Emotional intelligence enables individuals to cope better and experience less stress thus contributing to a healthy and stable workforce through enhancing professional skills in health care providers. It helps nurses to improve relationships, manage their patients more effectively, make better decisions, and positively affect the quality of care provided to patients and families (**ASTURIAS, 2017**). Individuals who are emotionally stable tend to be less aggressive and hostile to others, hence posit good interpersonal relations. Higher Emotional intelligence is correlated with higher satisfaction with life, better perceived problem-solving coping ability, in addition, individuals with higher EI scores seek out more appropriate coping patterns to manage stress and lower perception of stress (**Awad and Ashour, 2020**).

Emotional intelligence is a prerequisite for key skills such as communication and empathy, sensitivity, creativity, self-awareness, self-control, and assertiveness. Several ways in which EI might be associated with health behaviors can be identified. Interpersonal EI would be expected to lead to better interactions with health professionals and thus to a greater tendency to seek help and follow advice (**Johnson, 2017**). Increased levels of emotional intelligence can produce positive results at the individual level, such as improving or creating interpersonal relationships with patients and colleagues, increasing coping resources, and increasing social support at work and at home because of good interpersonal relationships. Furthermore, increased levels of emotional intelligence can provide positive organizational results such as improvement in service delivery, reduced absences, commitment, and greater satisfaction (**Dickens, Ion, and Waters, 2019**).

Research indicates that EI is positively associated with nurses' sense of overall well-being mental health and personal accomplishment. Research suggests that the level of stress and psychological distress increase with clinical experience, indicating that EI is vital throughout nurses' careers (**Fteiha, & Awwad, 2020**). Nurses with low levels of emotional intelligence skills were reported to be linked with ineffective coping patterns and a higher degree of distress, and nurses with higher emotional intelligence scores demonstrated higher performance, had longer careers, and greater job retention, an individual with high Emotional intelligence proved to be more able to manage work stressors effectively (**Larijani et al, 2017**). Studies further suggested that specific components of EI were more critical in decreasing burnout. Specifically, the research identified other's emotional appraisal (the ability to understand and express one's own emotions), emotional management (the ability to effectively evaluate and manage positive and negative emotions in oneself and others), and emotional control (the ability to effectively control emotions) as important EI factors that moderate stress and burnout in nurses (**Rakhshani et al., 2018**).

Psychiatric mental health nurses have a vital and important role toward nurses who

work in general hospitals they should help them to be emotionally intelligent o be able to deal with such a difficult and demanding situation, especially at a time when the international medical-scientific community is trying to deal with the new threat called Coronavirus, emotional intelligence is contributing decidedly to address this pandemic (**Huang et al., 2020**). Awareness, management, empathy, basic components of emotional intelligence, are especially important for people to cope with stress such as the ones we are going through. The need for the development and cultivation of emotional intelligence from the very beginning, starting from the field of education, is strongly apparent so that the child and later the adult can cope with stressful situations. Studies have shown that people with high emotional intelligence can better manage and mitigate stress and adopt strategies of resilience and control (**Rakhshani, et al., 2018**). Furthermore, Emotional capacities help people cope with everyday stressors and improve their cheerful outlook regarding life problems and events, hence the importance of the EI in improving coping strategies (**Mollaie, Asayesh, Qorbani & Sabzi, 2012**).

#### **Significance of the study:**

During sudden natural disasters and, infectious diseases, nurses are exposed to greater stressors. As reported by World Health Organization (WHO) 2020, there were 10.431 affirmed cases of COVID-19 and 556 deaths in Egypt. The 2020 coronavirus widespread in Egypt is a portion of a continuous around the world coronavirus widespread (**WHO,2020**). Throughout the COVID-19 pandemic, nurses are experiencing, stress fear, pressure, tiredness, ongoing emotional trauma, and isolation. (**Cheung, Fong, & Bressington, 2020**). So, they need to cope adaptively and make selfless contributions out of moral and professional responsibility. At this point, emotional intelligence comes to the fore and its role is a catalyst for not panicking but for better management from all sides (**Jun, Tucker & Melnyk, 2020**).

Nurses who understand the nature and the causes of their feelings, and who are proficient in emotional -regulation abilities, are less likely to collapse under the pressure of

real-life stressors and more likely to restore their emotional balance to cope effectively with life stressors. In addition, the conscious use of EI resources helps maximize the effectiveness of the overall response effort. Adaptive coping, in turn, helps reduce the intensity and duration of stressful experiences and thus, minimizes the creation of health problems associated with chronic stress. Emotional intelligence empowers people to be effective at reducing fear and worry as well as enhancing resilience and adaptive coping with stressors during the CoVid-19 pandemic and the years that will follow. So, this study aimed to assess the relationship between emotional intelligence and coping with stressors among nurses during the covid 19 pandemic.

