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Emotional Intelligence and Stress-Coping Strategies among Nurses during the COVID-19 Pandemic

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Abstract

The present study aimed to investigate the relationship between emotional intelligence and stress-coping strategies among nurses working in epidemiology departments during the COVID-19 pandemic. It also sought to identify the level of emotional intelligence and the nature of the strategies employed by nurses to cope with stress during the pandemic. The study was conducted on a sample of 310 nurses, selected through a convenience sampling method, working in hospitals in southeastern Algeria. Two instruments were administered: the Emotional Intelligence Scale developed by Ali Moussa Batran (2018) and the Coping Strategies Scale developed by researcher Nadjiya Touati (2018). The study adopted a descriptive approach (exploratory-correlational). After processing the data using the Statistical Package for the Social Sciences (SPSS), version 25, the results revealed the following: Nurses working in epidemiology departments demonstrated a high level of emotional intelligence during the COVID-19 pandemic. Nurses employed effective coping strategies to deal with stress during the COVID-19 pandemic. There was a statistically significant correlation between emotional intelligence and stress-coping strategies among nurses working in epidemiology departments during the COVID-19 pandemic.

Keywords: Emotional intelligence – Stress-coping strategies – Nurses working in epidemiology departments – COVID-19 pandemic.

Introduction

At the beginning of 2020, and continuing until relatively recently, the world experienced a major epidemic wave caused by the novel coronavirus respiratory syndrome, which was considered one of the most severe waves in history. The epidemic first emerged in Wuhan, People's Republic of China, and subsequently spread throughout the world, reaching its peak within a relatively short period, as mortality rates increased rapidly. The COVID-19 virus caused widespread panic and posed a serious threat to the health and lives of humanity as a whole. According to the World Health Organization, the coronavirus pandemic resulted in between 13 and 16 million deaths worldwide between 2020 and 2021.

According to the Algerian Press Service, the first case of coronavirus infection in Algeria was recorded on February 25, 2020. The epidemic then gradually spread from one province to another. As was the case in countries around the world, health authorities worked to provide the necessary care and mobilize all available human and material resources to contain the pandemic. They also prepared medical and paramedical teams to confront the stressful situation created by the coronavirus outbreak and developed psychological and social support and motivation programs in order to preserve public health as much as possible.

Manour (2020) emphasized that, as the epidemic worsened, it became necessary to mobilize healthcare systems and the general public so that they would be medically and psychologically prepared. Previous studies have shown that healthcare workers, including nurses, emergency medical personnel, and other healthcare professionals, faced significant risks and experienced severe psychological stress and traumatic experiences. They also exhibited high levels of symptoms associated with emotional disorders, such as depression and anxiety. This was expected because anxiety and fear of infection tend to increase when individuals are exposed to the virus and are concerned about transmitting the infection to people who are important in their lives.

Batran (2018) also argues that emotional intelligence in the workplace contributes to improving performance and increasing productivity. Some studies have demonstrated that individuals with higher levels of emotional intelligence perform better than others. Individuals need to overcome negative emotions in order to experience health and happiness. The presence of negative feelings may lead to maladjustment and emotional imbalance, which, in turn, may result in an inability to perform work-related functions appropriately.

1. Research Problem

It is evident that the COVID-19 pandemic has generated varying levels of distress and psychological stress, depending on the severity of the waves experienced over the course of two years, until

preventive vaccines were developed and mortality rates declined significantly. Based on the foregoing, it is clear that paying attention to the psychological and emotional well-being of nurses during epidemiological crises in general, and the COVID-19 pandemic in particular, is essential to ensuring an effective response to the profound effects of the pandemic on healthcare workers. Therefore, through this scientific initiative, we seek to investigate the relationship between emotional intelligence and stress-coping strategies among this important segment of society and to answer the following questions:

What is the level of emotional intelligence and its dimensions among nurses working in the Epidemiology Department during the COVID-19 pandemic?

What strategies do nurses working in the Epidemiology Department use to cope with stress during the COVID-19 pandemic?

Is there a statistically significant relationship between emotional intelligence and stress-coping strategies among nurses working in the Epidemiology Department during the COVID-19 pandemic?

2. Research Hypotheses

Nurses working in the Epidemiology Department have a high level of emotional intelligence during the COVID-19 pandemic.

Nurses working in the Epidemiology Department use effective strategies to cope with stress during the COVID-19 pandemic.

