Journal Homepage: - www.journalijar.com

INTERNATIONAL JOURNAL OF ADVANCED RESEARCH (IJAR)

Article DOI: 10.21474/IJAR01/12668
DOI URL: http://dx.doi.org/10.21474/IJAR01/12668

RESEARCH ARTICLE

COPING STRATEGIES FOR COVID-19 IN THE MOROCCAN POPULATION

S. Benzahra, S. Belbachir and A. Ouanass
University Psychiatric Hospital Ar-Razi in Sale, Faculty of Medicine and Pharmacy, Mohammed V University of Rabat- Morocco.

Manuscript Info

Manuscript History
Received: 05 February 2021
Final Accepted: 10 March 2021
Published: April 2021

Key words:-
Stress, COVID-19, Coping Strategies, SARS-CoV2, Moroccan Population

Abstract

Background: The coronavirus infection is pandemic emerging infectious disease caused by the coronavirus SARS-CoV-2. This pandemic has had serious social and economic consequences due to the confinment and curfew applied in various countries around the world. The psychosocial responses to this pandemic are variable and depend on the coping strategies of each individual which can mitigate and moderate the impact of these psychosocial responses.
Objective: To identify the different coping strategies implemented by the Moroccan population.
Methods: We conducted an online survey from April 23 to May 23, 2020, through a questionnaire published on social networks using Google Forms. The assessment of coping strategies was carried out through the Brief Cope scale.
Results: 404 individuals participated in the study. The mean age was 36.86 years, 65.6% were female, 14.1% had a psychiatric history, 28% had a medical-surgical history and 30.2% had a substance use disorder. Study participants showed a maximum level acceptance as a strategy of adaptation (6.22 ± 1.69) followed by positive reframing (5.72 ± 1.71) then religion (5.45 ± 1.8). The least used strategies were substance use (2.29 ± 0.91) and denial (3.05 ± 1.42). Problem-focused coping was more used in our sample (4.34 +/- 1.22) compared to emotion-focused coping (4.21 +/- 0.64).
Conclusions: The pandemic of Covid-19 had a significant negative impact on the mental health of populations including the Moroccan. The most frequently adopted coping strategies are acceptance, positive reframing, and religion. Psychological support remains necessary in order to safeguard mental health in the face of stressful situations.

Introduction:-

The coronavirus disease (COVID-19) is an emerging infectious pandemic that appeared on November 17, 2019 in China and then spread around the world. This pandemic has had serious social and economic consequences following the confinment and curfew applied in various countries around the world. Urgent research has identified various stressors associated with this pandemic: quarantine measures, curfews, fears of infection, disruption of work and learning in schools and daily personal care, in addition to the lack of access to information from reliable sources [1].

Corresponding Author:- S. Benzahra
Address:- University Psychiatric Hospital Ar-Razi in Sale, Faculty of Medicine and Pharmacy, Mohammed V University of Rabat- Morocco.

The psychosocial responses to this pandemic are variable and depend on the coping strategies of each individual which can mitigate and moderate the impact of it.

Coping is defined according to Lazarus and Folkman (1984) as "The set of constantly changing cognitive and behavioral efforts made to manage specific internal and / or external demands which are assessed by the person as consuming or exceeding its adaptive resources "[2]. External demands refer to the event itself, while internal demands are the emotional reactions to the event that the individual must deal with it too [3].

From this distinction arise two ways of acting, which Lazarus and Folkman (1984) called problem-focused coping and emotion-focused coping [4]. Problem-focused coping is a response directed towards the event, it aims to reduce the demands of the situation or to increase one's own resources to better cope with it (e.g. planning, active coping, use of instrumental support). Emotion-focused coping aims to regulate the emotions caused by the problem in order to reduce emotional "distress". Some strategies aim to change the way the situation is interpreted, while others consist of temporarily blocking out some aspects of the situation. (e.g., acceptance, venting, use of emotional support) [3]. Emotion-focused coping is more likely to occur when the person has assessed that nothing can be done to change the threatening environment [4].

The two forms of coping are not exclusive; faced with a given situation, the individual may use either one or the other or both [5]. Most of the time, individuals develop both types of strategies simultaneously. Coping strategies oriented towards emotion or action will have emotional and behavioral consequences respectively [3].

Coping is a process and not an isolated act. It evolves over time because the elements that make up the individual's situation, such as other life events, personal resources or the environment, change. Maes et al (1996) point out that in addition to varying over time, coping varies from one person to another: faced with an identical situation, two individuals do not cope in the same way [3].

The objective of this study is to identify the different coping strategies implemented by the general Moroccan population in order to safeguard their psychological well-being during the Covid-19 pandemic.

