Socioeconomic Status, Lifestyle and Coping Strategies During COVID-19 Outbreak

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This study was aimed at investigating the association between socioeconomic status, lifestyle and coping strategies during the COVID-19 outbreak. The study was conducted within the framework of a cross-sectional descriptive-correlational research design in the period from July to February 2020. The research population consisted of all the individuals in Tehran who were in home quarantine during the outbreak of corona virus. The research sample was comprised of 384 people who were quarantined at home for 6 months during the COVID-19 pandemic and were selected for the study by using the convenience sampling method. For data collection, Socioeconomic Status Questionnaire, the Lifestyle Questionnaire by La'li et al., and Jalowiec Coping Scale were used. As for data analysis, the Pearson correlation method and stepwise regression analysis were applied in the inferential section in order to investigate the relationship between the variables, while observing the relevant assumptions. The results demonstrated that the predictor variable of socioeconomic status had a significant correlation with the criterion variables of constructive coping strategies (0.488) and non-constructive coping strategies (-0.460) at a significance level of 0.001. Furthermore, the predictor variable of lifestyle had a correlation coefficient of -0.457 with non-constructive coping strategies and 0.407 with constructive coping strategies. Based on the research findings, it can be inferred that people with low socioeconomic status were mentally less healthy during the corona virus pandemic and also that people with healthier lifestyles used more constructive coping strategies.

Keywords: Socioeconomic Status, Lifestyle, Coping Strategies, COVID-19

In December 2019, a new variance of corona virus (SARS-CoV-2) emerged, leading to an outbreak of Acute Respiratory Syndrome (COVID-19) epidemic centered in Wuhan, China. The rapid increase through the international and overseas travel and the evolution of the transportation system led to a global outbreak and the epidemic of newly emerging infectious diseases (Van der Hoek et al., 2004), one of which being the Covid-19. In three months, the virus spread to more than 118,000 cases and killed 4,291 people in 114 countries, causing the World Health Organization to declare a global epidemic (Bavel et al., 2020).

Common symptoms of this virus include respiratory symptoms, fever, cough, shortness of breath, and respiratory problems. In more severe cases, the infection could lead to pneumonia, severe acute respiratory syndrome, kidney failure, and even death (Hosseini, Korki & Gholamreza-nezhad, 2020). About 80% of the infected people recovered without any special treatment. One in six people afflicted with COVID-19 became severely ill and had difficulty breathing. Older people and those with major medical problems such as hypertension, heart problems, or diabetes were more prone to being infected with this disease (Bernard et al., 2020).

Mental health complications of COVID-19 could manifest in a range of problems, namely adaptation/coping, exacerbation/recurrence, basic psychiatric diagnoses, and stimulation of pre-existing psychiatric disorders (Naguy, Moodliar,

Rensburg & Alamiri, 2020). Experts consistently advised people to stay in quarantine while these restrictions had short-term and potentially long-term effects on key aspects of mental health. Self-isolation, social distancing, and unwanted quarantine were associated with numerous emotional, psychological, behavioral and social effects that could all affect basic aspects of a person's mental health (Mukhtar, 2020). Quarantining caused a variety of problems; that is, it led to feelings of fear, anger, anxiety and panic about the worsening of the possible outcome. It also caused boredom, loneliness, and guilt about not being present in the family (Brooks et al., 2020). In a study of COVID-19 in China, researchers found that many of the people who were affected by COVID-19 experienced high levels of psychological distress and many used negative coping strategies for adapting to this crisis. People's inability to find solutions to problems, lack of coping strategies to manage stressors, inflexibility, and the limited number of solutions they offer, all led to the use of ineffective coping strategies (Hua, Mingli & Zhixiong, 2020).

Evidence shows that following the COVID-19 outbreak, people around the world experienced major lifestyle changes and challenges (Brooks et al., 2020; Lai, Ma & Wang, 2019; Xiang, Jin & Cheung, 2020). A comprehensive emphasis on home quarantine and curfews and reduced communication with other people to prevent the spread of the virus and the use of cyberspace to communicate with others has led to the formation of a new lifestyle (Hu, Lin, Chiwanda & Xu, 2020). However, choosing a new lifestyle or changing behaviors at this point in time may lead to unpredictable detrimental or protective consequences for mental health (Shah et al., 2020). The COVID-19 epidemic, in addition to having a major impact on the healthcare system, has had rapid effects on all aspects of human life. As such, governments closed their borders to prevent the spread of the virus, imposed travel restrictions, and urged their people to remain in quarantine. All of this has led to economic shocks for countries, even economically strong ones (Nicola et al., 2020). As a result of the problems caused by the epidemic, many countries experienced a recession, which affected people with lower socioeconomic status to a large extent (Gopalan & Misra, 2020), which in turn have affected the mental health of these people

and resulted in the use of ineffective coping strategies to deal with the ensuing problems.