#### **Aim of the Study:**

The present study aimed to assess the relationship between emotional intelligence and coping patterns with stress among nurses during the COVID-19 Pandemic.

#### **Research questions:**

1. What are the levels of emotional intelligence among nurses during the COVID-19 Pandemic?
2. What are the coping patterns among nurses during the COVID-19 Pandemic?
3. What is the relationship between emotional intelligence and coping patterns among nurses during the COVID-19 Pandemic?

#### **Subjects and method:**

##### **Research Design:**

A descriptive correlation research design was used in this study. Descriptive research design. is research is designed to provide a snapshot of the current situation and cannot make predictions or determine causality. Correlational research is research designed to discover whether a relationship or association exists between two or more variables and allow the prediction of future events from present knowledge. (**Lappe, 2000**).

##### **Study setting:**

This study was conducted at Ain Shams University Hospital which is affiliated to Ain

Shams University Hospitals Egypt. It provides care for medical patients in different medical specialties. Its total capacity is 618 beds. It contains one main building consisting of fifth floors. It offers medical care in various specialties such as pediatric intensive care unit, coronary care unit, cardiac catheter unit, medical care unit 1, medical care unit 2, intermediate care unit, chest care unit, neurology intensive care unit, neurosurgery intensive care unit, hematology intensive care unit and tropical intensive care unit.

### Subject:

Convenient sample consisted of 241 nurses out of 550, nurses working in the above-mentioned settings and providing care for patients during covid the 19 pandemic the sample size was determined according to the formula for calculating sample size and research activities at a confidence level of 95%, and the precision rate at 0.05.

$S = X \cdot 2NP (1 - P) \div d^2 (N - 1) + X \cdot 2P (1 - P)$ .

s= required sample size

x=the table value of chi-square for

1 degree of freedom at the desired confidence level (3.841)

N=the population size.

P=the population proportion (assumed to be .50 since this would provide the maximum sample size)

d=the degree of accuracy expressed as a proportion (.05) (Krejcie, & Morgan, 1970).

### These inclusion criteria were:

- Adult nurse above 18years.
- Sex: both sexes (male and female).
- Free from any diagnosed psychiatric illness.
- Different pandemic levels
- Experience not less than one year.
- actively working during the covid 19 pandemic

### Tools of data collection:

#### 1- Sociodemographic Data questionnaire:

The researchers designed this part in simple Arabic language after reviewing related literature in the field of coping patterns and emotional intelligence among nurses during the covid 19 pandemic to gather personal data including sex, age,

marital status, level of education, monthly income, and work experience.

- 2- **Emotional Intelligence Scale (EIS)**- The EIS is a 33- question test developed by **Schutte et al (1998)** to assess general emotional intelligence. including regulation of emotion, utilization of emotion, and appraisal of emotion on the Likert –scale from score 1 (quite opposing) to score 5 (quite agreeing). The scale was modified and translated by the researchers based on related literature in the field of emotional intelligence in nurses and the final form was composed of six domains including self-awareness (8 items), managing emotions (7items), motivating oneself (6items), empathy /social skill (5 items), optimism (4 items), and social skills (3 items) Cronbach’s alpha of scale questions was calculated at 0.89 which shows good internal consistency of the test.

**Scoring:** The responses on the five-point scale from ‘strongly disagree’ to ‘strongly agree’ were scored from “1” to “5.” lowest attainable score is 33 and the maximum score is 165. A higher score indicates a higher level of emotional intelligence. For categorical analyses, the scores of each domain and of the total scale were converted into percent scores. A percent score <60 is considered low emotional intelligence, 60-<75% is considered moderate emotional intelligence, and 75%+ is Considered high emotional intelligence. For statistical efficiency, the moderate and high categories were joined together

- 3- **Brief Cope scale:** The Brief-COPE developed by **Carver, 1997** (Coping Orientation to Problems Experienced) is a 28-items self-reported questionnaire it was designed to measure 14 coping types with 28 questions that determine adaptive and maladaptive ways to cope with a stressful life event. Each question has 4 possible answers ranging from 1 to 4, (1: I have not been doing this at all, 2: A little bit, 3: A medium amount, and 4: I have been doing this a lot). (Nisa, & Siddiqui,2020).

The scale can determine someone’s primary coping pattern as either adaptive coping or maladaptive coping.