Methods:-

We conducted an online survey via a questionnaire published on social networks using Google Forms. The study was spread over a period of one month from April 23 to May 23, 2020.

The questionnaire consisted of two parts, the first one devoted to socio-demographic data. The second part of the questionnaire is devoted to the evaluation of the coping strategies that has had been set up by the Moroccan population, using the Brief-Cope scale (Carver, 1997) [6]. This is a 28-item scale that describes 14 coping strategies (two items per strategy) used in response to a particular stressor. These strategies are: active coping, planning, use of instrumental support, positive reframing, use of social support, venting, humor, acceptance, self blame, religion, self-distraction, denial, behavioral-disengagement and substance use. Each participant indicated on a four-point scale, ranging from 1 (I did not do this at all) to 4 (I did it a lot), how often they used each strategy to cope with Covid-19 stress.

We then grouped the 14 coping strategies into two main categories: problem-focused coping (which includes: active coping, planning, and use of instrumental support) and emotion-focused coping (which includes: use of emotional support, acceptance, positive reframing, religion, humor, self-distraction, self-blame, denial, behavioral-disengagement, venting, and substance use).

We included individuals aged 18 years old or more agreeing to participate in the study after being informed of its purpose and the respect of anonymity. We excluded persons under the age of 18 years old or persons refusing to participate in the study.

Statistical analysis: The data were analyzed using SPSS version 20. For the bivariate analysis, the Student's t test and the one-factor ANOVA test were used. A p value < 0.05 was considered statistically significant.

Results:-

From April 23, 2020 to May 23, 2020, we received 404 responses to our questionnaire.
The socio-demographic characteristics are represented in Table N°1. The average age of the participants was 36.86 years; the age range of 20 to 30 years was the most representative with a percentage of 32.9%. Most of the participants were female (65.6%), 51.7% were married, 83.9% had a higher level of education, 87.1% lived with their families and 92.8% lived in urban areas. For Medico-Surgical and Psychiatric History: 14.1% had a psychiatric history, 28% had a medico-surgical history and 30.2% had a substance use disorder.

Coping strategies :
Table N°2 presents the average scores of the different coping strategies of our participants. Indeed, the participants in the study showed a maximum level of coping by acceptance (6.22 ± 1.69) followed by positive reframing (5.72 ± 1.71) then religion (5.45 ± 1.8). The least used strategies were substance use (2.29 ± 0.91) and denial (3.05 ± 1.42). After adding up the different scores for the different strategies, we see that problem-focused coping was the most used in our sample (4.34 +/- 1.22) compared to emotion-focused coping (4.21 +/- 0.64).

Table N°3 summarizes the main results of the correlations between coping and the different variables. The analysis of the data shows that women used coping strategies much more. The average of problem-focused coping and emotion-focused coping in women was respectively 4.43 and 4.28 versus 4.16 and 4.09 in men, and was highly significant with p 0.006 in both cases.

The comparison of the means of problem-focused coping and emotion-focused coping showed a statistically significant difference between the different age groups (p=0.013 and p=0.007). The elderly have obtained higher scores than other age categories for both coping strategies.

For the school level, there was no statistically significant difference for emotion-focused coping, however, this difference was significant for problem-focused coping (p=0.001), as the school level increases, the use of problem-focused strategies increases.

We also found that subjects living with a family used problem-focused coping more (4.39) than those living alone (4.01), this difference was statistically significant (p=0.041), whereas no statistically significant difference was found for emotion-focused coping.

There was no statistically significant difference related to having a psychiatric history. In fact, having a medical history was related to a statistically significant difference between the mean of emotion-focused coping (p=0.002).

Similarly, participants who use substances employ less problem-focused coping compared to those who do not use substances (p=0.001). Research participants with high socioeconomic status used problem-focused coping more than those of low socioeconomic status (p=0.001).

Discussion:-

The present study took advantage of the Covid-19 context to examine the coping strategies of the Moroccan population. To our knowledge, this is the first study to assess coping with Covid-19 stress in the Moroccan context. Among 404 Moroccan participants, the coping strategies found were dominated by acceptance followed by positive reframing and then religion, whereas the least used strategies were substance use and denial.

In our study, problem-focused coping was the most commonly used coping strategies compared to emotion-focused coping. This result corroborates those found in a German population. Indeed, in a representative survey conducted within a German population (1300 participants) on risk perceptions and coping with Covid-19, Preliminary results showed that Covid-19 risk estimation was lower in older subjects compared to younger. Women were more concerned about Covid-19 than men. People were particularly concerned about being infected in places with high public traffic. Problem-focused coping was the most prevalent in the German population [7].

