

*Research paper*

## The Mediating Role of Perceived Social Support in the Relationship between Cognitive Emotion Regulation Strategies and Corona Disease Anxiety

Rahimi Taghanaki, Changiz<sup>1</sup>; Zare, Mina<sup>2</sup>; Chitsazi, Maryam\*<sup>3</sup>; Kamranpour Jahromi, Farideh<sup>4</sup>

1. Professor of Psychology, Department of Clinical Psychology, Shiraz University, Head of Counseling and Psychotherapy Center of Shiraz University, Shiraz, Iran [crahimi2016@hotmail.com](mailto:crahimi2016@hotmail.com)
2. Psychologist of Counseling and Psychotherapy Center of Shiraz University, Shiraz, Iran. [mina.zare73@gmail.com](mailto:mina.zare73@gmail.com)
3. Corresponding Author: Expert of Counseling and Psychotherapy Center of Shiraz University, Shiraz, Iran [machitsazi@gmail.com](mailto:machitsazi@gmail.com)
4. Deputy of Counseling and Psychotherapy Center of Shiraz University, Shiraz, Iran [kamranpourj@yahoo.com](mailto:kamranpourj@yahoo.com)

### Abstract

The aim of this study was to investigate the relationship between cognitive emotion regulation strategies and Corona disease anxiety mediated by social support. The research design was descriptive- correlational and the statistical population included all students studying at Shiraz University in the academic year 1399-1400, of which 293 were selected by convenience sampling. They responded to Corona Disease Anxiety Scale, Multidimensional Perceived Social Support Scale and the short form of Cognitive Emotion Regulation Questionnaire. The results showed that cognitive emotion regulation strategies had a significant relationship with corona anxiety both directly and indirectly through social support. The goodness-of-fit indices also indicated the good fit of the proposed model. These results, emphasize the importance of paying attention to these strategies, especially strengthening adaptive strategies along with providing social support.

**Keywords:** Cognitive emotion regulation strategies, corona anxiety, Covid-19, social support

### Introduction

Corona virus pandemic has had widespread psychological, social, and economic consequences (Brooks, et al., 2020). The constant risk of contracting the virus has been making individuals increasingly anxious. Such level of anxiety can lead to more vulnerability to the virus by itself. This anxiety has also had negative effects on students' learning ability and mental health (Karwowski, et al., 2020). Cognitive emotion regulation strategies are among the individual constructs that affect individuals' reactions to difficult situations such as this pandemic. These strategies helped individuals to manage their emotions and prevent excessive mental pressure (Gratz & Tull, 2010). Cognitive emotion regulation strategies are divided to two categories; adaptive and maladaptive (Garnefski, et al., 2001). Maladaptive strategies had a positive relationship with depression and anxiety while adaptive strategies had a negative relationship with these variables (Mohebi & Zarei, 2019). Another key variable in coping with difficult situations such as Covid-19 pandemic is perceived social support. Perceived social support is defined as the perception of individuals about the level and quality of support they may receive from their social network. Studies showed that the two variables of cognitive emotion regulation strategies and perceived social support had a strong relationship. Increased perceived social support had a positive relationship with higher tendencies to use adaptive cognitive emotion regulation strategies (Pejicic, et al., 2018). Considering the widespread prevalence of corona

anxiety on students' health and academic performance, the study of variables affecting it is very important. Therefore, the key hypothesis here is to show that cognitive emotion regulation strategies have either direct relationship or indirect relationship (through perceived social support) with Corona disease anxiety.

## Method

The research design was descriptive-correlational (Structural Equation Modeling). The statistical population was all students studying at Shiraz University in the academic year 1399-1400. Convenience sampling was used to collect data, the link of the questionnaires was provided to the students through Student system and student-related virtual pages to participate in this research voluntarily. The criteria for entering the research included employment at Shiraz University and the Students' willingness to participate in the study. After deleting some of the questionnaires, a sample of 293 students was obtained.

### Tools

**Corona Disease Anxiety Scale (CDAS):** This 18-item scale was designed by Alipour, et al. (2020) which is scored between 0-3, higher score indicates a higher level of anxiety. In the present study, Cronbach's alpha for psychological and physical symptoms of anxiety as well as the whole scale was 0.85, 0.73 and 0.86, respectively.

**Multidimensional Scale of Perceived Social Support (MSPSS):** The 12 items MSPSS developed by Zimet, et al. (1988), measuring Social support perceived by the individual in three dimensions: family, friends and important people in life. Each item was scored on a seven-point Likert scale. Cronbach's alpha for perceived support from family, friends and important people were 0.89, 0.92 and 0.88, respectively, in the current study.