**Scoring:**

Responses were measured on a four-point Likert scale ranging from 1 ("I've not done this at all") to 4 ("I've been doing this a lot"). The scores for each domain ranging from 2 to 8 and the means for each coping method were then calculated.

**Operational design:**

- **Preparatory phase:** It begins with reviewing the literature of national and international resources concerning Emotional intelligence and coping patterns among nurses during the covid 19 pandemic by using textbooks, articles, magazines, research, and internet search to get a clear picture of all aspects related to the study.

**Tools validity and reliability:**

The content validity was ascertained by a group of 5 experts from the psychiatric/mental health nursing department and 2 experts from the administration department, Faculty of Nursing, Ain shams university to ensure relevance, clarity, completeness, simplicity, and applicability of the study tools. Expert's responses were either agreed or disagreed or agreed with modifications. about 89 % of the experts agreed with the used tools. Their opinions were elicited regarding the format, layout, consistency, accuracy, and relevancy of the tools. Reliability the pretest was carried out to test the reliability of Cronbach's Alpha.

**The Reliability:**

It was statistically tested by the Cronbach Alpha test; 0.92 for the demographic interviewing questionnaire, 0.89 for an emotional intelligence scale, 0.93 for the coping scale.

**• Pilot Study:**

A pilot study was carried out to test the questionnaire's feasibility, understandability and to estimate the time consumed for filling in the forms. The pilot study was carried out on 10% of the study sample (24 nurses). A brief explanation of the purpose of the study was provided to every participant in the pilot study, and then they were provided with a copy of each study tool. The time consumed in answering the questionnaires was about 15-25 minutes. Nurses in the pilot study were excluded from the main study sample.

**• Fieldwork**

The fieldwork for this study extended for two months. It is started at the beginning of

April 2020 and was completed by the end of May 2020. The researchers collected the data from the nurses after spending by sending the questionnaire translating it into Arabic via email and social media after sending a message explaining the purpose of the study and confirming the privacy of the data. Approval of the hospital director was taken first also a suitable time for data collection as determined by each staff nurse the participated in the study.

**• Ethical consideration:**

Official permission to conduct this study was secured. The researchers clarified to nurses that participation was voluntary and anonymity was assured.

**Statistical Analysis:**

Statistics were analyzed using the Statistical Package for the Social Sciences (SPSS), version 22. Data were presented using descriptive statistics in the form of Frequency and percentages were used for numerical data and mean and standard deviation. For parametric analysis, Pearson's correlation coefficient is the test statistics that measure the statistical relationship, or association, between two continuous variables (to assess the relationship between emotional intelligence and coping pattern for stressors among nurses). P-value: Level of significance: P<0.05: Significant (S) - P<0.01: Highly significant (HS).

**Results**

**Table (1)** reveals that the highest percentage (91.7%) of nurses under study are female and more than one third (34.9%) of them in aged 25 to 29 years, the majority (71.8%) of them are married and more than three-fifth (60.6%) of them are from the institute of nursing and 83.8% had enough. Regarding their work experience, it was found that more than half of them (58.1%) have work experience from 3 to 5 years.

**Table (2)** demonstrated that the highest mean ( $27.1 \pm 17.04$ ) of the studied sample was self-awareness, social skills, empathy, managing emotions, optimism, and utilization of other emotion subscales ( $27.1 \pm 17.04$ ,  $26.1 \pm 2.04$ ,  $15.3 \pm 12.04$ ,  $15.3 \pm 12.04$  and  $15.0 \pm 2.05$  and  $6.1 \pm 2.03$  respectively).

**Table (3)** indicates that near three quarters (72.2%) of the nurses in this study have low levels of emotional intelligence with statistically significant differences  $P < 0.01$

**Table (4):** indicates that, regarding adaptive coping, the highest mean ( $5.92 \pm 1.743$ ) is found in active coping followed by ( $5.23 \pm 1.915$ ) in the religion of adaptive coping subscale. Meanwhile, it was found in maladaptive coping, the highest mean ( $5.24 \pm 1.894$ ) founded in behavioral disengagement and followed by ( $5.24 \pm 0.850$ ) for Self-blame. And the lowest mean ( $5.11 \pm 1.837$ ) was in denial of maladaptive coping.

**Table (5):** shows that, the highest mean score was for maladaptive coping and there were statistically significant differences between levels of coping among the studied sample as evidenced by ( $P < 0.001$ ).