There are only a few studies that show how environmental factors such as socioeconomic status and lifestyle can affect people's response to stress and its management. However, it has been demonstrated that socioeconomic status affects coping strategies by influencing psychological well-being (Ruhafza et al., 2009). In addition, lifestyle factors have a direct impact on psychological distress and coping strategies (Caplan & Schooler, 2007). Given the multiple effects of the COVID-19 epidemic on socioeconomic status and lifestyle as well as its impact on coping strategies used by individuals to deal with the problems caused by this epidemic, the present study tried to answer the question as to whether socioeconomic status and lifestyle had a bearing effect upon coping strategies during the COVID-19 outbreak.

Method

Participants

The research population was comprised of all people from Tehran who were in home quarantine during the Coronavirus outbreak in 2020. The research sample included 385 participants who were in home quarantined for at least 6 months during the COVID-19 pandemic and were selected through using the convenience sampling method. The sample size was determined according to Krejcie and Morgan's table (1970).

Measurement Instruments

Socioeconomic Status Questionnaire. To assess socioeconomic status, Ghodratnama Socioeconomic Status Questionnaire (2013) is generally used, which contains four components of income, economic class, education, and housing status. The questionnaire contains a total of 6 demographic questions and 5 main questions which are scored on a 5-point scale, ranging from very low (1) to very high (5). Eslami et al. (2013) confirmed the face and content validity of the questionnaire by consulting 12 sports experts. Additionally, the questionnaire reliability was obtained to be 0.83 by using Cronbach's alpha. In the present study, Cronbach's alpha method was applied to determine the reliability of the

Socioeconomic Status Questionnaire, which was equal to 0.72 for the whole questionnaire, indicating the acceptable reliability coefficients of this questionnaire.

Lifestyle Questionnaire. To assess the subjects' lifestyle (La'li et al., 2012), the Lifestyle Questionnaire (LSQ) was used. This questionnaire contains 70 items and has 10 components (physical health, exercise and health, weight control and nutrition, disease prevention, mental health, spiritual health, social health, drug and alcohol avoidance, accident prevention, and environmental health). This questionnaire was designed by La'li et al. who conducted a study on the construction and validation of the Lifestyle Questionnaire (LSQ) for 300 teachers. The results demonstrated that the Lifestyle Questionnaire (LSQ) had sufficient validity and reliability to evaluate and measure the lifestyle of individuals. In his study, La'li reported the Cronbach's alpha of each of the ten factors of physical health (0.89), exercise and health (0.87), weight control and nutrition (0.85), disease prevention (0.87), mental health (0.88), spiritual health (0.84), social health (0.82), drugs and alcohol avoidance (0.79), accident prevention (0.85) and environmental health (0.76). Besides, Cronbach's alpha of La'li's et al. (2012) Lifestyle Questionnaire in this study was equal to 0.87, which indicates the appropriate validity of this questionnaire.

Coping Strategies Scale. Jalowiec Coping Scale (Jalowiec, 1984) was used to assess participants' perceptions of their coping styles in the face of challenges. This scale contains sixty items measured on a 4-point Likert scale, ranging from zero (never) to 3 (most of the time), which assess coping behaviors. This scale includes eight coping styles. Cronbach's alpha of eight subtests of this scale in the sample of patients under study ranged from 0.65 to 0.84. Furthermore, the results of the test-retest reliability of this scale were obtained to be between 0.60 and 0.74 in an Iranian sample of 30 patients with heart disease at an interval of three weeks. The content validity of this scale was also examined through the comments of 15 psychologists and psychiatrists using a 6-point Likert scale for items and a 10-point scale for the whole scale. In general, the results extracted from this evaluation showed an acceptable and satisfactory validity of this scale (Baqerian, Ahmadzadeh et al., 2008). In the current research,

Cronbach's alpha method was used to determine the reliability of the coping strategies questionnaire, which is equal to 0.78 for the whole questionnaire, suggesting the desired reliability coefficients.

