



## Original Article

### Coping Strategies During COVID-19 Outbreak in Islamic Republic of Iran

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#### Abstract

**Objective:** Since the emergence of the Covid- 19 pandemic in Wuhan, China, there have been 36,166,237 cases and 1,056,504 deaths worldwide to date, and the numbers are growing. These conditions in the world have created a kind of mental stress in people that provides a basis for studying coping strategies for this condition. Coping occurs in response to psychological stress (usually triggered by changes) in an effort to maintain mental health and emotional well-being. The Lazarus Coping Strategy Questionnaire is based on the Lazarus-Folkman theory of stress. In their view, our interpretation of events is more important than the events themselves. They believe that one's perception of situations determines its tension and severity.

**Materials and Methods:** In this study we used online questionnaire of Lazarus and Folkman coping strategies from June 22, 2020 to July 1, 2020 to investigate the coping strategy of people. 100 questionnaires were collected from individuals and people answered 66 questions online and their answers were collected and analyzed through the Porsline.ir website.

**Results:** The averages obtained from the emotion-focused and problem-focused strategies are as follows 1.20 and 1.40. T-test shows that people used more problem-focused strategy in this period. Problem-focused coping strategy are characteristic of people with good mental health and social well-being.

**Conclusion:** Results show that participants used problem-focused coping strategy more than emotion-focused strategy.

**Keywords:** COVID-19, Coping strategy, Lazarus, Folkman

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#### Introduction

In late December 2019 a group of pneumonia cases of unknown origin in Wuhan, China has raised concerns among health officials. On December 31, a warning was issued by the Wuhan Municipal Health Commission, a rapid response team was sent to Wuhan by the China Centers for Disease Control and Prevention (CDC China) and a notification was sent to the World Health Organization (WHO) [1]. The causative pathogen was identified as a Novel Coronavirus, and genomic characterization and experimental method development were performed [1-5]. Now 2019-nCoV, the virus is different from both SARS-CoV and MERS-CoV [4,6]. According to the WHO, there are currently no drugs or vaccines for the coronavirus. The current situation

in the world has caused a kind of stress in people. An important principle for understanding individual differences in vulnerability to physical and mental problems is a person's coping style. Stress coping skills are a multi-step approach that enable person to use those steps to manage stressful situations [7]. In 1966 Lazarus developed the first version of the transactional model of stress and coping and explained it in his book Psychological Stress and the Coping Process. During the 1970s and 1980s in collaboration with Susan Folkman another book was published, Stress, Appraisal, and Coping (Lazarus and Folkman 1984) which developed the original model, built and described the key structures of the experimental modeling test, coping, and results [8]. According to Lazarus and Folkman (1984), coping

refers to behavioral and cognitive efforts to prevent, regulate, and alleviate stress. Folkman and Lazarus consider coping to be a complex process that changes according to one's assessments of the stressful situation and the pressures of that situation, and involves the individual's active behavioral-cognitive efforts. Coping strategies are the process by which a person manages desires that are beyond personal resources and capabilities and are threatening [8]. In their book, they referred to two coping strategies, problem-focused coping and emotion-focused coping [9]. The problem-focused coping is based on the environment and self is evaluated to eliminate or change the situation that is considered as a threat, but on the other hand emotion-focused coping are used to control unpleasant feelings caused by stressful situations. Studies have shown that coping styles are associated with mental health [10]. According to studies, problem-focused coping is more effective and adaptive than emotion-focused coping. Because this type of coping changes the stressful situation. Using emotion-focused coping strategies increases the likelihood of depression and physical weakness, while problem-focused coping strategies increase the likelihood of a protective factor against depression and poor physical health [11]. In this questionnaire, they defined eight scales of coping strategy that included: 1- Confrontive coping, 2- Distancing, 3- Self-controlling, 4- Seeking social support, 5- Accepting responsibility, 6- Escape-Avoidance, 7- Plan full problem-solving, 8- Positive reappraisal. Confrontive coping, describes aggressive attempts to change the situation and offers degrees of hostility and risk-taking. Distancing describes cognitive efforts to isolate oneself and minimize the importance of the situation. Self-controlling, describes the efforts that regulate a person's feelings and actions. Seeking social support, describes efforts seeking information and emotional support. Accepting responsibility, describes accepting one's role in the problem, which is always accompanied by trying to put everything in the right place. Escape-Avoidance refers to wishful thinking and moral attempts to escape and avoid trouble. Plan full problem-solving, describes problem-oriented thoughtful efforts to change position. A good review describes efforts that create a positive attitude by focusing on personal growth. This scale has a religious meaning. In this study we observed the coping strategy of 100 people in Iran to investigate the coping style.