**Table (6):** illustrated that, near half (49.4%) of nurses under study were female with high levels of emotional intelligence. Meanwhile, (28.2%) of them who were in age 25-29 years had a low level of emotional intelligence, and more than half (55.2%) of married nurses understudy was had low-level emotional intelligence. Regarding educational level, it was found that (48.1%) of nurses who were graduated from the institute of nursing had a low level of emotional intelligence. in

addition, more than three-fifths (64.7%) of those who were had enough monthly income have high-level emotional intelligence, and more than half (53.9%) of those who were had years of experience from 3 to 5 years were had a low level of emotional intelligence.

**Table (7):** clarified that, near half (66.4%) of nurses under study were female with maladaptive coping. Meanwhile 29.04% of them who are in age from 25-29 were had maladaptive coping and more than half (62.2%) of married nurses understudy were had maladaptive coping, regarding educational level, it was found that (37.3%) of nurses who were graduated from the institute of nursing were had maladaptive coping. in addition to near half (46.5%) of nurses who had years of experience from 3 to 5 years had maladaptive coping patterns.

**Table (8)** shows that there is a positive correlation between the level of coping of the studied sample and their level of emotional intelligence as evidenced by ( $P < 0.001$ ).

**Table (9)** emphasized that there was a positive correlation between coping patterns of the studied sample and their emotional intelligence as evidenced by ( $P < 0.001$ ).

**Table (1)** Demographic characteristics of the studied nurses (No.241)

Items	No.	%
<b>Sex</b>		
• Male	20	8.3%
• Female	221	91.7%
<b>Age</b>		
• 20-24y	45	18.7%
• 25-29y	84	34.9%
• 30-34y	79	32.8%
• More than 35y	33	13.7%
<b>X&amp;SD</b> 28±5.6		
<b>Marital status</b>		
• Single	31	12.9%
• Married	173	71.8%
• Divorced	32	13.3%
• Widowed	5	2.1%
<b>Educational level</b>		
• Baccalaureate	23	9.5%
• Institute of Nursing	146	60.6%
• Diploma nurses	72	29.9%
<b>Monthly income</b>		
• Not Enough	39	16.2%
• Enough	202	83.8%
<b>work experience</b>		
• From 1 to 3 years	65	27.0%
• From 3 to 5 years	140	58.1%
• More than 5 years	36	14.9%

**Table (2):** Total Mean and Stander Deviation of the studied sample regarding their Emotional intelligence Subscale (No.241)

Items	$\bar{x} \pm SD$	P-value
• Self-awareness	27.1 $\pm$ 17.04	P <0.001
• Managing emotions	15.3 $\pm$ 12.04	P <0.001
• Utilization of other emotion	6.1 $\pm$ 2.03	P <0.001
• Empathy	15.3 $\pm$ 2.04	P <0.001
• Social skills	26.1 $\pm$ 2.04	P <0.001
• Optimism	15.0 $\pm$ 2.05	P >0.001

**Table (3)** Total levels of emotional intelligence among the studied sample (No.241)

Items	No. = (241)	%	X	P-Value
<b>Total Levels of Emotional Intelligence</b>				
• Low	174	72.2	25.2	P <0.01
• High	67	27.8		

**Table (4):** Mean and Stander Deviation of the studied sample regarding their coping subscale (No.241)

Items	$\bar{x} \pm SD$	P-value
<b>Adaptive Coping</b>		
• Active coping	5.92 $\pm$ 1.743	P <0.001
• Instrumental support	5.09 $\pm$ 1.830	P <0.001
• Planning	5.14 $\pm$ 1.862	P <0.001
• Acceptance	5.12 $\pm$ 1.925	P <0.001
• Emotional support	4.91 $\pm$ 1.779	P <0.001
• Humor	5.16 $\pm$ 1.913	P >0.001
• Positive reframing	5.17 $\pm$ 1.898	P >0.001
• Religion	5.23 $\pm$ 1.915	P <0.001
<b>Maladaptive Coping</b>		
• Behavioral Disengagement	5.24 $\pm$ 1.894	P <0.001
• Denial	5.11 $\pm$ 1.837	P <0.001
• Self-distraction	5.20 $\pm$ 1.847	P <0.001
• Self-blame	5.24 $\pm$ 0.850	P <0.001
• Substance use	5.18 $\pm$ 1.864	P >0.001
• Venting	5.17 $\pm$ 0.847	P <0.001

**Table (5):** Total levels of coping among the studied sample (No.241)

Items	$\bar{x} \pm SD$	P-value
<b>Total levels of coping</b>		
▪ Adaptive coping	31.15 $\pm$ 7.332	P <0.001
▪ Maladaptive coping	41.75 $\pm$ 10.674	

