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COGNITIVE REAPPRAISAL AND MENTAL HEALTH PROBLEMS IN FEMALE UNIVERSITY TEACHERS DURING COVID-19: A MEDIATING ROLE OF EMOTIONAL EXHAUSTION

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Date Received:

Jan 28th, 2022

Date Revised:

Aug 5th, 2022

Date Accepted:

Aug 6th, 2022

This article may be cited as

Pervez S, Saleem S, Zahra ST. Cognitive Reappraisal and Mental Health Problems in Female University Teachers during COVID-19: A Mediating Role of Emotional Exhaustion. *J Postgrad Med Inst* 2022;36(3): 186-190. <http://doi.org/10.54079/jpmi.36.3.3052>

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ABSTRACT

Objective: To find out the role of emotional exhaustion as mediation in the association of cognitive reappraisal and mental health problems in female university teachers in COVID-19.

Methodology: A correlational research design was utilized to get participants from different government and private universities of Lahore. Participants of this study were 100 university teachers having the ages of 25 to 60 years. Participants were selected using purposive sampling technique. Scales of Cognitive Reappraisal, Emotional Exhaustion, and Psychosocial Reactions of COVID-19 were utilized to get the data from the participants.

Results: Findings of correlation analysis suggested interrelatedness of cognitive reappraisal, emotional exhaustion, and mental health problems. Additionally, mediation analysis suggested the significant mediating role of emotional exhaustion in the association of cognitive reappraisal and mental health issues.

Conclusion: By identifying the risk and protective factors of mental health problems of working women at early stages, we can prevent them from adverse consequences of these issues.

Keywords: Cognitive Reappraisal; Emotional Exhaustion; Mental Health; University Teachers; COVID-19.

INTRODUCTION

COVID-19 outbreak has caused to affect nearly every area in the lives of people.^{1,2} Fear of contagion, fear of death, fear of losing loved ones or seeing them sick, worries related to job have led to psychological distress and has triggered mental health problems.³ People have continued to face anxiety, depressive thoughts, post-traumatic stress, panic attacks, sleep problems, low mood, overthinking, social isolation, loneliness, fear of death, loss of loved ones, financial crisis, insecurity, suicidal thoughts, psychosis, and somatic symptoms.⁴ Although COVID-19 influences everyone's mental health but the working women were at greater risk of developing mental health problems. Looking at the profession of teaching, it is already very hectic and requires a lot of energy consumption mentally and physically.⁵ Not only do these teachers have work-related stress but also familial commitments that become a constant source of stress and anxiety for them. COVID-19 increased the challenges of teachers as they shifted to an online working system and teaching from home with the help of online portals such as Zoom and Moodle.^{6,7} They had to maintain balance in work and family simultaneously which caused numerous adjust-

ment issues leading them towards numerous mental health problems.^{8,9}

Researchers explored the higher prevalence rate psychological problems in university teachers during COVID-19 associated with numerous adverse consequences including poor performance, disorientation, anxiety, lower well-being, and quality of life.¹⁰ Therefore, to understand how working women, cope with these mental health issues through this hour of crisis, the risk and protective factors of mental health encountered by university teachers during the COVID-19 epidemic should be investigated.

Cognitive reappraisal is one of the most prominent protective factors of mental health problems in working women during COVID-19.¹⁰ Cognitive reappraisal refers to an individual's attempts to construct a potentially emotive event in a way that influences its emotional impact.^{11,12} Having qualities in oneself to regulate intrinsically as well as extrinsically through cognitive reappraisal means that a person possesses the ability to regulate their negative emotion such as sadness, anger, frustration, and fear etc.^{12,13} Researchers also explored that cognitive reappraisal also helps individu-

als in overcoming their level of emotional exhaustion by preventing them from negative thoughts and feelings.¹³

Additionally, during COVID-19, researchers investigated emotional exhaustion as one of the most important risk factors for mental health issues in working women.¹⁴ Emotional exhaustion is thought to be at the heart of burnout, which is defined as a complicated path of stressful events leading to workplace stress and the difficulty in coping with one's job, both emotionally and psychologically, thus playing a crucial role in the mental health of working people.¹⁵

Given the negative effects of mental health issues in working women during COVID-19, it is crucial to investigate the risk and protective variables of these issues so we can improve these women's mental health functioning. The objective of the current study is to determine how cognitive reappraisal, emotional exhaustion, and mental health issues among female university teachers during COVID-19 relate to one another. It was also intended to determine whether emotional exhaustion played a mediating role in the connection between cognitive reappraisal and mental health issues.

