

Psychological hardiness and its relationship to health awareness Among Kurdish people in Kurdistan Region during the pandemic of Covid-19

Hanaw Hasan Mohammedkhan

Department of Kindergarten
College of Basic education
University of Sulaimani
Sulaimani City, Iraq
Hanaw.mohammed@univsul.edu.iq

Delan Jamal Qader

Department of Adult Nursing
College of Nursing
University of Sulaimani
Sulaimani City, Iraq
Delan.qader@univsul.edu.iq

Trifa Murad Mohammed

Department of Psychiatric nursing & mental health
College of Nursing
University of Sulaimani
Sulaimani City, Iraq
Trifa.murad.mohammed@univsul.edu.iq

Article Info

Volume 6 – Issue 1- June 2021

DOI:

10.24017/science.2021.1.4

Article history:

Received 1/2/2021

Accepted 5/3/2021

Keywords:

Psychological hardiness,
Health awareness, Kurdistan
Region, Covid 19 Pandemic.

ABSTRACT

Background: Iraq and the Kurdistan region was affected by the epidemic of covid-19 which gradually led to a lockdown in March and April and a wide-spread disruption of people's life and activities. Objective: In this study, the researcher investigated psychological hardiness and its relation to health awareness among citizens of the Kurdistan region during the Corona epidemic. Methods: Across sectional design quantitative survey, conducted online from 1st to 18 April 2020. The survey was carried out after two months of lockdown due to the Covid-19 in the Kurdistan region. A questionnaire consist of 25 questions was prepared to measure psychological hardiness. Results: The researcher observed a low level of psychological hardiness, because of the pandemic of Covid-19. It has shown the non-significant association between psychological hardiness and health awareness also identified several significant factors associated with this psychological hardiness and health awareness. Conclusion: The study showed that the psychological hardiness of the citizens of the Kurdistan region is at a low level during the COVID-19 pandemic. The results can contribute to further research to investigate the effect of the pandemic on the public's association of psychological hardiness with health awareness.

1. INTRODUCTION

The coronavirus (COVID-19) is a group of viruses that cause illnesses and disorders in the respiratory tract. COVID-19 is a new type of coronavirus and it's not found before, it appears for the first time when the outbreak began in China (Wuhan), at the beginning of December 2019. The COVID-19 has been confirmed as a pandemic disease worldwide by the World Health Organisation (WHO) [1]. Coronaviruses are mostly affected the respiratory and gastrointestinal tract. The COVID-19 virus it's not only an effect on physical aspects but also affects people's mental health and emotional aspects as several theories imply [2]. This new pandemic and uncertain prognosis for this new version of the virus all-cause experience of fear and anxiety among adults and children whole the world. All the actions that do by public health for protection and decrease of spreading of COVID-19 like social distance, isolation from each other, and loneliness make more stress, fear, and anxiety [3]. All these three reactions (stress, fear, anxiety) are a normal response to real threats when people faced unknown what happens and uncertainly treatment, and people at the end experience fear during the COVID-19 pandemic [4]. Fear experience on one hand is very significant changing in daily living activities and routines of people to settle down and help for reducing of spreading of COVID-19 [5], working online at home and distance learning for kids, reduce of physical activity and less contact with colleagues and friend and limitation in our social contact all of these difficulties effect on people's mental and emotional aspects and also physical aspect and health status [6]. The experience to respond to all of these problems that occur during COVID-19 depends on many factors such as their background and social support by government and families, financial status, their physical and psychological status, and the community that they live in it [7]. The most main result that appears with COVID-19 in the world is psychological hardiness that faced to all society and countries [8,9]. The positive psychological and mental aspects of the individual have a main role to accepted the sudden community health crisis [10]. Based on several kinds of literature about positive emotional and mental health techniques and skills at the human being has a direct effect on reducing the level of stress and anxiety during such pandemic as COVID-19 [11]. Social support, sense of coherence, optimism, hardiness, and self-esteem are all some of the factors that lead to positive mental health that all-important to tolerate during COVID-19 [12]. Based on hardiness theory, three elements can improve coping in an individual [13]. "control" is the first element and in this element, individual beliefs can control the environment. During COVID-19 individual believes can control all precautions methods and find a new alternative to improve new way and make better and more stable mental health statement. "commitment" is the second element of this theory and its engagement and do activities like writing, drawing, reading, cooking and other activities that make individual busy and reduce the level of stress and anxiety during COVID-19 pandemic. "challenge" is the third element of psychological hardiness theory, which is the ability of acceptance of all changing and do the new activities and try to find new opportunity to the better condition [14]. All of these challenges and opportunities make more positive mental health and psychological wellbeing [13]. Nowadays COVID-19 is considered the most important event and problem in the world. Most of the studies are toward this aspect. One of the important issues in this area is psychological hardiness, which is needed to evaluate and interpret. Psychological hardiness is mostly affected by people's knowledge, attitudes, and practices (KAP) towards COVID-19 by KAP theory [15,16]. The outbreak in 2003 from SARS recommended that knowledge and attitudes confront of infectious diseases and illnesses have the direct relation to the level of fear and emotional imbalance among the people, that can lead to negative effect to prevent and help to control the spread of the viruses [17,18]. The COVID-19 pandemic is now spread in the world for near of one year but still very short in psychological and mental health literature and studies