**Table (6):** Comparison between Level of Emotional Intelligence and their Socio-demographic Characteristics (n=241).

Socio-Demographic Characteristics	Emotional intelligence				X <sup>2</sup>	p-value	Sign
	Low		High				
	No.	%	No.	%			
<b>Sex</b>							
• Male	15	6.2	5	2.1	11.52	<0.05	S
• Female	102	42.3	119	49.4			
<b>Age</b>							
• 20-24	32	13.3	13	5.4	15.79	<0.05	S
• 25-29	68	28.2	16	6.6			
• 30-34	54	22.4	25	10.4			
• More than 35	23	9.5	10	4.1			
<b>Marital Status</b>							
• Single	19	7.9	12	4.9	22.34	<0.05	S
• Married	133	55.2	40	16.6			
• Divorced	29	12.03	9	3.7			
• Widowed	3	1.2	2	0.8			
<b>Educational level</b>							
• Baccalaureate	19	7.9	14	5.8	19.62	<0.05	S
• Institute of Nursing	116	48.1	30	12.4			
• Diploma nurses	52	21.6	20	8.3			
<b>Monthly income</b>							
• Not Enough	21	8.7	18	7.5	27.13	<0.05	S
• Enough	46	19.1	156	64.7			
<b>Years of experience</b>							
• From 1 to 3 years	44	18.3	21	8.7	18.52	<0.05	S
• From 3 to 5 years	130	53.9	10	4.1			
• More than 5 years	32	13.3	4	1.7			

**Table (7):** Comparison between Level of coping and Socio-demographic Characteristics of nurses understudy (n=241).

Socio-Demographic Characteristics	Level of Coping				X <sup>2</sup>	p-value	Sign
	Adaptive		Maladaptive				
	No.	%	No.	%			
<b>Sex</b>							
• Male	12	4.9	8	3.3	11.52	<0.05	S
• Female	61	25.3	160	66.4%			
<b>Age</b>							
• 20-24	15	6.2	30	12.4	15.79	<0.05	S
• 25-29	14	5.8	70	29.04			
• 30-34	19	7.9	60	24.9			
• More than 35	16	6.6	17	7.1			
<b>Marital Status</b>							
• Single	11	4.6	20	8.3	22.34	<0.05	S
• Married	23	9.5	150	62.2			
• Divorced	12	4.9	20	8.3			
• Widowed	1	0.4	4	1.7			
<b>Educational level</b>							
• Baccalaureate	13	5.4	20	8.3	19.62	<0.05	S
• Institute of Nursing	56	23.2	90	37.3			
• Diploma nurses	30	12.4	42	17.4			
<b>Monthly income</b>							
• Not Enough	15	6.2	24	9.9	27.13	<0.05	S
• Enough	112	46.5	90	37.3			
<b>Years of experience</b>							
• From 1 to 3 years	15	6.2	50	20.7	18.52	<0.05	S
• From 3 to 5 years	30	12.4	110	45.6			
• More than 5 years	3	1.2	33	13.7			



**Table (8):** Relationship between Total Levels of Emotional Intelligence and Total levels of coping among the studied sample (n=241).

Items	Pearson correlation coefficient (R- test)		P- Value
	Total Levels of Emotional Intelligence		
	Low	High	
	Total levels of coping		P < 0.001
• Adaptive coping	0.452	0.673	P < 0.001
• Maladaptive coping	0.379	0.541	

**Table (9):** Correlation between total coping of the studied sample and their Emotional Intelligence (n=241).

Items	Coping of the studied sample	
	R	P-value
Total Emotional intelligence	0.342	P < 0.001

## Discussion

Nurses may experience high levels of stress during their work, especially during covid 19. Emotional intelligence is a basis for active, adaptive coping with stress, and the individual pattern of coping with stress relates to the level of emotional intelligence. Nurses with high emotional intelligence can cope in a better way with negative emotions evoking stressful situations, can use emotions in coping with the problem, and better comprehend potential stressors. (Kikanloo et al., 2019).

After analyzing the collected data, related to the first research question, The results of this study demonstrated that the highest mean of the studied sample was self-awareness, and the lowest mean scores were for optimism and utilization of other emotion subscales this could be explained that the nurses have self-awareness as prerequisites skills for work as nurses, but no one is born with high EI levels. To develop EI, students require training, practice, and experience, which can assist nurses in the management of their own and utilization of other emotions, facilitating the demonstration of genuine emotional responses, increasing the ability to communicate emotions, and improving empathy. These findings were congruent with Hussien, Elkayal, & Shahin,. (2020), who reported that nursing education must provide a learning environment that emphasizes the importance of EI by nurturing and facilitating the development of these qualities.