■ METHODOLOGY

This cross-sectional research was conducted at the Department of Clinical Psychology, University of Management and Technology-Lahore from April to May 2020. In this study, female teachers from university (25-60 Years) were enrolled after the approval from the Ethical Review Committee. A purposive sampling technique was used to choose 100 participants from private (50%) and government (50%) universities in Lahore, Pakistan, whose ages ranged from 25 to 60 ($M=38.44$, $SD=12.06$). The sample size was determined by using the criterion given by Harris¹⁶ i.e. to recruit 30 participants per predictor. As there are two predictors'

cognitive reappraisal and emotional exhaustion of mental health problems, therefore, the minimum sample size for this study was 60 participants. Participants with any type of physical disability and participants that have not worked from home during the COVID-19 lockdown were excluded from the study.

Basic demographic information including age, qualification, marital status, family system, institution type, and work from home during COVID-19 was also obtained along with study measures. Findings suggested that majority of the participants (60%) were married and having nuclear family system (64%). Cognitive Reappraisal Scale taken from Emotion Regulation Questionnaire¹⁷ was used to measure cognitive reappraisal of the participants. The scale consists of six items that are scored on a seven-point Likert scale ranging from 1 (strongly disagree) to 7 (strongly agree). The scores, which ranged from 1 to 42, were calculated as the sum of the scores on each scale item, with a high score indicating a higher level of cognitive reappraisal. For the current study, the Cronbach alpha of the Cognitive Reappraisal Scale was .71, suggesting good internal consistency of the scale. The Emotional Exhaustion Scale, which was derived from the Burnout Scale, was used to assess emotional exhaustion.¹⁸ The respondents responded each item on a four-point Likert-type scale from 0 (not at all) to 3 (very much). The Emotional Exhaustion Scale has a scoring range of 0 to 54, with a higher score indicating more emotional exhaustion. The current study's Cronbach alpha for the Emotional Exhaustion Scale was .87, suggesting high internal consistency of the scale. Psychosocial Reactions of COVID-19 Scale¹⁹ was used to measure the mental health problems of the participants. It has 28 items and two factors: depressive symptoms and anxiety, with a four-point rating scale ranging from 0 (not at all) to 3 (a lot). A high score indicates a higher level of mental health difficulties. The total score for mental health problems was

computed by summing the scores on each item of the scale, with possible scores ranging from 0 to 84. Cronbach alpha of Psychosocial Reactions of COVID-19 Scale for the existing research was .93 indicating good internal consistency of the scale.

Principles of research ethics were followed during the data collection. First, a verbal agreement to participate in the research was carried out by participants. Second, participants were also cleared that their participation in the research is voluntary. Third, participants were fully allowed to quit the research at any point in time. Fourth, they were also assured about the confidentiality and privacy of the information taken from them. Finally, the purpose of the research project was also briefed to them.

The data were analysed using SPSS version 25 (Statistical Package for Social Sciences). Descriptive analyses were used to calculate the mean and standard deviation of continuous variables, as well as the frequencies and percentages of categorical variables. The Pearson Product Moment Correlation was computed to investigate the relationship between mental health issues, cognitive reappraisal, and emotional exhaustion. Using mediation analysis, it was determined how emotional exhaustion served as a mediating factor in the relationship between cognitive reappraisal and mental health issues.