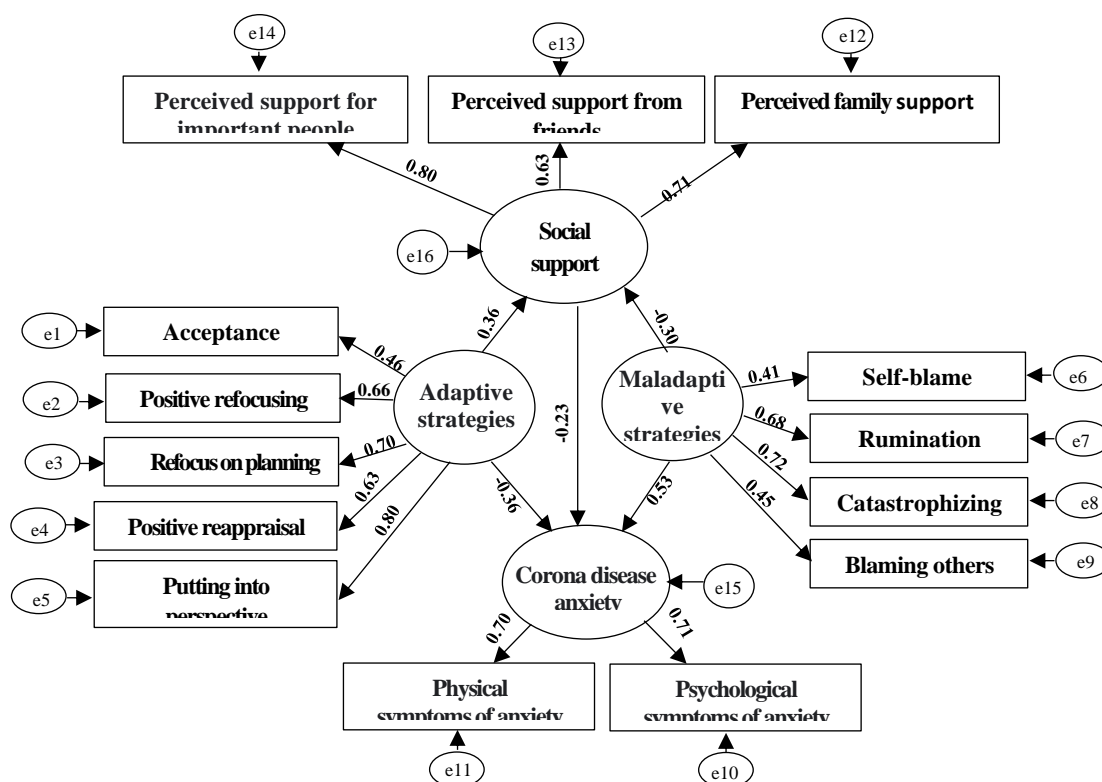
**Cognitive Emotion Regulation Questionnaire-short form (CERQ):** The CERQ is comprising 18 items and 9 subscales developed by Garnefski, and Kraaij (2006). This questionnaire measures adaptive strategies and maladaptive strategies. Items are rated on a five-point Likert scale. In the present study, Cronbach's alpha was 0.87 and 0.82 for adaptive and maladaptive strategies, respectively.

## Results

In order to analyze the data, Pearson correlation coefficient and structural equation modeling were used by using SPSS 24 and AMOS 24 software. Considering the values of skewness and elongation indices of the variables, the assumption that the variables were normal was established. Findings from Pearson correlation showed that there is a significant negative and positive correlation ( $P < 0.01$ ) between corona disease anxiety with adaptive and maladaptive strategies, respectively. In order to investigate the path coefficients between the variables, the conceptual model of the research presented below (Figure 1). Also, according to Table 1, the fit indices of the model indices showed the good fit of the proposed model and its compatibility with the obtained data.

**Table 1: Fit indicators of the proposed model**

CMIN.DF	GFI	AGFI	CFI	TLI	RMSEA
2.36	0.93	0.89	0.92	0.91	0.07



**Figure 1. Structural model of research**

Based on the findings, all paths of the model are significant. As can be seen in Table 2, the obtained coefficients indicate a direct relationship between adaptive strategies and maladaptive (P<0.01) with corona disease anxiety, with the difference that this relationship is in the opposite direction with respect to adaptive strategies. The results of Bootstrap test showed that social support plays a significant mediating role in the relationship between cognitive emotion regulation strategies and Corona disease anxiety.