There is a statistically significant relationship between the level of emotional intelligence and stress-coping strategies among nurses working in the Epidemiology Department during the COVID-19 pandemic.

3. Research Objectives

To identify the level of emotional intelligence among nurses working in the Epidemiology Department during the COVID-19 pandemic in hospitals in southeastern Algeria, namely Touggourt, Ouargla, El Oued, Biskra, and Ghardaïa.

To highlight the stress-coping strategies used by nurses working in the Epidemiology Department during the COVID-19 pandemic in the aforementioned hospitals.

To determine the relationship between emotional intelligence and the stress-coping strategies used by nurses working in the Epidemiology Department during the COVID-19 pandemic in hospitals in southeastern Algeria.

4. Significance of the Study

The seriousness of the COVID-19 pandemic as a global crisis threatening the physical and psychological health and lives of nurses.

Identifying the strategies that contribute to maintaining a certain level of psychological and emotional well-being, thereby making it possible to propose preventive programs aimed at promoting the effective use of these strategies in order to preserve health.

5. Definitions of the Study Variables

5.1. Emotional Intelligence

Emotional intelligence is defined as the ability to monitor one's own emotions as well as those of others, to distinguish between different emotions and label them appropriately, and to use emotional information to guide one's thinking and behavior and to influence others (Mayer, 1990)

Emotional intelligence is what we use when we empathize with our colleagues at work and engage in deep conversations about our relationships with significant others. It enables us to communicate with others, understand ourselves better, and live a more authentic, healthy, and happy life (Abdel-Fatah, 2021, p. 57)

The researcher defines emotional intelligence as a set of traits and abilities possessed by nurses that enable them to adequately understand their own emotions, perceive the feelings and emotions of others, communicate effectively with them, and utilize this knowledge to achieve personal and collective goals in various social and professional contexts. Accordingly, emotional intelligence is represented by the score obtained by the nurse working in the Epidemiology Department of the hospitals of Touggourt, Ouargla, El Oued, Biskra, and Ghardaïa on the emotional intelligence scale used in this study.

5.1. Stress-Coping Strategies

Stress-coping strategies refer to a set of behavioral, cognitive, and emotional responses used by nurses to deal with stressful situations and events in order to achieve psychological adjustment and balance or to alleviate their effects. They are measured according to the score obtained by the participant on the Stress-Coping Scale developed by the researcher Touati Najia (2018), which consists of the following strategies:

Seeking Self-Support: Refers to turning to family, social, and sports activities with the aim of overcoming occupational stress.

Seeking Social Support: Refers to seeking support from others, including family members, colleagues, and friends, by asking for assistance, advice, and help, such as sharing and discussing one's occupational problems.

Seeking Spiritual Support: Refers to turning to religion. By religious methods, we mean the practices to which nurses resort during stressful periods, such as increasing prayer and acts of worship as a source of spiritual support.

Taking Breaks and Withdrawal: Refers to the various measures taken by nurses to avoid confronting occupational stress, such as taking sick leave, taking a rest period, sleeping, or being absent from work.

Problem Avoidance: Refers to all activities aimed at avoiding stressful situations by engaging in other situations and activities, thinking about matters unrelated to work, or displaying behavioral changes that indicate avoidance of stressful situations, such as isolation, silence, and neutrality.

Positive Thinking: Refers to finding a new meaning and interpretation of the situation, such as taking time to reflect and gaining experience from what has happened.

Finding Solutions to Problems: Refers to the cognitive methods and rational and logical patterns of thinking employed by nurses in an attempt to generate new and innovative ideas and solutions for coping with occupational stress.

Soothing and Alleviating Strategies: These include ways of dealing with stress through humor and a sense of fun, or through shouting and aggression, as well as the use of psychological tranquilizers or other means of relief, such as smoking and excessive eating or drinking.

Planning: Refers to the rational and logical patterns of thinking adopted by the worker in response to a stressful situation while seeking positive ways of coping, such as organizing work, prioritizing tasks, and avoiding marginal or non-essential matters.

5.2. Nurses Working in the Epidemiology Department

A nurse working in an epidemiology department is a person who holds a professional nursing qualification, such as a nursing assistant, nurse, or senior nurse, and who works in epidemiology departments as part of efforts to control the spread of the novel coronavirus (COVID-19). The nurses included in the present study were recruited from hospitals in Touggourt, Ouargla, El Oued, Biskra, and Ghardaïa, where they perform specific duties, including treating infections, administering injections, providing daily medications, and conducting radiological and medical laboratory examinations.