## Materials and Methods

In this article we prepared questionnaire of Lazarus and Folkman coping strategies with [www.porsline.ir](http://www.porsline.ir) and share it in any platform to collect data randomly. Collecting duration was from 22 June, 2020 to 30 June 2020. In present study we analyzed 100 questionnaires randomly.

### Questionnaire of Lazarus and Folkman Coping Strategies

The sample from which the coping scales were extracted consisted of 75 upper-middle-class white couples living with at least one child in each household. Factor analysis was finally performed on 750 observations and resulted in the extraction of the following 8 scales. Scales were: 1- Confrontive coping,

2- Distancing, 3- Self-controlling, 4- Seeking social support, 5- Accepting responsibility, 6- Escape-Avoidance, 7- Plan full problem-solving, 8- Positive reappraisal. The questionnaire is scored in both raw and relative ways. Raw scores describe the coping effort for each of the eight types of coping and the sum of the subjects' responses to the constituents of the scale. Relative scores describe the proportion of effort made in each coping. In both scoring methods, individuals respond to each item on a four-point Likert scale: zero "I did not use", one "very little", two "partially used", and three "I used a lot." The Lazarus Coping Strategies Questionnaire consists of 66 items and measures 8 coping scales. Each scale contains a set of questions that are:

1- Confrontive coping (7, 6, 17, 28, 34, 46)

2- Distancing: (12, 13, 15, 21, 41, 44)

3- Self-control (self-control) (10, 14, 35, 43, 54, 62, 63)

4- Seeking social support: (8, 18, 22, 31, 42, 45)

5- Accepting responsibility: (9, 25, 29, 51)

6- Escape-Avoidance: (11, 16, 33, 40, 47, 50, 58, 59)

7- Plan full problem-solving (1, 26, 39, 48, 49, 52)

8- Positive reappraisal: (20, 23, 30, 36, 38, 56, 60)

A person's score on each scale is obtained from the sum of his points from the questions specific to that scale. Problem-focused part has four characteristics: seeking social support, accepting responsibility, plan full problem-solving, and positive reappraisal, and the emotion-focused part also includes the four characteristics of confrontive coping, distancing, self-control, and escape-avoidance. The reliability and validity of this test in a study using Cronbach's alpha were 0.79 and 0.81, respectively [12]. Maleki obtained the validity of the coping styles questionnaire by confirmatory factor analysis method by 0.83 and the reliability by Cronbach's alpha coefficient by 0.84.

## Results

All collected results were analyzed in eight scales and finally t-test analysis was used for general conclusions in two coping strategies.

### Scale 1

This scale is including six questions of questionnaire. [Figure 1](#) shows that for all 100 data frequency of zero option (not use) is 178, option one (very little) is 211, option 2 (partially used) 143 and option 3 (I used a lot) is 67.

### Scale 2

This scale is including six questions of questionnaire. [Figure 2](#) shows that for all 100 data frequency of zero option (not use) is 224, option one (very little) is 212, option 2 (partially used) 93 and option 3 (I used a lot) is 67.

### Scale 3

This scale is including seven questions of questionnaire. [Figure 3](#) shows that for all 100 data frequency of zero option (not use) is 138, option one (very little) is 277, option 2 (partially used) 183 and option 3 (I used a lot) is 95.