■ RESULTS

The findings demonstrated a significant negative relationship between cognitive reappraisal and mental health problems. ($r = -0.23$, $p < 0.05$) as shown in Table 1. The relationship between cognitive reappraisal, emotional tiredness, and mental health issues was examined using correlation as shown in Table 2. The findings demonstrate a significant positive relationship between emotional exhaustion and cognitive reap-

praisal ($r = -0.22, p < 0.05$). Additionally, it was discovered that emotional exhaustion has a significant positive association with mental health issues. ($r = 0.56, p < 0.001$).

Correlation findings revealed significant relationship between emotional exhaustion, cognitive reappraisal, and mental health problems, validating Baron and Kenny's assumptions.²⁰ Hence, using Hayes²¹ Bootstrapping Approach, the mediating function of emotional exhaustion in the association of cognitive reappraisal and mental health problems was investigated through PROCESS (v3.5) as shown in Table 2.

Findings reported in Figure 1 demonstrates that the total effect of cognitive reappraisal on mental health problem is significant ($\beta = -0.47, SE = 0.21, p < 0.01$). Moreover, Results also show the significant direct effect of cognitive reappraisal on emotional exhaustion ($\beta = -0.37, SE = 0.12, p < 0.05$) and emotional exhaustion on mental health problems ($\beta = 1.00, SE = 0.16, p < 0.001$). Findings of mediation analysis indicated that emotional exhaustion fully mediates¹⁹ the association of cognitive reappraisal and mental health problems as after

controlling the role of emotional exhaustion the association of cognitive reappraisal and mental problems is no more significant ($\beta = -0.16, SE = 0.18, p = 0.37$). Additionally, the results represented significant indirect effect ($-0.37 \times 1.00 = -0.37$) of cognitive reappraisal on mental health problems via emotional exhaustion ($\beta = -0.20, SE = 0.12, LL = -0.43, UL = -0.26$), hence, fulfilling the assumptions of Hayes.²⁰ Therefore, it might be stated that emotional exhaustion significantly mediates the link between cognitive reappraisal and mental health.

DISCUSSION

COVID-19 is a serious life-threatening issue that has adversely influence the psychosocial and mental health functioning of working women due to challenges faced by them in terms of work-family equilibrium due to the online working system.^{4,5,22} Hence, the risk and protective factors of mental health disorders in working women during COVID-19 were examined in the current study. For this purpose, it was looked into how emotional exhaustion mediates the link between cognitive reappraisal and mental health issues.

The results of this study showed a significant inverse relationship between cognitive reappraisal and mental health problems among working women during COVID-19. Previous studies had also supported these results. In order to effectively manage mental health concerns, cognitive reappraisal helps people to view them as a challenge rather than a threat.¹⁰ Regular use of cognitive reappraisal has been linked to increased positive affect, decreased negative affect, and improved mental health functioning, according to research.^{12,13}

Furthermore, the findings revealed a significant negative relationship between cognitive reappraisal and emotional exhaustion in working women during COVID-19. Additionally, these findings are in line with past empirical research.²³ Cognitive reappraisal is a healthy and adaptive regulatory reaction to stressful circumstances because it may successfully change inner feelings in emotionally taxing situations like COVID-19. Working women can overcome their emotional exhaustion by using cognitive reappraisal in this way during the COVID-19 epidemic.

Furthermore, data showed that emotional

Table 1: Inter-Correlations of Cognitive Reappraisal, Emotional Exhaustion, and Mental Health Problems (n=100)

Variables	M	SD	EE	CR	MHP
EE	13.91	7.08	-	-0.22*	0.56***
CR	28.69	6.03	-	-	-0.23*
MHP	24.79	12.93	-	-	-

Note. EE = Emotional Exhaustion; CR = Cognitive Reappraisal; MHP = Mental Health Problems
* $p < 0.05$, *** $p < 0.001$, $df = 99$.