6. Field Study Procedures

6.1. Research Method

To investigate the relationship between emotional intelligence and stress-coping strategies, the researcher adopted the descriptive method using its analytical approach (exploratory and correlational). This method aims to describe existing phenomena or events after collecting the relevant data, as well as to interpret these phenomena and identify the conditions and relationships among variables as they exist in reality (Mansi, 2003, p. 202)

6.2. Research Instruments

6.2.1. Emotional Intelligence Scale

We adopted the Emotional Intelligence Scale developed by Ali Moussa Batran (2018). The scale consists of five dimensions and includes 50 items related comprehensively to emotional intelligence.

Table No. (03): Dimensions and Items of the Emotional Intelligence Scale

Dimension	Items of the Dimension	Total Number of Items
1- Emotion Management	1–12	12
2- Emotional Empathy	13–21	09
3- Self-Motivation for Work	22–32	11
4- Emotional Awareness	33–40	08
5- Social Communication with Others at Work	41–50	10
Emotional Intelligence	1–50	50

(Batran, 2018, p. 49)

The above table shows that emotional intelligence consists of five dimensions:

Emotion Management: includes items 1 to 12.

Emotional Empathy: includes items 13 to 21.

Self-Motivation for Work: includes items 22 to 32.

Emotional Awareness: includes items 33 to 40.

Social Communication with Others at Work: includes items 41 to 50.

A five-point Likert scale was adopted for the measurement instruments, consisting of five response categories: Strongly Agree (5) – Agree (4) – Neutral (3) – Disagree (2) – Strongly Disagree (1).

Scale Scoring

In its final form, the Emotional Intelligence Scale consists of 50 items, which are scored as follows:

Strongly Agree: 5 points.

Agree: 4 points.

Neutral: 3 points.

Disagree: 2 points.

Strongly Disagree: 1 point.

This scoring system is applied to all items of the scale.

In order to determine the level of the nurses' scores, arithmetic means were adopted as follows:

An arithmetic mean of 2.33 or lower indicates a low level.

An arithmetic mean ranging from 2.34 to 3.66 indicates a moderate level.

An arithmetic mean of 3.67 or higher indicates a high level. (Batan, 2018, p. 51)

6-2-1. Stress-Coping Strategies Scale

The Stress-Coping Strategies Scale was developed by the researcher Touati Najia (2018) in her study on occupational stress in the health sector in Algeria. The scale consists of two parts:

Part One: This part introduces the scale, identifies its developer, and provides instructions addressed to the respondents.

Part Two: This part consists of the dimensions of the scale, which contains 46 items distributed across nine (09) main dimensions. The respondent is required to answer all items. The scoring method is based on a three-point Likert scale, with three response alternatives. Since all items are positively worded, the following weights were assigned:

I always use it: 2 points (100%).

I sometimes use it: 1 point (50%).

I do not use it: 0 points (0%).

Accordingly, a high total score obtained by the employee indicates that the corresponding coping style is used to a considerable extent. The same applies to all coping styles.

The following table presents the items of the Occupational Stress-Coping Strategies Scale, including the number and sequence of its statements (Touati, 2018, pp. 129–130)

Table 07: Items of the Stress Coping Strategies Scale

Scale Dimensions	Item Numbers	Number of Items
Self-Support Seeking Strategy	1 / 12 / 22 / 32	04
Social Support Seeking Strategy	2 / 13 / 4 / 23 / 33 / 46	06
Spiritual Support Seeking Strategy	3 / 14 / 34 / 42	04
Disengagement Strategy	5 / 16 / 24 / 35 / 25 / 43	06
Soothing and Relieving Strategies	21 / 31 / 11 / 32 / 40 / 28 / 45 / 8	08
Problem Avoidance Strategy	6 / 10 / 15 / 17 / 26 / 36 / 44	07
Positive Appraisal Strategy	7 / 18 / 27 / 37	04
Problem-Solving Strategy	39 / 41 / 20 / 19	04
Planning Strategy	9 / 30 / 38 / 20 / 29 / 7	06

Source: (Touati, 2018, p. 130)

The above table shows that the self-support seeking strategy consists of four (4) items: items (1, 12, 22, and 32). The social support seeking strategy consists of six (6) items: (2, 13, 4, 23, 33, and 46). The spiritual support seeking strategy consists of four (4) items: (3, 14, 34, and 42). The disengagement strategy consists of six (6) items: (5, 16, 24, 35, 25, and 43).