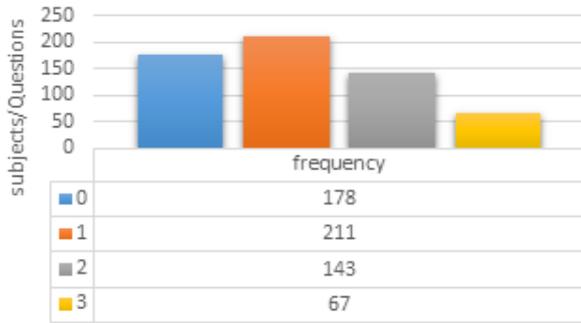


Figure 1. Confrontative coping

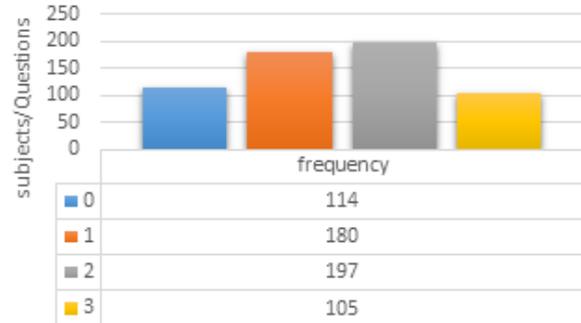


Figure 4. Seeking social support

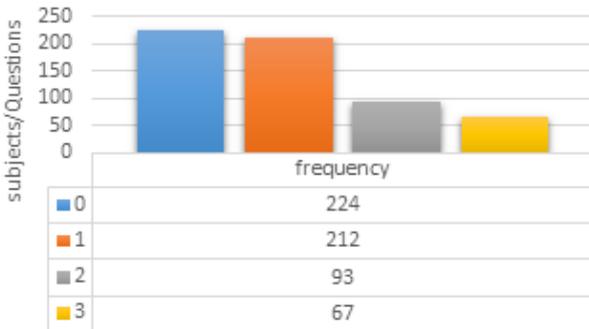


Figure 2. Distancing

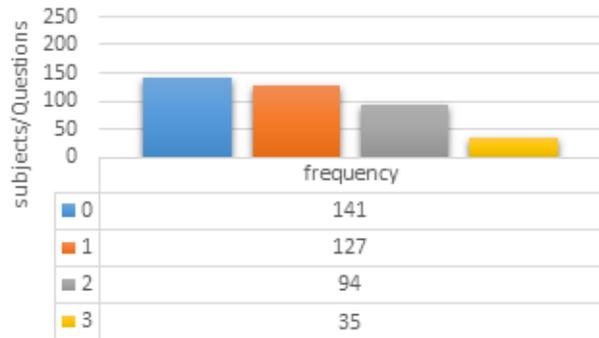


Figure 5. Accepting responsibility

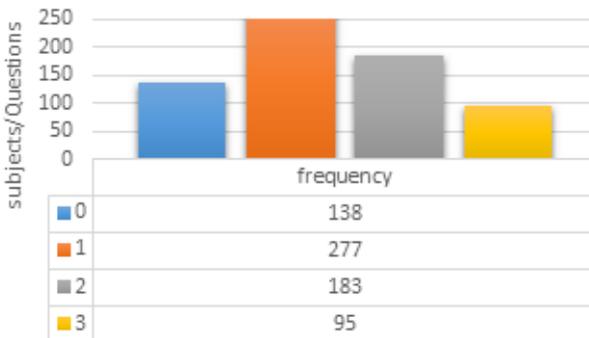


Figure 3. Self-controlling

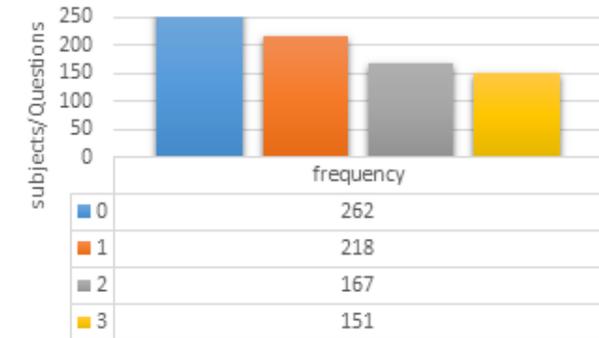


Figure 6. Escape-avoidance

**Scale 4**

This scale is including six questions of questionnaire. Figure 4 shows that for all 100 data frequency of zero option (not use) is 114, option one (very little) is 180, option 2 (partially used) 197 and option 3 (I used a lot) is 105.