related to this problem in the world [19]. Iraq and the Kurdistan region were among the areas affected by the COVID-19 pandemic. As a result, the government applies lockdown in March and April, which this decision has a main role and effect on the public activities and daily livings routine of people. Understanding the population awareness about COVID-19 is essential in Iraq to a more effective process to success in this crucial period. In this study, the researcher investigated psychological hardiness according to gender and age, and its relation to health awareness components among citizens of the Kurdistan region during the Corona epidemic.

2. LITERATURE REVIEW or RELATED WORK or INTRODUCTION

This section allows the authors to describe the problems proposed in this paper as well literature review regarding the discussed subject. The structure of the paper is able to be different based on the type of the manuscript: Literature review, Study case, Letter.

3. METHODS AND MATERIALS

Design of the study

Across sectional design quantitative survey that was done online from 1st to 18th April 2020 after two months lockdown in Kurdistan region for COVID-19.

Participant

The sample consists of 1203 adult participants, including 874 from Sulaimani, 210 Hawler, 84 Halabja, and 33 Dhok provinces. The age of the sample ranged between 18 and 48 or above. The survey was established in a Google Survey and the participants were invited to take part in the survey through online social media (Facebook). The first part included a written consent to inform the participants about the objective of this research. After participant's agreements, they could continue to complete the questionnaire.

Measures

Extensive literature review and related previous studies were established for the questionnaire and the questionnaire was accurate with the same modification by the researcher after the process of 3 steps (Internal review, Input for the target population, and External review by expert, in the step of input for target population the researchers select 100 samples to the answered questioner by their opinion, to benefits from them to frame and re-arranging the questioners of the measure.

After these steps, a questionnaire of 25 questioners to measure psychological hardiness, later the researchers got the psychometric qualities as follow:

1- (*Construct – Validity*)

For this kind of Validity, the researchers depend on (Relation of each question with the overall score of scale or measure), which means the relationship between the degree of each question with the total degree accounted for all the measures. The researcher's dependent on (Pearson correlation) by using (SPSS) program, which shows the level of the correlations between each question with the overall score of scale, which was between (0.230-0.534), and according to (Ebeil standard) if the correlation coefficient of each question was less than (0.19) regarded as weak and should be removed, while if it was more than (0.19) so that question is regarded as strong and should be remained [20].

2- To assess the level of reliability for the (psychological hardiness measure) before applying it to the research sample, the researchers used (re-examining test), which applied to a sample of (70) person through a private e-mail, then the same questionnaire was applied after 2 weeks. later by using Pearson correlation between the two tests the result was (0.889), which was very strong depending on the indicator (0.01).

Table (1): Test and re-test for sample stability.

tests	Test 1	Test 2	Correlation between the two tests
N	70	70	
Mean	38,500	38.152	0.886
SD	4.28	4.32	

3-Finally, after assessing the psychometric qualities the measure of psychological hardiness became 22 questions, for each of them were 3 chooses for the answer to select as a follower.

Table (2): Scoring for psychological hardiness.

Answers	The Score of positive questions	The Score of negative questions
I am strongly agree	3	1
I am agree	2	2
I am not agree	1	3

The key component of the questionnaire was the Kurdish translation of the questioner first part psychological burden containing 22 items so that by comparison the mean of the sample with the hypothesized mean for the scale which is 44 degrees will calculate the level of psychological hardiness. The second section consists of health awareness, including knowledge, practice, and attitude. The questions were distributed to 12 questions for knowledge, 6 questions for practice, and 8 questions for attitude with respectively hypothesized mean (6,4,3). The socio-demographic characteristics were limited to age and gender. By only clicking the answer checkbox, it takes an average of 10 minutes to respond to the questionnaire. This research was approved by the Presidency of Sulaimani University.