The soothing and relieving strategies dimension consists of eight (8) items: (11, 21, 31, 32, 40, 28, 45, and 8). The problem avoidance strategy consists of seven (7) items: (6, 10, 15, 17, 26, 36, and 44). The positive appraisal strategy consists of four (4) items: (7, 18, 27, and 37). The problem-solving strategy consists of four (4) items: (39, 41, 20, and 19). Finally, the planning strategy consists of six (6) items: (9, 30, 38, 20, 29, and 7).

The level of scores for the dimensions of the two scales was calculated as follows:

Dimension Score (%) = Σ Item Percentages / Number of Items = α (%)

The equation can be read as follows:

Dimension Score (%) = The sum of the percentages of the items related to the dimension $\div$ the number of its items.

This calculation yields a result expressed as a percentage, denoted by (α).

According to the value of α , which represents a percentage ranging from 0% to 100%, and based on this percentage, the intensity of the use of coping strategies was classified as follows:

If (α) ranges between 0% and 33.33%, the use of the coping strategy is considered low.

If (α) ranges between 33.33% and 66.66%, the use of the coping strategy is considered moderate.

If (α) ranges between 66.66% and 100%, the coping strategy is considered to be highly used (Touati, 2018, pp. 130–131)

Note:

It should be noted that, under the exceptional and critical circumstances resulting from the COVID-19 pandemic, successive severe waves of infection led to hospitals becoming fully occupied with patients, eventually reaching a state of incapacity. Consequently, several specialized departments and units affiliated with epidemiology services and dedicated to COVID-19 patients were established. In addition, a considerable number of nurses from other departments were reassigned and directed to confront this deadly virus. This explains the increase in the number of nurses working in epidemiology departments during this emergency situation.

6.3 Study Sample

The main study sample consisted of 310 male and female nurses working in infectious disease departments during the response to the COVID-19 pandemic in hospitals located in five provinces in southeastern Algeria. The sample was distributed as follows: 48 nurses from the Infectious Diseases Department at Mohamed Boudiaf Hospital in Ouargla Province; 77 nurses from the Infectious Diseases Department at Slimane Amirat Hospital in Tougourt Province; 57 nurses from the Infectious Diseases Department at Hakim Saadan Hospital in Biskra Province; 62 nurses from the Infectious Diseases Department at Ben Omar El Djilani Public Hospital in El Oued Province; 18 nurses from the Infectious Diseases Department at the February 18 Hospital in Metlili; and 24 nurses from the Public Hospital in Ghardaïa Province, making a total of 42 nurses in Ghardaïa Province.

It should also be noted that 24 questionnaires were distributed and collected electronically through social media platforms (Facebook and WhatsApp), including 16 questionnaires completed by nurses

at Ghardaïa Hospital and 8 questionnaires completed by nurses at Hakim Saadan Hospital in Biskra. The participants were selected using the random sampling method, which, according to Maamria (2010), means that all members of the study population have equal opportunities to be included in the sample, without bias or intervention by the researcher or other factors.

6.4 Practical Procedures of the Study

After verifying the validity and reliability of the data-collection instruments and determining the location where the study would be conducted, the researcher followed a series of procedural steps. These began with introducing himself to the nurses. Modern Standard Arabic and Algerian Arabic (Darija) were used as the languages of communication and explanation. The researcher explained the nature of the scales used, their instructions, and how to respond to the items.

The instruments were administered as a single battery, sometimes individually and at other times in small groups, depending on the nurses' availability. Regarding the retrieval of the instruments after completion, the procedure varied from one participant to another: some participants completed and returned the questionnaires immediately, whereas others requested that the researcher return after a few days.

The main study procedures were conducted between September and December 2021. A personal data sheet, accompanied by the two scales—the Emotional Intelligence Scale and the Coping Strategies Scale—was administered to the initial sample of 321 nurses. Following the exclusion of 11 participants, including 2 participants whose personal data were incomplete and 9 participants whose responses to one of the two scales were incomplete, the final sample consisted of 310 nurses. This included 286 paper-based questionnaires and 24 electronic questionnaires.