Park et al, evaluated the immediate impact of Covid-19 on stress, coping strategies, and adherence to guidelines among 1086 Americans aged 18 years or older. The most frequently encountered stressors were information about the severity and contagiousness of Covid-19, uncertainty about the duration of quarantine, social distancing, and

changes in social and daily self-care routines. Financial concerns were found to be the most stressful. Younger age, female gender, and caregiver status increased the risk of exposure to stressors and a greater degree of stress. The most frequently reported strategies for coping with stress were distraction, active coping and use of emotional support [8].

Salman et al, in a study assessing the psychological impact of Covid-19 and coping strategies among 1134 students from four Pakistani higher education institutions, found that the main sources of distress were changes in daily life. For coping strategies, majority of the respondents reported adopting religious or spiritual coping (6.45 ± 1.68) followed by acceptance (5.58 ± 1.65) [9], whereas, in our study, religion was the third strategy adopted after acceptance and positive reframing.

In our study, there was no statistically significant difference in coping strategies between participants depending on the presence of a psychiatric or the lack thereof. In the case of chronic illness history, there was no significant difference for problem-focused coping. However, there was a statistically significant difference within the mean scores of emotion-focused coping as patients with medical history had higher scores (p=0.002).

Umucu et al, conducted a study to describe perceived stress levels and coping mechanisms related to Covid-19 in a population of 269 subjects with chronic illness or disability. After taking into consideration the socio-demographic fand psychological characteristics, correlation analyses showed that perceived Covid-19-related stress was positively associated with coping strategies and that active coping, denial, use of emotional support, humor, religion, and self-responsibility were associated with participants' well-being [10].
In our sample, we found a significant difference between the age ranges. Older subjects scored higher than younger subjects on both problem-focused and emotion-focused coping. In addition to responding to a problem with different emotions, people in different age groups also tend to respond with different coping strategies. However, when age differences are observed, they typically take the form of greater use of emotion-focused coping in old people and greater use of problem-focused coping in young people [11].

Yeung et al, examined age differences in coping strategies and emotional responses at the peak and the end of the SARS (Severe Acute Respiratory Syndrome) outbreak in Hong Kong in 2003. Results showed that among 385 Chinese adults aged 18 to 86 years, older adults consistently felt less anger than their younger counterparts. Younger adults used an emotion-focused coping strategy more than middle-aged and older adults at the peak of SARS; however, they showed the smallest increase in this form of coping throughout the epidemic, so that age differences had reversed by the end of the epidemic. The results of this study suggest that older adults may be better at emotional regulation than their younger counterparts, responding to a crisis with less anger and being able to adapt their coping strategies to the changing environment [12].

Yiwei et al. conducted a study assessing different stressors experienced and coping strategies in 196 adults (age 18-89 years). Three types of coping strategies were found: problem-focused coping, positive emotion and negative emotion-focused coping. Older adults were less likely to use problem-focused coping than younger adults [13].

Several studies have shown that women tend to use coping strategies that focus on altering their emotional responses to a situation, whereas men use more problem-focused or instrumental methods to manage stressful experiences [14]. Other studies have reported that differences in how women and men respond to stress may be an underlying mechanism that contributes to observed gender differences in the development and clinical presentation of anxiety and depressive disorders [15]. Specifically, research findings suggest that gender differences in the use of coping strategies in response to stress are critical and contributing factors in the pathogenesis of anxiety and depression in women [16]. Indeed, Kelly et al, investigated gender differences in the use of coping strategies and their relationship to depression and anxiety from a sample of 107 participants. Results showed that women who less used positive reinterpretation had higher levels of depressive symptoms. In addition, women who reported using self-blame had higher levels of anxiety [17].

Our study revealed that women used coping strategies more, both problem-focused and emotion-focused coping. In the same way, Matud et al had conducted a study to examine gender differences in stress and coping strategies in a sample of 2816 people (1566 women and 1250 men) between the ages of 18 and 65. Women had significantly higher scores than men for chronic stress and minor daily stressors, significantly higher scores than men for emotion-focused coping and avoidance strategies, and lower scores for rational coping and detachment. The results

of this study suggest that women suffer more from stress than men and that their coping style is more emotionally focused compared to men [14].

Ptacek et Al investigated the effects of the nature of stressful events on gender differences in coping strategies. Although men and women were similar in their cognitive appraisal of the situation, they nevertheless reported differences in the coping strategies used. Women reported seeking social support and using emotion-focused coping to a greater extent than men, the latter reported using relatively problem-focused coping. These findings are consistent with the idea that men and women are socialized to cope with stress in different ways [18].