Also, the current study demonstrated that nearly three-quarters (72.2%) of the nurses in

this study have low levels of emotional intelligence. From the researcher's point of view, this might be due to that most nurse in the current study were graduated from the institute of nursing or only diploma nurses, and our society and educational systems place a much higher emphasis on developing students' Intelligence Quotient (IQ) or academic intelligence not in developing emotional intelligence, so the nurses might be not taught anything about emotions or how to use and manage emotions. Add to that nurses during covid 19 pandemic worked in a stressful environment due to high patient mortality, daily confrontations with a tension-charged atmosphere, recurrent exposure to work-related stresses, and the potential for delivering unfitting care, nurses may feel powerless, unable to offer the care according to their own belief system, and therefore prone to develop emotional dysregulation and become unable to use their emotion effectively which consequently affect their levels of emotional intelligence. The finding of the present study is similar to the studies of Awad and Ashour, (2020) who investigate the relationship between emotional intelligence, moral distress, and work engagement among critical care nurses, who concluded that low level of emotional intelligence, high degree of moral distress, moderate work engagement among nurses.

On the other hand, the results of the current study were contradicted by Štiglic et al., (2018) who conduct a study entitled Emotional intelligence among nursing students and found that most of the nurses in their study were had moderate to high levels of emotional

intelligence. Meanwhile, **Allam (2018)**, conducted a study entitled Relationship between Nurses' Emotional Intelligence and their Caring Behavior at the National Medical Institute in Damanhour, and his findings illustrated that the total score of emotional intelligence was moderate. Also, the study finding of **Mollaie et al., (2012)**, were reported a good score for emotional intelligence. where participants with a high level of EI had better control over their psychological health. In addition, the result of **Rakhshani et al., (2018)** disagreed with the present study finding, which study the relationship between emotional intelligence and job stress among nurses, and found that the emotional intelligence levels of nurses were moderate and good.

In relation to the adaptive coping subscale, the present study finding showed that the active coping item had the highest mean score, followed by the religion of adaptive coping. Likewise, in the maladaptive coping subscale, the finding illustrates that the behavioral disengagement item had the highest mean score, followed by self-blame. Meanwhile, the denial maladaptive coping had the lowest mean score. Finally, the present results exposed that there were statistically significant differences between levels of coping. The present result came to agree with **Huang et al, (2020)** who found that nurses are more proactive in using problem-focused coping than nursing students. emotions, therefore emotion-focused coping is rarely used when dealing with stress. In addition, this study also found that participants in affected zones were more likely to cope with emotion-focused strategies than those in unaffected communities. This is because being in an unaffected area, the participants do not focus much on COVID-19 and do not cause a strong emotional response to the pandemic.

As regards the correlation between total levels of emotional intelligence and total levels of coping, the present study demonstrated that there was a positive correlation between the level of emotional intelligence and level of coping. The result of **Larijani et al, (2017)** were consistent with the current study which investigate the relationship between emotional intelligence and coping styles against stress among nurses and who found a meaningful

relationship between the average score of emotional intelligence and coping styles among the nurses.

Also, these findings are similar to the studies of **ASTURIAS, (2017) and Mollaie et al., (2012)**, who concluded that there is a positive correlation between the emotional intelligence of nurses and coping styles and psychological distress. Significant differences were identified in emotional intelligence level, perceived stress, and utilization of coping strategies based on individual characteristics. The contradictory result was reported by **Awad and Ashour, (2020)** who investigate the relationship between emotional intelligence, moral distress, and work engagement among critical care nurses, and who showed that there is a highly statistically significant negative correlation between moral distress and overall emotional intelligence as well as its sub-dimensions.

Regarding, the relation between the level of emotional intelligence and their socio-demographic characteristics, the present study illustrates that nearly half of nurses are female, with high levels of emotional intelligence. Meanwhile more than half of married nurses aged from 25-29 years had a low level of emotional intelligence. In addition, near half of them are graduated from the institute of nursing were had a low level of emotional intelligence.

The present finding was congruent with **ASTURIAS, (2017)** who explored the relationship between emotional intelligence and stress, psychological distress, and coping strategies for undergraduate nursing students, and who found that some demographic characteristics of the participants have some influence on their emotional intelligence levels as females scored a slightly higher level of emotional intelligence than males.