The questionnaires were administered primarily in paper form on an individual basis, and occasionally in small groups of no more than two participants. For the electronic administration, an electronic copy of the questionnaire was sent to the nurses, who completed it and subsequently returned the filled-in version electronically.

7. Results

7.1 Presentation, Analysis, and Interpretation of the Results of the First Hypothesis

The first hypothesis states that nurses working in infectious disease departments have a high level of emotional intelligence during the COVID-19 pandemic. To test this hypothesis, the arithmetic means and standard deviations of the nurses' responses across the different dimensions of emotional intelligence were calculated. The following table presents the results:

Table 13. Arithmetic Means and Standard Deviations of the Dimensions of Emotional Intelligence.

Level of Emotional Intelligence among Nurses Working in Epidemiology Departments during the COVID-19 Pandemic

Dimensions of Emotional Intelligence	Sample Size	Number of Items	Arithmetic Mean	Standard Deviation	Rating Level
1.Emotion Management	310	12	4.032	0.467	High
2. Emotional Empathy	310	09	4.167	0.496	High
3.Self-Motivation for Work	310	11	4.016	0.575	High
4. Emotional Awareness	310	08	3.963	0.611	High
5. Communication with Others	310	10	3.953	0.618	High
6.Overall Emotional Intelligence	310	50	5.401	0.806	High

The table above shows that the level of emotional intelligence among nurses working in epidemiology departments during the COVID-19 pandemic was high, based on the scoring key (see p. 75). The arithmetic mean for the scale as a whole was 5.401, with a standard deviation of 0.806. The means of the emotional intelligence dimensions were also high, ranging from 3.953 to 4.167. The highest rating was recorded for the emotional empathy dimension, with an arithmetic mean of 4.167 and a standard deviation of 0.496. In contrast, the lowest rating was recorded for the communication with others dimension, with an arithmetic mean of 3.953 and a standard deviation of 0.618.

Based on this result, it can be concluded that the first hypothesis, which states that nurses working in epidemiology departments have a high level of emotional intelligence during the COVID-19 pandemic, was confirmed among the study participants.

This finding can be explained by the fact that nursing is, first and foremost, a humanitarian profession. It requires and entails numerous noble values, such as empathy, compassion,

selflessness, sensitivity, and an orientation toward others. Nurses can also develop and enhance these skills through years of work in the public healthcare sector. It is therefore essential for nurses to manage and regulate themselves in terms of understanding their own emotions and those of others, as well as communicating effectively with different segments of society and with colleagues, particularly in light of the exceptional circumstances imposed by the COVID-19 pandemic.

Moussa Batran (2018) confirms that emotionally intelligent nurses are more capable of adapting to the psychological changes experienced by patients and are more likely to succeed in building interpersonal relationships and establishing effective support networks for patients. They also possess the ability to communicate and express emotions, while developing their skills and expertise in various emotional domains.

The findings of our study are consistent with those of Ashraf Nassar Mahmoud Badah (2018), who found that managers and heads of departments in Palestinian governmental hospitals in the southern governorates demonstrated a high level of emotional intelligence. They are also consistent with the study by Anna Soto Rubio et al. (2020), which concluded that a high level of emotional intelligence among nurses in Spain during the COVID-19 pandemic constituted a protective factor against psychosomatic complaints and burnout, while also having a positive effect on job satisfaction. Likewise, the findings are consistent with the study conducted by Willy Sun et al. (2021), which found that the level of emotional intelligence among frontline nurses at a hospital in Wuhan, China, ranged from moderate to high. The study recommended paying greater attention to developing nurses' emotional intelligence and promoting their mental health.

However, the findings of our study are inconsistent with those of Nasser Issa (2020), which indicated that Egyptian nurses exhibited a moderate level of emotional intelligence during the COVID-19 pandemic. They also differ from the findings of Giusty Danilla Valenti et al. (2020) and Rouaa Djenad et al. (2019), in which the level of emotional intelligence ranged from moderate to low.