Limitations:
Despite the interest and originality of our study, some limitations are to be noted, notably the realization of the study based on a questionnaire distributed through Google-forms making it difficult to contact the participants, and not accessible to other parts of the Moroccan population. Also, we were not able to use other scales assessing the level of stress and psychological consequences of the confinement and curfew on the Moroccan population.

Conclusions:-

The Covid-19 pandemic and associated restrictions (confinment, curfew, and social distancing), had a significant negative impact on the mental health of individuals, especially the most vulnerable.

The most frequently adopted coping strategies by the Moroccan population are problem-focused coping strategies mainly acceptance, positive reframing and religion.

At the end of this work, we recommend psychological support as well as a particular attention to be given to mental health during epidemics in order to improve the capacity to regulate emotions and to undertake effective adaptation strategies, especially for vulnerable and fragile subjects, so that we could we minimize the negative consequences, especially mental disorders that can arise when the defense mechanisms are exceeded.

Appendices :
Table 1:- socio-demographic characteristics of the sample:

Variables	Number of participants	Percentage (%)
Average age (years) :	36.86 years	(min =18, max= 74)
Age range :		
Under 20 years	12	3 %
Between 20 and 30 years	133	32.9 %
Between 30 and 40 years	123	30.4 %
Between 40 and 50 years	40	17.3 %
Over 50 years	66	16.3 %
Sex :		
Men	139	34.4 %
Women	265	65.6 %
Marital status:		
Single	160	39.6 %
Married	209	51.7 %
Divorced	25	6.2 %
Widower	10	2.5 %
Level of study:		
Unschooled	11	2.7 %
Primary	18	4.5 %
Secondary	36	8.9 %
University	339	83.9 %
Profession		
Unemployed	54	13.4 %
Occasional Employment	22	5.4 %
Permanent employment	264	65.3 %
Student	64	15.8 %

Socio-economic level		
High	61	15.1 %
Moderate	296	73.3 %
Low	45	11.6 %
Living environment		
Urbain	375	92.8 %
Rural	29	7.2 %
Who lives		
Alone	52	12.9 %
with family	352	87.1 %

Table 2:- Participants coping strategies assessed by the Brief-Cope scale :

Coping strategies	Means +/- SD
Acceptance	6.22 +/- 1.69
Positive reframing	5.72 +/- 1.71
Religion	5.45 +/- 1.8
Self distraction	4.77 +/- 1.62
Planning	4.71 +/- 1.83
Active coping	4.55 +/- 1.66
Venting	4.33 +/- 1.58
Humor	3.93 +/- 1.75
Use of instrumental support	3.77 +/- 1.47
Use of emotional support	3.61 +/- 1.45
Self blame	3.52 +/- 1.51
Behavioral-Disengagement	3.50 +/- 1.58
Denial	3.05 +/- 1.42
Substance use	2.29 +/- 0.91
Problem-focused coping	**4.34 +/- 1.22**
Emotion-focused coping	**4.21 +/- 0.64**

Table 3:- correlation between the coping means and the different variables:

			Problem-focused coping		Emotion-focused Coping	
Variables	**group**	**Number of participant**	**Means**	**p value**	**Means**	**p value**
Sex	Men	139	4.16	**0.030**	4.09	**0.006**
	Women	265	4.43		4.28	
Age range	Under 20 years	12	3.66	**0.013**	3.90	**0.007**
	Between 20 and 30	133	4.32		4.13	
	Between 30 and 40	123	4.18		4.22	
	Between 40 and 50	70	4.39		4.19	
	Over 50 years	66	4.73		4.45	
Marital status	Single	160	4.16	**0.021**	4.14	**0.017**
	Married	209	4.47		4.22	
	Divorced	25	4.62		4.48	
	Widower	10	4.76		4.60	
Level of study	Unschooled	11	3.78	**0.001**	4.61	0.067
	Primary	18	3.29		4.19	
	Secondary	36	4.36		4.38	
	University	339	4.41		4.18	
Socio-economic level	Better-off	61	4.50	**0.001**	4.26	0.21
	Medium	296	4.41		4.18	
	Low	47	3.66		4.35	
Who lives	Alone	52	4.01	**0.041**	4.12	0.28
	With Family	352	4.39		4.23	

Psychiatric history	Yes	57	4.11	0.12	4.22	0.9
	No	347	4.38		4.21	
Substance use	Yes	62	3.84	**0.001**	4.22	0.9
	No	342	4.43		4.21	
Medical history	Yes	122	4.45	0.24	4.36	**0.002**
	No	282	4.29		4.15	

Table 4:- Summary tables of the main studies:

Study	Country	Methodology	Results
Lars Gerhold [7]	Germany	-Online survey from March 19 to 23, 2020 -N = 1300 (age ≥ to 18 years) -German version of the coping scale	Problem-focused coping +++ Women>>> Men.
Park et al [8]	United States	-Online survey from April 7 to 9, 2020. -N = 1086 (age ≥ to 18 years), living in the United States and English speaking.	Distraction, active coping and use of emotional support +++
Salman et al [9]	Pakistan	-Online cross-sectional study -1134 students from four Pakistani higher education institutions with an average age of 21,7.	The majority of participants have adopted religious and spiritual coping strategies (6.45 ± 1.68) followed by acceptance (5.58 ± 1.65).
Umucu et al [10]	United States	-Online survey in April 2020. -N=269 (age ≥ à 18 years), follow-ups for chronic illness or disability.	Perceived stress positively associated with emotion-focused coping.
Our study	Morocco	-Online survey from April 23 to May 23, 2020. -N=404 (age ≥ à 18 years).	Acceptance (6.22 ± 1.69), positive reframing (5.72 ± 1.71) then religion (5.45 ± 1.8).

References:-

[1] BROOKS, Samantha K., WEBSTER, Rebecca K., SMITH, Louise E., et al. The psychological impact of quarantine and how to reduce it: rapid review of the evidence. The lancet, 2020, vol. 395, no 10227, p. 912-920.
[2] Folkman S, Lazarus Richard S. An analysis of coping in a middle-aged community sample. Journal of health and social behavior, 1980, p. 219-239.
[3] Maes, S. et Leventhal, H. De ridder DT. Coping with chronic diseases. Handbook of Coping: Theory, Research, Applications, 1996, p. 221-251.
[4] Folkman, Susan et Lazarus, Richard S. Stress, appraisal, and coping. New York: Springer Publishing Company, 1984. p. 464p.
[5] Gustave-Nicolas, Fischer et Tarquinio, Cyril. Les concepts fondamentaux de la psychologie de la santé. Dunod, 2006.
[6] Carver, Charles S. You want to measure coping but your protocol'too long: Consider the brief cope. International journal of behavioral medicine, 1997, vol. 4, no 1, p. 92-100.
[7] Gerhold, Lars. COVID-19: risk perception and coping strategies. PsyArXiv. 2020.
[8] Park, Crystal L., Russell, Beth S., Fendrich, Michael, et al. Americans' COVID-19 stress, coping, and adherence to CDC guidelines. Journal of general internal medicine, 2020, vol. 35, no 8, p. 2296-2303.
[9] Salman, Muhammad, Asif, Noman, Mustafa, Zia Ul, et al. Psychological impact of COVID-19 on Pakistani university students and how they are coping. Medrxiv, 2020.
[10] Umucu, Emre et Lee, Beatrice. Examining the impact of COVID-19 on stress and coping strategies in individuals with disabilities and chronic conditions. Rehabilitation psychology, 2020.
[11] Blanchard-Fields, Fredda, Chen, Yiwei, et Norris, Lisa. Everyday problem solving across the adult life span: Influence of domain specificity and cognitive appraisal. Psychology and aging, 1997, vol. 12, no 4, p. 684.

[12] Yeung, Dannii Yuen-Lan et Fung, Helene H. Age differences in coping and emotional responses toward SARS: a longitudinal study of Hong Kong Chinese. Aging and Mental Health, 2007, vol. 11, no 5, p. 579-587.
[13] Chen, Yiwei, Peng, Yisheng, Xu, Huanzhen, et al. Age differences in stress and coping: Problem-focused strategies mediate the relationship between age and positive affect. The International Journal of Aging and Human Development, 2018, vol. 86, no 4, p. 347-363.
[14] Matud, M. Pilar. Gender differences in stress and coping styles. Personality and individual differences, 2004, vol. 37, no 7, p. 1401-1415.
[15] Craske, Michelle G. Origins of phobias and anxiety disorders: Why more women than men?. Elsevier, 2003. p. 304p.
[16] BARLOW, David H. Anxiety and its disorders: The nature and treatment of anxiety and panic. Guilford press, 2004. p. 704.
[17] Kelly, Megan M., Tyrka, Audrey R., Price, Lawrence H., et al. Sex differences in the use of coping strategies: predictors of anxiety and depressive symptoms. Depression and anxiety, 2008, vol. 25, no 10, p. 839-846.
[18] Ptacek, John T., Smith, Ronald E., et Dodge, Kenneth L. Gender differences in coping with stress: When stressor and appraisals do not differ. Personality and social psychology bulletin, 1994, vol. 20, no 4, p. 421-430.