Procedures

Present study was a cross-sectional descriptive-correlational research. In this study, socioeconomic status and lifestyle were considered as predictors, while coping strategies and mental health were two separate criterion variables.

To start the data collection, the authors first submitted the proposal to the ethics committee of Allameh Tabataba'I University and obtained a license and code of ethics (IR.ATU.REC.1399.070) in which it is stated that due to the COVID-19 pandemic, it was not possible to have face-to-face communications with participants, and therefore the questionnaires were converted to an online version using Google Form and the links were sent to the participants. In the initial section of each online questionnaire the research objectives, the observance of ethical aspects, and the informed consent statements were briefly explained and the participants' consent to participate in the research were obtained and participants were asked to fill in the questionnaires. By using a convenience sampling method, a link to the questionnaires was sent to 450 people who were in home quarantine. Finally, 65 people were excluded due to their incomplete responses to the questionnaires, and 385 people were selected. The inclusion criteria were 1) remaining in home quarantine at least for 6 months, 2) age range between 20 and 40, and 3) willingness to participate in the research and provision of informed consent. The exclusion criteria included 1) the subjects' being under pharmacological treatment for psychological-psychiatric problems, 2) not having completed the questionnaires, and 3) reluctance to participate in the research. finally the obtained data were analyzed by using the matrix regression procedure in SPSS 26 version.

Results

Tables 1 and 2 below respectively show zero-order correlations between the dimensions of lifestyle and the participants' constructive/non-

constructive coping strategies, as well as the zero-order correlations between the dimensions of the participants' socioeconomic status (SES) and their constructive/non-constructive coping strategies. The zero-order correlation between the aggregated scales of lifestyle and SES was found to be 0.347 which was statistically significant at <0.001 level.

Two separate regression models were built using the aggregated scales of lifestyle and SES as predictors and the constructive or non-constructive coping strategies as criterion variables.

The first model predicted the participants' constructive coping strategies by their total scores in lifestyle and SES. The results indicated that lifestyle and SES altogether explained 30.2% of the total variance in the participants' constructive coping strategies (R^2 =.302, $F(2,382)$= 82.78, $P<.0001$). Both the participants' lifestyle (β=0.27, $p<0.0001$) and SES (β= 0.394, $p<0.0001$) significantly and positively predicted their constructive coping during COVID-19 outbreak.

The second model predicted the non-constructive coping strategies of the participants according to their lifestyle and SES total scores. The results showed that lifestyle and SES altogether accounted for 31.2% of the total variance in participants' non-constructive coping strategies (R^2 =.312, $F(2,382)$= 86.67, $P<.0001$). Lifestyle (β=-.338, $p<0.001$) and SES (β= -.343, $p<0.0001$) significantly and negatively predicted the participants' non-constructive coping during COVID-19 pandemic.

Table 1.

Correlations Coefficients between Dimensions of Lifestyle and Constructive/ Non-Constructive Coping Strategies

	Constructive Coping Strategies		Non-Constructive Coping Strategies	
	Correlation Coefficients	2tailed Sig.[A]	Correlation Coefficients	2tailed Sig.
Physical Health	0.241	0.000	-0.252	0.000
Exercise And Health	0.292	0.000	-0.337	0.000
Weight Ctrl[B] And Nutrition	0.366	0.000	-0.340	0.000
Disease Prevention	0.277	0.000	-0.274	0.000
Psychological Health	0.360	0.000	-0.307	0.000
Spiritual Health	0.335	0.000	-0.288	0.000
Social Health	0.376	0.000	-0.269	0.000
Drug Avoidance	0.291	0.000	-0.345	0.000
Accident Prevention	0.284	0.000	-0.366	0.000
Environmental Health	0.225	0.000	-0.308	0.000
Lifestyle	0.407	0.000	-0.457	0.000

Note: A: Sig. = Two-Tailed Statistical Significance; B: Ctrl = Control

Table 2.