**Table 2: Path coefficients of direct, indirect and total effects in the model**

path	Direct effects	Indirect effects	Total effects
Corona disease anxiety ← adaptive strategies	-0.36**	-0.08**	-0.44
Corona disease anxiety ← maladaptive strategies	**0.53	0.07**	0.60

### Discussion and Conclusion

Perceived social support was found to be a mediator between both types of cognitive emotion regulation strategies (adaptive and maladaptive) and Corona disease anxiety. Those who can rely on their friend's support during difficult times, feel less threatened by these situations. Limitations of the study include convenience sampling with only students as respondents from Shiraz university. Generalization of the results to other populations should be considered carefully. Since the role of some demographic variables such as gender has not been considered in this study, it is suggested that future research should examine such

effects. It is also recommended that adaptive cognitive emotion regulation workshops are included in students' university curriculum as key life skills.

## References

- Alipour, A., Ghadami, A., Alipour, Z., Abdollahzadeh, H. (2020). Preliminary validation of the corona disease anxiety scale (CDAS) in the Iranian sample. *Quarterly Journal of Health Psychology*, 8(32), 163-175. (Text in Persian). <https://doi.org/10.30473/hpj.2020.52023.4756>
- Brooks, S. K., Webster, R. K., Smith, L. E., Woodland, L., Wessely, S., Greenberg, N., & Rubin, G. J. (2020). The psychological impact of quarantine and how to reduce it: rapid review of the evidence. *The Lancet*, 395(10227), 912-920. [https://doi.org/10.1016/S0140-6736\(20\)30460-8](https://doi.org/10.1016/S0140-6736(20)30460-8)
- Cai, W. P., Pan, Y., Zhang, S. M., Wei, C., Dong, W., & Deng, G. H. (2017). Relationship between cognitive emotion regulation, social support, resilience and acute stress responses in Chinese soldiers: Exploring multiple mediation model. *Psychiatry Research*, 256, 71-78. <https://doi.org/10.1016/j.psychres.2017.06.018>
- Garnefski, N., & Kraaij, V. (2006). Cognitive emotion regulation questionnaire—development of a short 18-item version (CERQ-short). *Personality and Individual Differences*, 41(6), 1045-1053. <https://doi.org/10.1016/j.paid.2006.04.010>
- Garnefski, N., Kraaij, V., & Spinhoven, P. (2001). Negative life events, cognitive emotion regulation and emotional problems. *Personality and Individual Differences*, 30(8), 1311-1327. [https://doi.org/10.1016/S0191-8869\(00\)00113-6](https://doi.org/10.1016/S0191-8869(00)00113-6)
- Gratz, K. L., & Tull, M. T. (2010). Emotion regulation as a mechanism of change in acceptance-and mindfulness-based treatments. In R. A. Baer (Ed.), *Assessing mindfulness and acceptance: Illuminating the Processes of Change*, 107-133, Oakland, CA: New Harbinger Publications.
- Karwowski, M., Kowal, M., Groyecka, A., Białek, M., Lebuda, I., Sorokowska, A., & Sorokowski, P. (2020). When in danger, turn right: Does Covid-19 threat promote social conservatism and right-wing presidential candidates? *Human Ethology*, 35, 37-48. <https://doi.org/10.22330/he/35/037-048>
- Mohebi, M., & Zarei, S. (2019). The relationship between emotion regulation strategies and state and trait competitive anxiety in South Korean Ambassador's Cup taekwondo athletes. *Shenakht Journal of Psychology and Psychiatry*, 6(2), 86-101. (Text in Persian). <http://dx.doi.org/10.29252/shenakht.6.2.86>
- Pejicic, M., Ristic, M., & Andelkovic, V. (2018). The mediating effect of cognitive emotion regulation strategies in the relationship between perceived social support and resilience in postwar youth. *Journal of Community Psychology*, 46(4), 457-472.
- Zimet, G. D., Dahlem, N. W., Zimet, S. G., & Farley, G. K. (1988). The multidimensional scale of perceived social support. *Journal of Personality Assessment*, 52(1), 30-41. [https://doi.org/10.1207/s15327752jpa5201\\_2](https://doi.org/10.1207/s15327752jpa5201_2)

## Acknowledgments

The authors wish to thank all students at Shiraz University who participated in this research.

## Funding

This research did not receive any specific grant from funding agencies in the public, commercial, or not for profit sectors.

## Conflict of interest

The authors did not declare conflict of interest.



This article is an open-access article distributed under the terms and conditions of the Creative Commons Attribution-Noncommercial 4.0 International (CC BY-NC-ND license) (<https://creativecommons.org/licenses/by-nc-nd/4.0/>).