**Scale 5**

This scale is including four questions of questionnaire. Figure 5 shows that for all 100 data frequency of zero option (not use) is 141, option one (very little) is 127, option 2 (partially used) 94 and option 3 (I used a lot) is 35.

**Scale 6**

This scale is including eight questions of questionnaire. Figure 6 shows that for all 100 data frequency of zero option (not use) is

262, option one (very little) is 218, option 2 (partially used) 167 and option 3 (I used a lot) is 151.

**Scale 7**

This scale is including six questions of questionnaire. Figure 7 shows that for all 100 data frequency of zero option (not use) is 143, option one (very little) is 212, option 2 (partially used) 174 and option 3 (I used a lot) is 68.

**Scale 8**

This scale is including six questions of questionnaire. Figure 8 shows that for all 100 data frequency of zero option (not use) is 97, option one (very little) is 225, option 2 (partially used) 215 and option 3 (I used a lot) is 159.

Table 1 shows means and standard deviation of all eight scales and emotion-focused and problem-focused strategies. Results

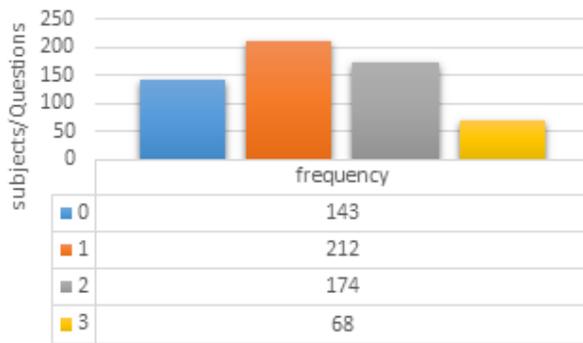


Figure 7. : Planful problem- solving

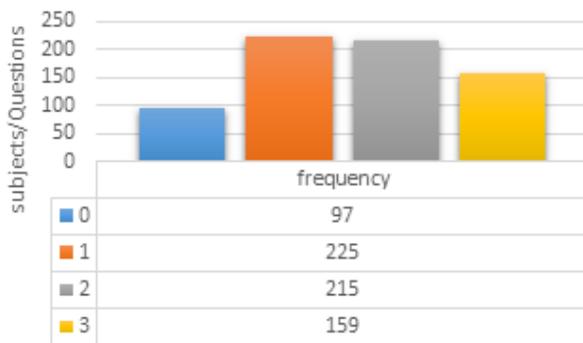


Figure 8. : Positive reappraisal

Table 1. One-sample test of emotion-focused and problem-focused coping strategy

|                           | N    | Minimum | Maximum | Sum     | Mean   | Std. Deviation |
|---------------------------|------|---------|---------|---------|--------|----------------|
| Emotion-focused           | 2686 | .00     | 3.00    | 3230.00 | 1.2025 | 1.02079        |
| Problem-focused           | 2286 | .00     | 3.00    | 3205.00 | 1.4020 | .99749         |
| Confrontive coping        | 599  | .00     | 3.00    | 698.00  | 1.1653 | .97856         |
| Distancing                | 596  | .00     | 3.00    | 599.00  | 1.0050 | .99155         |
| Self-control              | 693  | .00     | 3.00    | 928.00  | 1.3391 | .94755         |
| Seeking social support    | 596  | .00     | 3.00    | 889.00  | 1.4916 | .99322         |
| Accepting responsibility  | 397  | .00     | 3.00    | 420.00  | 1.0579 | .97139         |
| Escape-avoidance          | 798  | .00     | 3.00    | 1005.00 | 1.2594 | 1.10848        |
| Plan full problem-solving | 597  | .00     | 3.00    | 764.00  | 1.2797 | .95387         |
| Positive reappraisal      | 696  | .00     | 3.00    | 1132.00 | 1.6264 | .98541         |
| Valid N (listwise)        | 387  |         |         |         |        |                |

show that the mean of problem-focused strategy is higher than emotion-focused strategy. Also results show that the standard deviation of emotion-focused strategy is higher than problem-focused strategy.

Table 2 shows that the mean difference (1.20253, 1.40201) between emotion-focused and problem-focused, at a significance level of  $p < 0.05$ , is statistically significant.