Concerning, the relations between the level of coping and their socio-demographic characteristics, the present study demonstrates that nearly half of nurses are female and have maladaptive coping. Similarly, more than half of married nurses their age from 25-29 were had maladaptive coping. This may be due to the possibility of mental and physical fatigue of nurse which, lead to utilizing disengagement coping strategies, in particular the problem

avoidance coping strategy. On the contrary **Huang et al, (2020)** found that nurses are women and more likely to adopt problem-focused coping mechanisms than men, and less likely to pick emotion-focused coping strategies. As mentioned earlier, women are more vulnerable and sensitive to emotions, therefore emotion-focused coping is rarely used when dealing with stress. Also, this result was contradictory to **ASTURIAS, (2017)** who concluded that participants of the study were reported utilization of ineffective coping strategies, problem avoidance, and self-destruction.

Correspondingly, the result of **Larijani et al, (2017)** was incongruent with the current study that explored the relationship between emotional intelligence and coping styles against stress among nurses who found that the participants got a good score for emotional intelligence.

### Conclusion

The current study results concluded that nearly three-quarters of the nurses in this study have low levels of emotional intelligence and that the highest mean of the studied sample was self-awareness, social skills, empathy, managing emotions, optimism, and utilization of other emotions subscales. The highest mean score was for maladaptive coping and there were statistically significant differences between levels of coping among the studied nurses. There is a positive correlation between the level of coping of the studied sample and their level of emotional intelligence. comprehensively, nurses who are proficient in emotion-regulation abilities, are generally less likely to collapse under pressure and emotional intelligence empowers people to adaptive coping during the time of the pandemic

### Recommendations

- Designing and implementing an emotional intelligence training program to empower the nurses to the conscious use of EI resources and use adaptive coping strategies during the time of pandemic and the years that will follow.

- Further studies should be applied to investigate the causes of low Emotional Intelligence among Staff Nurses.
- Concept of emotional intelligence should be incorporated into nursing education to help them adapt better to various life situations.

### References

- Allam L(2018).**The Relationship between Nurses' Emotional Intelligence and their Caring Behavior at the National Medical Institute in Damanhour. Unpublished master thesis. Faculty of Nursing, Alexandria University. 2018.
- Astralaga, I. (2018).**Emergency room nurses perceptions of emotional intelligence (Doctoral dissertation, Walden University).
- ASTURIAS, (2017):** An exploration of the relationship between emotional intelligence and stress, psychological distress and coping strategies for undergraduate nursing students. A research thesis submitted in fulfilment of the requirements for the degree of Master of Nursing by Research College of Health and Biomedicine Victoria University Melbourne, Australia.
- Awad, N,H and Ashour, H, M, (2020):** The relationship between emotional intelligence, moral distress, and work engagement among critical care nurses. International Journal of Advances in Nursing Management, Volume:8. Issue:3. Print ISSN: 2347-8632.
- Awad, N. H. A., & Al anwer Ashour, H. M. (2020).** The relationship between emotional intelligence, moral distress and work engagement as perceived by critical care nurses. International Journal of Advances in Nursing Management, 8(3), 237-248.
- Baba, M. M. (2020).** Navigating COVID-19 with emotional intelligence. International Journal of Social Psychiatry, 66(8), 810-820.