Statistical Analysis

For statistical analysis, SPSS version 22 was used. All the data recorded in an Excel file and then analyzed by SPSS. The researcher used descriptive and inferential analysis.

4. RESULTS

(Table 3) illustrated that the average degrees of psychological hardiness among citizens of the Kurdistan region, in general, is (38.95) degrees and a standard deviation of (4.32), and it appeared that the arithmetic mean is smaller than the hypothetical mean (44) on the triple scale of psychological hardiness. When comparing the arithmetic mean of the research sample as a whole with the hypothetical average of the scale and using the t-test and comparing the value of the calculated t (311.7) with the value of the tabular T (1.96), it was found that t the difference is significant and at the level of (0.05). It appeared that the psychological hardiness of the citizens of the Kurdistan region is at a low level.

Table (3): Level of psychological hardiness.

Variable	Mean	Std. Deviation	Degree freedom	Hypothesized Mean	T value	T table	Significant
Psychological Hardiness	38.95	4.32	1200	44	31	1.96	0.05

(Table 4) to identify the difference in the level of psychological hardiness according to the gender variable, the statistical analysis (t-test) was used according to the comparison of the arithmetic mean of males of (38.62) with a standard deviation of (4.45) with the arithmetic means of the psychological hardiness of females of (39.21) and a standard deviation The value of (4.20), and the calculated T value reached (2.35), which is higher than the tabular T value (1.96). It was found that there are significant differences between males and females in the level of psychological toughness, as shown in (Table 3).

Table (4): Compare by gender for Psychological Hardiness level.

Variables	Number of samples	Mean	Std. Deviation	T value	T table	Significant
Gender Male	539	38.62	4.45	2.35	1.96	0.05
Female	662	39.21	4.20			

(Table 5) explained the evidence from this table that the calculated final value of psychological hardiness (8.14) at the significance level 0.05, with a horizontal degree of freedom (4) and a vertical degree of freedom (1196), is a statistical function, meaning that there are differences in the level of psychological hardiness among citizens according to age.

Table (5): Analysis of variance for the significance of the difference in the level of psychological hardiness according to age groups (Sheffy-Toki) test.

Source of kontras (Psychological hardiness)	Df	Mean square	Sum of square	F	The tabular value at Indication level 0.05
Between Groups	4	149.16	596	8.14	2.37
Within groups	1196	18.30	21897.64		
Total	1201	-----	-----		

(Table 6) the table shows that the level of psychological hardiness is more among the age groups of (18-25years) and(26-32 years).

Table (6): The level of psychological hardiness according to age groups

Variables		Number of samples	Mean	Std. Deviation
Age	18-25	360	39.88	4.77
	26-32	232	39.23	4.13
	33-39	239	38.37	3.87
	40-47	205	38.32	4.10
	48or above	165	38.15	4.09
Total	1201		38.95	4.32

Table 7, has shown a weak correlation between psychological hardiness level and health awareness.

Table (7): Correlation between psychological hardiness and parts of health awareness

variables		The correlation coefficient (r test)	Nr	Significant level
Knowledge psychological hardiness	with	-0.133	1201	0.01
Practice psychological hardiness	with	-0.247		
Attitude psychological hardiness	with	-0.292		

Table 8 according to this table's comparison between the health awareness components knowledge, practice, and attitude showed the highest mean is distributed with knowledge component with 8.83 and SD 1.78. The practice has the lowest mean average of 3.78. The table shows that have high significant level is between the health awareness components.

Table (8): Level of Health awareness according to health awareness components.

Fields of health awareness	No. of samples	Mean	Std. Deviation	Degree freedom	Hypothesized Mean	T value	T table	Significant
Knowledge	1201	8.83	1.78	1200	6	171.01	1.96	0.05
practice		3.78	1.02		4	127.89		
Attitude		4.95	1.34		3	128.03		