Table 2. Descriptive statistics of emotion-focused and problem-focused coping strategy and their 8 scales

|                 | Test Value = 0 |      |                 |                 |   |        |
|-----------------|----------------|------|-----------------|-----------------|---|--------|
|                 | t              | df   | Sig. (2-tailed) | Mean Difference | 95% Confidence Interval of the Difference |        |
|                 |                |      |                 |                 | Lower                                     | Upper  |
| Emotion-focused | 61.054         | 2685 | .000            | 1.20253         | 1.1639                                    | 1.2412 |
| Problem-focused | 67.202         | 2285 | .000            | 1.40201         | 1.3611                                    | 1.4429 |

### Discussion

Covid-19 pandemic is a stressful situation in 2020. Everybody all over the world faces this stressful situation. An important principle for understanding individual differences in vulnerability to physical and mental problems is a person's coping style. Stress coping skills are a multi-step approach that enable a person to use those steps to manage stressful situations [7]. Investigating a coping strategy is important to know about people mental health

### Conclusion

The main aim of this study was investigating the coping strategy of small amount of people in Covid-19 pandemic. The results of this study shows that participants used problem focused strategy more than emotion-focused strategy. This means that they have somehow good mental health and social well-being. To generalize these results to the community, research with more participants is needed, but this research gave us an overview of coping strategies in Iranians.

### Conflict of Interest

Parya Abravani and Shahriar Gharibzadeh declare that they have no conflict of interest.

### Funding Source

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### References

1. Novel CP. The epidemiological characteristics of an outbreak of 2019 novel coronavirus diseases (COVID-19) in China. Zhonghua liu xing bing xue za zhi= Zhonghua liuxingbingxue zazhi. 2020 Feb 17;41(2):145.
2. Wang C, Horby PW, Hayden FG, Gao GF. A novel coronavirus

- outbreak of global health concern. *The Lancet*. 2020 Feb 15;395(10223):470-3.
3. Hui DS, Azhar EI, Madani TA, Ntoumi F, Kock R, Dar O, et al. The continuing 2019-nCoV epidemic threat of novel coronaviruses to global health—The latest 2019 novel coronavirus outbreak in Wuhan, China. *International Journal of Infectious Diseases*. 2020 Feb 1;91:264-6.
  4. Zhu N, Zhang D, Wang W, Li X, Yang B, Song J, et al. A novel coronavirus from patients with pneumonia in China, 2019. *New England Journal of Medicine*. 2020 Jan 24.
  5. Chan JF, Kok KH, Zhu Z, Chu H, To KK, Yuan S, Yuen KY. Genomic characterization of the 2019 novel human-pathogenic coronavirus isolated from a patient with atypical pneumonia after visiting Wuhan. *Emerging microbes & infections*. 2020 Jan 1;9(1):221-36.
  6. Tan W, Zhao X, Ma X, Wang W, Niu P, Xu W, et al. A novel coronavirus genome identified in a cluster of pneumonia cases—Wuhan, China 2019–2020. *China CDC Weekly*. 2020 Jan 1;2(4):61-2.
  7. Jang KL, Thordarson DS, Stein MB, Cohan SL, Taylor S. Coping styles and personality: a biometric analysis. *Anxiety, Stress, & Coping*. 2007 Mar 1;20(1):17-24.
  8. Lazarus RS, Folkman S. *Stress, appraisal, and coping*. Springer publishing company; 1984 Mar 15.
  9. The Lazarus and Folkman Model of Stress and Coping, in *Encyclopedia of Personality and Individual Differences*, V. Zeigler-Hill and T. K. Shackelford, Eds., ed Cham: Springer International Publishing, 2020, pp. 5464-5464.
  10. S. Folkman, “Stress: appraisal and coping. *Encyclopedia of behavioral medicine*,” ed: Springer. N Y, 2013.
  11. Sadeghi Movahed F, Narimani M, Rajabi S. The effect of teaching coping skills in students’ mental health. *Journal of Ardabil university of medical sciences*. 2008 Sep 10;8(3):261-9.
  12. Lazarus RS. Coping theory and research: Past, present, and future. Fifty years of the research and theory of RS Lazarus: An analysis of historical and perennial issues. 1993:366-88.