- Cheung, T., Fong, T. K., & Bressington, D. (2020).** COVID-19 under the SARS Cloud: Mental Health Nursing during the Pandemic in Hong Kong. *Journal of Psychiatric and Mental Health Nursing*, 00, 1–3.
- Dickens, G.L., Ion, R., and Waters, C. (2019).** Mental health nurses' attitudes, experience, and knowledge regarding routine physical healthcare: systematic, integrative review of studies involving 7,549 nurses working in mental health settings. *BMC Nurs* 18, 16. <https://doi.org/10.1186/s12912-019-0339-x>.
- Fteiha, M., & Awwad, N. (2020).** Emotional intelligence and its relationship with stress coping style. *Health Psychology Open*, 7(2), 2055102920970416.
- Huang, J., Wansheng Lei, W, Xu, F, Liu, H., and Yu, L., (2020):** Emotional responses and coping strategies in nurses and nursing students during Covid-19 outbreak: A comparative study. *Online ISSN:2454-2652.*  
Article DOI: 10.5958/24542652.2020.00060.8.  
doi: 10.1371/journal.pone.0237303.  
PMCID: PMC7413410.
- Hussien, R. M., Elkayal, M. M., & Shahin, M. A. H. (2020).** Emotional intelligence and uncertainty among undergraduate nursing students during the COVID-19 pandemic outbreak: A comparative study. *The Open Nursing Journal*, 14(1).
- Johnson, B W., (2017).** Understanding and Applying Emotional Intelligence: A Qualitative Study of Tampa Veterans Administration Hospital Employees. A dissertation submitted in partial fulfillment of the requirements for the degree of Doctor of Philosophy. University of South Florida.
- Jun, J., Tucker, S., & Melnyk, B. (2020).** Clinician mental health and well-being during global healthcare crises: Evidence learned from prior epidemics for COVID-19 Pandemic. *Worldviews on Evidence-Based Nursing*, 17(3), 182–184. <https://doi.org/10.1111/wvn.12439>
- Kikanloo, A. A. I., Jalali, K., Asadi, Z., Shokrpour, N., Amiri, M., & Bazrafkan, L. (2019).** Emotional intelligence skills: Is nurses' stress and professional competence related to their emotional intelligence training? A quasi experimental study. *Journal of Advances in Medical Education & Professionalism*, 7(3), 138.
- Krejcie, R. V., & Morgan, D. W. (1970).** Determining sample size for research activities. *Educational and Psychological Measurement*, 30(3), 607–610.
- Lappe, J. M. (2000).** Taking the mystery out of research: Descriptive correlational design. *Orthopaedic Nursing*, 19(2), 81.
- Larijani TT , Movaghari MR , Rostami M, Zamani N , Ghadirian F. (2017).** The Relationship between emotional intelligence and coping styles against stress among nurses. *World Journal of Research and Review (WJRR)* ISSN:2455-3956, Volume-4, Issue-5, Pages 71-75.
- MacIntyre, P. D., Gregersen, T., & Mercer, S. (2020).** Language teachers' coping strategies during the Covid-19 conversion to online teaching: Correlations with stress, wellbeing and negative emotions. *System*, 94, 102352
- Mollaie E, Asayesh H, Qorbani M, Sabzi (2012).** The relationship between emotional intelligence and coping strategies of Golestan medical science university students. *Pejouhandeh.*;17(3):127-33 (Persian).
- Pfefferbaum, B., & North, C. (2020).** Mental health and the Covid-19 pandemic. *New England Journal of Medicine*, 383, 510–512. <https://doi.org/10.1056/NEJMp2008017>
- Rakhshani, T, Motlagh,Z, 1 Vahid Beigi,V, Rahimkhanli,M and Rashki, M ( 2018):** The Relationship between Emotional Intelligence and Job Stress among Nurses in Shiraz, Iran. *PMC6422573.*  
PMID: 30914883  
Published online 2018 Dec 28. doi: 10.21315/mjms2018.25.6.10

- Rupani, P. F., Nilashi, M., Abumalloh, R. A., Asadi, S., Samad, S., & Wang, S. (2020).** Coronavirus pandemic (COVID-19) and its natural environmental impacts. *International Journal of Environmental Science and Technology*, 17(11), 4655-4666.
- Schutte, N. S., Malouff, J. M., Haggerty, J. D., Hall, L. E., ;Copper, J. T., Golden, C. J., & Dornheim, L. (1998).** Development and validation of a measure of emotional intelligence. *Personality and Individual Differences.*, 2(25), 167-177. doi:10.1016s0191- 8869.
- ShubhangiG and Khokhar C. P (2018).** Cognitive approach coping style as a function of sex, resilience, and neuroticism in medical professionals. OR: 5.2331(Uif) UGC appROved JOURn al nO. 48514 ISSN: 2249-894X. Volum - 7 | issue - 10. Available online at [www.lbp.world](http://www.lbp.world).
- Soto-Rubio, A., Giménez-Espert, M. D. C., & Prado-Gascó, V. (2020).** Effect of emotional intelligence and psychosocial risks on burnout, job satisfaction, and nurses' health during the covid-19 pandemic. *International journal of environmental research and public health*, 17(21), 7998.
- Štiglic, G., Cilar, L., Novak, Ž., Vrbnjak, D., Stenhouse, R., Snowden, A., & Pajnkihar, M. (2018).** Emotional intelligence among nursing students: Findings from a cross-sectional study. *Nurse education today*, 66, 33-38.
- Vinkers, C. H., van Amelsvoort, T., Bisson, J. I., Branchi, I., Cryan, J. F., Domschke, K., ... & van der Wee, N. J. (2020).** Stress resilience during the coronavirus pandemic. *European Neuropsychopharmacology*, 35, 12-16.
- World health organization (2020).** Coronavirus disease (COVID-2019) situation reports. Available at: <https://www.who.int/emergencies/diseases/novel-coronavirus-2019/situation-reports>