7-2. Presentation, Analysis, and Interpretation of the Results of the Second Hypothesis

The second hypothesis states that nurses working in the Epidemiology Department employ positive coping strategies to deal with stress during the COVID-19 pandemic. To test this hypothesis, the arithmetic means and standard deviations of the nurses' responses regarding the variable of stress-coping strategies were calculated. The following table presents the results obtained:

Table 14. Arithmetic Means and Standard Deviations of the Dimensions of Stress-Coping Strategies among Nurses Working in the Epidemiology Department during the COVID-19 Pandemic

Strategy	Sample	Degree	Arithmeti	Standard	Hypothesize	T	Signifi	Rati
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	Size	s of Freedo m	c Mean	Devatio n	d Mean		cance Level	ng Leve l
Self-support	310	309	5.31	1.46	4	15.775	0.000	High
Social support	310	309	7.99	1.76	6	19.892	0.000	High
Spiritual support	310	309	6.91	1.14	4	44.833	0.000	High
Positive appraisal	310	309	4.90	1.40	4	11.250	0.000	High
Finding solutions	310	309	5.37	1.35	4	15.586	0.000	High
Planning	310	309	6.13	1.88	6	1.175	0.247	Low

As shown in the table above, the arithmetic mean for the self-support strategy was 5.31, which is higher than the hypothesized mean of 4. Accordingly, the calculated t value was 15.775, which is statistically significant at a significance level of 0.000. Therefore, it can be concluded that the level of use of this strategy is high.

We reached the same result for each of the strategies of social support, spiritual support, positive thinking, and problem-solving, as the arithmetic means were, respectively, 7.99, 6.91, 4.90, and 5.37. These means are high compared with their corresponding hypothetical means, which were, respectively, 6, 4, 4, and 4. This indicates that nurses working in the Epidemiology Department make extensive use of positive coping strategies focused on self-support, social and spiritual support, positive appraisal, and problem-solving.

Referring once again to the results presented in the above table, we find that the arithmetic mean for the planning strategy was 6.13, which is higher than the hypothetical mean of 6. However, the t-value was not statistically significant, reaching 1.175. Therefore, it can be concluded that the use of this strategy was relatively low.

Accordingly, the hypothesis stating that nurses working in the Epidemiology Department use positive strategies to cope with stress during the COVID-19 pandemic was partially confirmed among the study participants.

Nursing is one of the noble humanitarian professions, as it is closely associated with the lives and well-being of patients. Nurses are therefore required to perform their duties appropriately and cannot withdraw from or evade their professional and humanitarian responsibilities, particularly in emergency situations and crises, as was the case during the outbreak of the novel coronavirus. Rather, they are required to respond effectively and make use of all available means to cope positively with such circumstances. Nurses' use of such positive strategies to cope with the stress resulting from the coronavirus constitutes a positive indicator that may protect them from developing psychological problems and disorders. Moos et al. also confirm that failure to employ positive coping strategies and resorting instead to negative strategies is an indicator of a state of depression.

Accordingly, it can be considered that nurses in the Epidemiology Department, during the COVID-19 pandemic, employed psychological stress-coping strategies in a gradual manner according to information processing and problem-solving processes. The mind first identifies the problem or situation and then assesses the magnitude of the situation and the warning signals, followed by biological, hormonal, and physiological responses, in accordance with Selye's theory of stress.

The findings of our study are consistent with those of Fathi and Sinamora (2019), who investigated stress-coping strategies among nurses in Indonesia as predictors of quality of life. Their results showed that nurses frequently used effective strategies, including turning to religion, positive reframing, active coping, and planning. However, the findings of our study were inconsistent with those reported by Long Huang et al. (2020), Wilson et al. (2021), Carmen Maria Sarabia et al. (2017), and Nasser Issa (2020).

7-2 Presentation, Analysis, and Interpretation of the Results of the Third Hypothesis

The third hypothesis states that there is a statistically significant relationship between the level of emotional intelligence and stress-coping strategies among nurses working in the Epidemiology Department during the COVID-19 pandemic. To test this hypothesis, the Pearson correlation coefficient was calculated. The table below presents the results.