5. DISCUSSION

The researcher observed low psychological hardiness levels in the study, because of the Covid-19 pandemic. Researchers believe that easy spreading, fewer etiological knowledge, treatment methods, and a huge number of deaths in the world all lead to panic and anxiety among individuals [22]. The quarantine also took place during the data collection in the Kurdistan region. This can also affect the psychological aspects of the person. The results are consistent with a survey of the general population conducted in Italy, which showed that the outbreak of COVID-19 had a psychological effect on individuals [21]. In the study by Kurdistan/Sulaiman and Turkey, their findings show no significant relationship between psychological hardiness

and gender [23,24]. The study result also found that women have reported a significantly higher prevalence of psychological hardiness, which is the opposite of Indian studies, that show anxiety and stress are more common among men [24]. According to an Iranian study, anxiety is more among men than female and in the level of depression they have not any differences [26], and researchers argue that it could be due to several social media and news stories suggesting that Covid-19 has a greater influence on male than female, and this aspect contributes to better psychological well-being for women than men [26]. Otherwise, as men prefer to be outside more than women in the Kurdistan culture, men have more negative effects on the quarantine situation than women. This way depression, anxiety, and panic are showed more in males than females. on the other hand study from Singapore, which does significantly and very fast control and prevents to spread of the COVID-19 in their country has a varying result from our result [25]. Although some studies have shown such a correlation, we have found substantial associations between psychological hardiness and age [26,27]. The lockdown situation and reduction of people's daily activity among the young age group especially during this pandemic period all affect mental health and psychological hardiness. This study identified a weak psychological hardiness relationship with health awareness and in Musl/Iraq region, a finding in contrast with our findings, [28] study in Oman shows that they found considerable variations in self-efficacy and not the main differences in psychological hardiness [29].

5. CONCLUSION

The study showed that the psychological hardiness is at a low level among citizens of the Kurdistan region during the COVID-19 pandemic. It has shown the non-significant association between psychological hardiness and health awareness. The researchers found that the public health in the Kurdistan region needs more focus on population awareness, especially during this crucial period such as a pandemic, economical suffering, and political disturbances that all these factors have a direct effect on the populations' mental health status. Elevated the level of people's health understanding of psychological hardiness and apply the different coping strategies methods is necessary to promote mental health wellbeing. The results can contribute to further study to investigate the effect of the pandemic on the public's association between psychological hardiness with health awareness.

REFERENCE

- [1] Q. Chen *et al.*, "Mental health care for medical staff in China during the COVID-19 outbreak," *The Lancet Psychiatry*, vol. 7, no. 4, pp. e15–e16, 2020, DOI: 10.1016/S2215-0366(20)30078-X.
- [2] C. Huang *et al.*, "Clinical features of patients infected with 2019 novel coronavirus in Wuhan, China," *Lancet*, vol. 395, no. 10223, pp. 497–506, 2020.
- [3] L. Duan and G. Zhu, "Psychological interventions for people affected by the COVID-19 epidemic," *The Lancet Psychiatry*, vol. 7, no. 4, pp. 300–302, 2020.
- [4] J. Torales, M. O'Higgins, J. M. Castaldelli-Maia, and A. Ventriglio, "The outbreak of COVID-19 coronavirus and its impact on global mental health," *Int. J. Soc. Psychiatry*, p. 0020764020915212, 2020.
- [5] Y. Zhang, Z. Sun, J. M. Latour, B. Hu, and J. Qian, "Hospital response to the COVID-19 outbreak: The experience in Shanghai, China," *J. Adv. Nurs.*, 2020.
- [6] S. A. Lee, "How much 'Thinking' about COVID-19 is clinically dysfunctional?," *Brain. Behav. Immun.*, 2020.
- [7] Y. Zhai and X. Du, "Loss and grief amidst COVID-19: A path to adaptation and resilience," *Brain. Behav. Immun.*, 2020.
- [8] S. Khan *et al.*, "Impact of coronavirus outbreak on psychological health," *J. Glob. Health*, vol. 10, no. 1, 2020.
- [9] M. Lee and M. You, "Psychological and behavioral responses in South Korea during the early stages of coronavirus disease 2019 (COVID-19)," *Int. J. Environ. Res. Public Health*, vol. 17, no. 9, p. 2977, 2020.
- [10] M. Nicola *et al.*, "The socio-economic implications of the coronavirus and COVID-19 pandemic: a review," *Int. J. Surg.*, 2020.