Correlation Coefficients between Dimensions of Socioeconomic Status and Constructive/Non-Constructive Coping Strategies

	Constructive Coping Strategies		Non-Constructive Coping Strategies	
	Correlation Coefficients	2tailed Sig.	Correlation Coefficients	2tailed Sig.
Income	0.450	0.000	-0.398	0.000
Economic Class	0.425	0.000	-0.377	0.000
Housing status	0.427	0.000	-0.393	0.000
Education	0.053	0.299	-0.121	0.017
SES	0.488	0.000	-0.460	0.000

Note: SES = Socioeconomic Status

Discussion

The results demonstrated that the participant's SES and lifestyle are associated with their coping strategies during the COVID-19 pandemic. According to the findings, the predictor variable SES could significantly and positively predict the participants' constructive coping strategies even after controlling for the effect of lifestyle. The participants' SES also was able to significantly and negatively predict the participants' non-constructive coping strategies even after controlling for the effect of lifestyle. The predictor variable lifestyle also could significantly and positively predict the participants' constructive coping strategies even after controlling the effect of SES. Lifestyle, also, could significantly and negatively predict the participants' non-constructive coping strategies after controlling for the effects of SES (see the results section). These findings was consistent with those of Putz et al. (2007) and Ruhafza et al. (2009). The findings of the present study concerning the relationship between lifestyle and constructive or non-constructive coping strategies also were found to be in line with those of Ashuri and Ashuri (2013).

In their research, Putz et al. (2007) revealed that low education level, low income, and emotional disturbance are associated with the use of non-constructive coping strategies among their sample. Additionally, in a study carried out by Ruhafza et al. (2009), it was suggested that high levels of education positively correlated with the use of constructive coping strategies, while negatively correlating with the selection of non-

constructive coping strategies. Higher intellectual performance in educated people is associated with their health-related behaviors, and, as a result, these people use more constructive coping strategies, which leads to a healthier life (Mulato & Schuler, 2002). As an explanation, it can be maintained that people with higher education have a richer behavioral repertoire, enabling them to use more constructive behaviors when facing stressful events and thus to manage the situation. On the contrary, people with lower education, due to lower self-efficacy, consider themselves confined and defeated by circumstances, and they therefore either do not take actions to solve the problems they face or try to solve them by resorting to inefficient methods.

Moreover, occupation, which is another component of socioeconomic status, can affect people's mental health. The research by Montaner et al. (2010) indicated that in different occupational groups, the mortality rate was higher in the workers who lacked professional skills. However, other components such as psychological conflict, job stress, and little coping ability were also more common in this group of people (Ahlebak & Eriksen, 2003). Thus, unskilled workers opt for more maladaptive coping strategies, which can be due to by higher job-related stress and job instability in these people.

Lifestyle is a person's approach to life that manifests itself in activities, attachments, and personal thoughts. In fact, lifestyle is more than just the personality or social class of the individual. In general, lifestyle includes a complete pattern of actions and reactions in the world (Aqaei et al., 2004). Choosing a lifestyle to maintain and

promote health and prevent diseases, one performs actions such as following a proper diet, sleep and activity, exercise, weight control, avoidance of smoking and alcohol use, and immunity against diseases, which altogether form the lifestyle. Health requires the promotion of a healthy lifestyle. Lifestyle is more important in that it affects the quality of life and disease prevention. Therefore, lifestyle correction is essential for maintaining and promoting health. Ensuring the health of individuals in society is one of the important pillars of the development of societies (Tal et al., 2011).

Any change in life that results from one's lifestyle requires some kind of readjustment. The methods of coping with life changes and the tensions resulting from these changes vary in different people and according to different situations (Ghazanfari & Qadampour, 2008; Forouzandeh & Delaram, 2003). Psycho-social abilities are also very important for effectively dealing with conflicts and life situations. These abilities enable a person to act positively and adaptively in relation to other human beings, society, culture, and environment to manage the stressful situation and to reduce the suffering caused by it and thus ensure his mental health (Sadeqi Movahhed, Narimani & Rajabi, 2008).

In explaining this issue, it can be stated that people with healthier lifestyles also incorporate healthier behavioral patterns to manage their lives and when they face stressful events they are less likely to use strategies contrary to their lifestyle and are more likely to use methods that are more effective in solving their problems where, as a result, they have better mental health.

Author Note:

All the authors actively participated in conceptualization, methodology, editing and review.

Statements:

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