Table 15. Correlation Coefficients between the Total Emotional Intelligence Score and Stress-Coping Strategies among Nurses Working in the Epidemiology Department during the COVID-19 Pandemic

Study Variables	Sample Size	Pearson's r	Significance Level (p)	Significance
Emotional Intelligence / Self-Support Strategy	310	0.219	0.000	Significant
Emotional Intelligence / Social Support Strategy	310	0.140	0.014	Significant
Emotional Intelligence / Spiritual Support Strategy	310	-0.029	0.617	Not significant
Emotional Intelligence / Disengagement Strategy	310	-0.101	0.075	Not significant
Emotional Intelligence / Soothing and Palliative Strategies	310	0.056	0.322	Not significant
Emotional Intelligence / Problem-Avoidance Strategy	310	-0.221	0.000	Significant
Emotional Intelligence / Positive Thinking Strategy	310	0.166	0.003	Significant
Emotional Intelligence / Problem-Solving Strategy	310	0.216	0.000	Significant
Emotional Intelligence / Planning Strategy	310	0.189	0.001	Significant

The above table shows that there is a positive and statistically significant correlation between emotional intelligence and each of the following coping strategies: self-support, social support, positive thinking, problem-solving, and planning among nurses working in the Epidemiology Department during the COVID-19 pandemic.

The Pearson correlation coefficient (r) for the self-support strategy was 0.219, with a significance level of 0.000. For the social support strategy, the coefficient was 0.140, with a significance level of 0.014. The coefficient for the positive thinking strategy was 0.166, with a significance level of 0.003, while

the coefficient for the problem-solving strategy was 0.216, with a significance level of 0.000. Finally, the coefficient for the planning strategy was 0.189, with a significance level of 0.001.

The results also indicate a negative correlation between emotional intelligence and the problem-avoidance strategy, with a Pearson correlation coefficient of -0.221 and a significance level of 0.000.

However, no statistically significant correlation was found between emotional intelligence and the spiritual support strategy, the disengagement strategy, or the soothing and palliative strategies. The respective Pearson correlation coefficients were -0.029, with a significance level of 0.617; -0.101, with a significance level of 0.075; and 0.056, with a significance level of 0.322.

Accordingly, it can be concluded that the third hypothesis was largely supported.

This is consistent with what Bar-On (2000) stated, namely that individuals with high emotional intelligence are better able to assess and evaluate the current situation and solve problems, and are more capable of dealing with and coping with stress than individuals with low emotional intelligence (Ismail, 2008, p. 199)

It is also consistent with the findings of Othman (1999), who found that individuals with high emotional intelligence are characterized by the ability to cope with stress and manage it effectively. Ajaja (2007) argues that individuals with high emotional intelligence possess the ability to adapt to life circumstances and manage stress effectively while maintaining a stable mood. Furthermore, the higher the level of emotional intelligence, the greater the individual's success in coping with environmental stressors and their burdens (Hassan, 2013, p. 151)

7-3-1 Interpretation of the Result of the Relationship between Emotional Intelligence and the Self-Support Strategy:

Shiota and Kalat (2014) confirm that, based on self-report measures, individuals with high emotional intelligence also perceive themselves as having a high level of social adjustment (Engelberg & Sjöberg, 2004). Likewise, workers who rate themselves as having a high level of emotional intelligence based on self-report also report high morale at work and lower levels of occupational stress (Dulewicz, Higgs & Slaski, 2003).

7-3-2 Interpretation of the Result of the Relationship between Emotional Intelligence and the Social Support Strategy:

Mayer (2000) indicated that individuals with high emotional intelligence are more capable of recognizing their own emotions and those of others in different social situations, and are better able to tolerate stress.

Similarly, Giusti, Valenti, et al. (2000), in their study on emotional intelligence and social support, found significant correlations between emotional intelligence and social support. This provides evidence that individuals with high emotional intelligence tend to perceive greater social support from others.

7-3-3 Interpretation of the Relationship between Emotional Intelligence and the Positive Thinking Strategy:

Latresh (2021) confirms that emotional intelligence enables individuals to think more creatively and is utilized in problem-solving. Emotional intelligence is also associated with knowing when and how to express emotions and being able to control them. Individuals with high emotional intelligence pay attention to their emotions, understand them, and manage them effectively. These skills perform adaptive functions that are likely to help individuals reduce work-related stress.

7-3-4 Interpretation of the Relationship between Emotional Intelligence and the Planning Strategy:

According to Goleman (2000), individuals with high emotional intelligence are more likely than others to experience satisfaction with themselves and demonstrate competence in their lives. They are also capable of controlling their mental processes in ways that enhance and advance their productivity. This contrasts with individuals with low emotional intelligence, whom Goleman describes as being unable to control their emotional lives and as engaging in internal psychological struggles that undermine their ability to concentrate on their areas of work (Ismail, 2008, p. 200)

7-3-5 Interpretation of the Relationship between Emotional Intelligence and the Solution-Finding Strategy:

Iman Al-Khafaf (2013) argues that emotional intelligence skills constitute one of the foundations for working effectively and efficiently with others. Emotional intelligence helps individuals think creatively by enabling them to view problems from different perspectives, generate numerous creative and innovative ideas, and develop ideas and solutions to problems.