- [11] A. A. Olagoke, O. O. Olagoke, and A. M. Hughes, "Exposure to coronavirus news on mainstream media: The role of risk perceptions and depression," *Br. J. Health Psychol.*, p. e12427, 2020.
- [12] J. Qiu, B. Shen, M. Zhao, Z. Wang, B. Xie, and Y. Xu, "A nationwide survey of psychological distress among Chinese people in the COVID-19 epidemic: implications and policy recommendations," *Gen. psychiatry*, vol. 33, no. 2, 2020.
- [13] C. Wang *et al.*, "Immediate psychological responses and associated factors during the initial stage of the 2019 coronavirus disease (COVID-19) epidemic among the general population in China," *Int. J. Environ. Res. Public Health*, vol. 17, no. 5, p. 1729, 2020.
- [14] A. Torices, "Educación distribuirá 20.000 líneas móviles entre estudiantes sin medios telemáticos," *D. La Rioja*. <https://cutt.ly/cypEW22> *Environ. Res. Public Heal.*, vol. 17, no. 7, p. 2381, 2020.
- [15] B. X. Tran *et al.*, "Coverage of health information by different sources in communities: Implication for COVID-19 epidemic response," *Int. J. Environ. Res. Public Health*, vol. 17, no. 10, p. 3577, 2020.
- [16] K. Ajilore, I. Atakiti, and K. Onyenankeya, "College students' knowledge, attitudes and adherence to public service announcements on Ebola in Nigeria: Suggestions for improving future Ebola prevention education programmes," *Health Educ. J.*, vol. 76, no. 6, pp. 648–660, 2017.
- [17] N. Tachfouti, K. Slama, M. Berraho, and C. Nejari, "The impact of knowledge and attitudes on adherence to tuberculosis treatment: a case-control study in a Moroccan region," *Pan Afr. Med. J.*, vol. 12, no. 1, 2012.
- [18] B. Person, F. Sy, K. Holton, B. Govert, and A. Liang, "Fear and stigma: the epidemic within the SARS outbreak," *Emerg. Infect. Dis.*, vol. 10, no. 2, p. 358, 2004.
- [19] N. Tao, "An analysis on reasons of SARS-induced psychological panic among students," *J. Anhui Inst. Educ.*, vol. 21, pp. 78–79, 2003.
- [20] ر. ا. ع. الموسوي, "مفهوم الذات وعلاقته بأساليب المعاملة الوادية لدى عينه من تلاميذ المرحلة الابتدائية بمدينة بغداد," *مجلة الآداب*, vol. 112, pp. 497–548, 2015.
- [21] L. Moccia *et al.*, "Affective temperament, attachment style, and the psychological impact of the COVID-19 outbreak: an early report on the Italian general population," *Brain. Behav. Immun.*, 2020.
- [22] S. S. Eroz and O. Emine, "psychological hardiness: a survey in hospitality management," *res. J. Bus. Manag.*, vol. 5, no. 1, pp. 81–89, 2018.
- [23] N. M. Kamal and N. Othman, "Depression, Anxiety, and Stress in the time of COVID-19 Pandemic in Kurdistan Region, Iraq," *Kurdistan J. Appl. Res.*, no. May, pp. 37–44, 2020, doi: 10.24017/covid.5.
- [24] S. S. H. Kazmi, K. Hasan, S. Talib, and S. Saxena, "COVID-19 and Lockdwon: A Study on the Impact on Mental Health," *Available SSRN 3577515*, 2020.
- [25] S. Ashtari, A. Vahedian-Azimi, M. S. Moayed, F. Rahimibashar, S. Shojaei, and M. A. Pourhoseingholi, "Compare the severity of psychological distress among four groups of Iranian society in COVID-19 pandemic," 2020.
- [26] B. Y. Q. Tan *et al.*, "Psychological impact of the COVID-19 pandemic on health care workers in Singapore," *Ann. Intern. Med.*, 2020.
- [27] N. Ozamiz-Etxebarria, M. Dosil-Santamaria, M. Picaza-Gorrochategui, and N. Idoiaga-Mondragon, "Stress, anxiety, and depression levels in the initial stage of the COVID-19 outbreak in a population sample in the northern Spain," *Cad. Saude Publica*, vol. 36, p. e00054020, 2020.
- [28] T. A. F. AL-Byirag, "PSYCHOLOGICAL PRESSURE AND ITS RELATIONSHIP WITH PSYCHOLOGICAL STIFFNESS OF STUDENTS at THE COLLEGE OF EDUCATION," *Coll. Basic Educ. Res. J.*, vol. 11, no. 1, pp. 28–56, 2011.
- [29] M. S. Hammoud, B. S. Bakkar, M. M. Abu-Hilal, and Y. S. M. Al Rujaiabi, "Relationship between psychological hardiness and career decision-making self-efficacy among eleventh grade students in Sultanate of Oman," *Int. J. Psychol. Couns.*, vol. 11, no. 2, pp. 6–14, 2019.