Table 2: Mediation Analysis of Emotional Exhaustion in Cognitive Reappraisal and Mental Health Problems (n=100)

		Outcome						
Antecedent		EE (M)			c'	MHP (Y)		
		β	SE	p		β	SE	p
CR (X)	a	-0.37	0.12	0.03*		-0.16	0.18	0.37
EE (M)		---	---	---	b	1.00	0.16	0.001***
Constant	i	19.50	3.43	0.001	i	15.54	6.07	0.01
		R ² = 0.07					R ² = 0.32	
		F (1, 98) = 2.77, p = 0.02*					F (2, 97) = 22.90, p = 0.001***	

Note. EE = Emotional Exhaustion; CR = Cognitive Reappraisal; MHP = Mental Health Problems
* $p < .05$, *** $p < .001$.

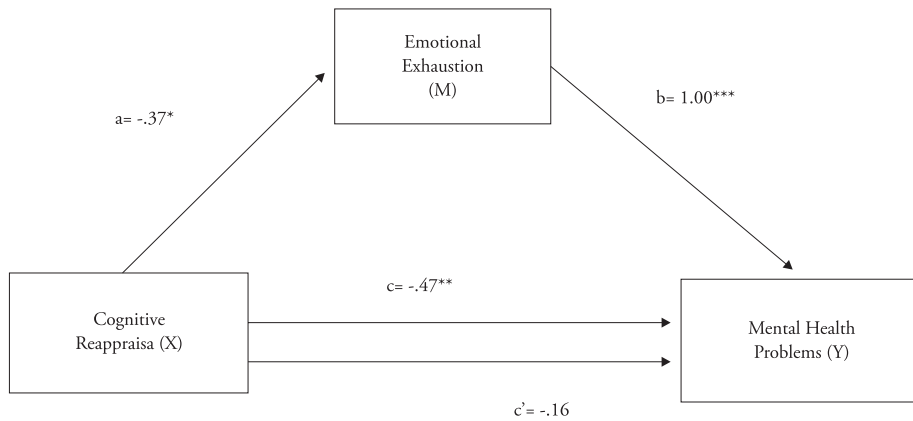


Figure 1: Mediation model of emotional exhaustion (M) on the association between cognitive reappraisal (X) and mental health problems (Y)

exhaustion is strongly positively connected with mental health problems, which is consistent with previous research.^{14,15} Emotional exhaustion has a negative impact on how people perceive stress-related elements at work and at home, resulting in mental health issues. COVID-19 pandemic caused the elevated level of emotional exhaustion in teachers due to challenges they faced due to online working system leading them towards a greater level of mental health problems.¹⁴

Additionally, results suggested that emotional exhaustion significantly mediates the association between cognitive reappraisal and mental health problems. previous empirical researches also supported these results indicating that using adaptive emotion regulation strategies like cognitive appraisal helps the individual to constructively manage their negative emotional states which in turn helps them to reduce and overcome the mental health issues caused by any stressful situation like COVID-19 pandemic.^{10,14,22} Therefore, training workshops for teachers to boost their adaptive emotion regulation strategies can help them in overcoming their burnout and emotional exhaustion, and in this way, we can reduce their mental health issues.

Despite, numerous strengths and implications, the existing research has also some

drawbacks. The information was gathered just from the urbanised population; hence the results cannot be generalized to the rural population. Furthermore, the study participants were merely female teachers. For future research, a comparative study can also be done by taking male teachers as well as female teachers as the population to see the predictors of mental health problems during the current pandemic.

CONCLUSION

Instead of being caused by a single factor, mental health concerns during COVID-19 are caused by a complex interplay of multiple elements. The current study looked at how cognitive reappraisal, emotional exhaustion, and mental health issues in working women relate to one another during COVID-19. It discovered that emotional exhaustion acts as a mediator in the interaction between cognitive reappraisal and mental health issues.

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Author's Contribution

SP conceived the idea, collected the data, and draft the manuscript. SS and STZ contributed in the data analysis and revision of the manuscript. Authors agree to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.

Conflict of Interest

Authors declared no conflict of interest

Grant Support and Financial Disclosure

None

Disclaimer

The research paper was presented at the World Women Conference III and the abstract was published in the abstract booklet of the conference.

Data Sharing Statement

The data that support the findings of this study are available from the corresponding author upon reasonable request.