7-3-6 Interpretation of the Relationship between Emotional Intelligence and the Problem-Avoidance Strategy:

A high level of emotional intelligence is negatively associated with negative coping strategies for dealing with stress, as confirmed by the theoretical literature and numerous studies in this field. Moreover, the emergency situation created by the COVID-19 pandemic did not allow nurses to adopt negative strategies such as isolation, maintaining neutrality, or thinking about things or activities unrelated to work. According to Samer Radwan (2020), negative coping strategies, including venting anger, cognitive preoccupation, surrender, or submission, have a detrimental

effect on psychological health. Perhaps coping strategies centered on the problem, characterized by a positive orientation and capable of reducing negative emotions, are more effective in dealing with stress than passive and submissive coping strategies.

Academic English Translation

7-3-7 Interpretation of the Finding of No Relationship between Emotional Intelligence and the Spiritual Support Strategy

This finding can be interpreted by considering that emotional intelligence is generally associated with intrinsic religiosity, which leads individuals to behave in accordance with religious principles rather than merely engaging in religious practices, such as frequent prayers and acts of worship. This was confirmed by Dganit Sh. and Keren G. (2020) in their study, in which no statistically significant correlation was found between the "degree of religiosity" and the level of emotional intelligence. Nevertheless, it is important to note that research in the literature indicates the existence of a positive relationship between emotional intelligence and religious orientation (intrinsic religiosity), which represents the internal dimension that motivates individuals to behave in accordance with their religious beliefs (Butt, Lowicki, & Zajenkowski, 2017).

7-3-8 Interpretation of the Finding of No Correlation between Emotional Intelligence and the Strategies of Taking Breaks, and Soothing and Calming Strategies

The emergency situation created by the novel coronavirus did not allow nurses, as a central component of the therapeutic process, to resort to negative strategies for coping with the stress resulting from confronting the COVID-19 pandemic, such as taking sick leave, being absent from work, or taking breaks, or resorting to soothing strategies such as smoking or taking psychotropic sedatives, for example. According to our observations, only a few nurses adopted such strategies, as reported by some of their colleagues.

The emotional intelligence skills possessed by nurses, such as self-motivation to work, enhance their sense of responsibility and commitment to their ethical and professional duties. Furthermore, empathy toward others also helps prevent nurses from resorting to such negative coping strategies.

8. Conclusion

In this study, we sought to address and shed light on a topic that is considered one of the most important contemporary issues in psychology, namely emotional intelligence and stress-coping strategies, during the global health crisis caused by the COVID-19 pandemic, which lasted for nearly three years. Levels of psychological distress varied according to the severity and fatality of the

pandemic among members of society, particularly among an important segment of the social and healthcare system in Algeria, namely nurses.

According to previous studies, stress levels were high at the beginning of the emergence and spread of the virus, and numerous psychological and social problems resulted from the pandemic. At that time, there were no clear solutions for coping with these circumstances. Gradually, however, healthy and preventive means of adaptation to the pandemic were developed. This may explain the findings of the present study, which showed that the level of emotional intelligence was high and that nurses employed effective strategies for coping with the stress resulting from the pandemic, particularly since the study was conducted at the end of the second year following the emergence of the virus, specifically between September and December 2021.

We hope that this study will contribute to scientific research and serve as a starting point for further studies and research on this topic in our country and throughout the Arab world.

In light of these findings, we recommend the following:

Hospitals should provide programs aimed at enhancing and developing nurses' emotional intelligence skills, particularly among those working in infectious disease departments, especially given that we are living in an era characterized by the spread of epidemics and serious diseases.

Further studies should be conducted with the aim of developing counseling programs to help individuals cope with stressful circumstances during crises, as was the case during the COVID-19 pandemic, in order to ensure effective preparedness and response.

Greater attention should be devoted to providing high-quality training for nurses in paramedical training centers, in a manner that is consistent with current challenges and contributes to the organization and development of emotional skills, as well as to effective coping with stressful circumstances.

More research should be conducted on emotional intelligence and stress-coping strategies among nurses in Algeria

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