

Original Article

The prevalence of depression in non-hospital employees in the outbreak of Covid-19: The role of mobbing, workplace incivility, and ostracism

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Abstract

The aim of this study was to determine the prevalence of depression symptoms and the predictive role of mobbing, incivility and ostracism in non-hospital workers. The research method was correlation. The population of this research consisted of all employees of non-hospital government offices in Kermanshah. Among them, 371 employees were selected by convenience sampling. The Depression, Luxembourg Workplace Mobbing, and Workplace Incivility, and Workplace Ostracism scales were used to collect the data. The data was analyzed by the Pearson correlation coefficient and stepwise regression. According to descriptive results, 15.9% of non-hospital workers experienced moderate to severe depression symptoms during the COVID-19 outbreak. The Pearson correlation results showed that there was a positive relationship between mobbing ($r=.33$), workplace incivility ($r=.46$), and workplace ostracism ($r=.41$) with employee depression. Based on the results of stepwise regression, workplace incivility and workplace ostracism had a significant role in predicting depression ($p < 0.01$). Based on the results, it is suggested to modify mobbing, workplace incivility, and workshops and psychological training for employees in conditions similar to COVID-19 which can lead to a reduction in workplace ostracism.

Keywords

Depression
Incivility
Mobbing
Workplace ostracism

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Introduction

The COVID-19 pandemic caused many changes in the world and its economic and social impacts were unprecedented (Aguilar-Quintana, Nguyen, Araujo-Cabrera, & Sanabria-Díaz, 2020). Until August 19, 2023, more than 693 million infected and more than 6,500,000 deaths have been recorded worldwide due to Covid-19; In Iran, more than 7,500,000 patients and more than 146,000 deaths have been reported due to Covid-19 (World Health Organization, 2023). Depression is one of the psychological consequences of Covid-19 (Lakhan, Agrawal, & Sharma, 2020). The rates of mild, moderate, moderately- severe, and severe depression in the outbreak of covid-19 were 24.6%, 14.8%, 7.9%, and 5.1%, respectively, and before covid-19 were 16.2%, 5.7%, 2.1%, and 0.7%, respectively (Ettman et al., 2020). In a systematic review, the prevalence of depression ranged from 14.3% to 81.7% (Mud Shukri et al, 2023). The rate of depression in Iran has been reported to be between 7.9% and 32.7% by various studies. (Khademian, Delavari, Koohjani, & Khademian, 2021; Nakhostin-

Ansari et al., 2020; Effati-Daryani et al., 2020).

Depression among nurses and hospital workers was investigated during the Covid-19 outbreak (Ariapooran & Amirmanesh, 2020; Ariapooran, Ahadi, & Khezeli, 2022; Ariapooran, & Abdolmaleki, 2023); Depression rate in hospital workers was higher than non-hospital workers (Sasaki, Kuroda, Tsuno, & Kawakami, 2020). A study revealed that there was no differences between depression levels among health workers and non-health workers during the Covid-19 outbreak (Ceri & Cicek, 2021). Research has also focused on depression in non-hospital workers (Deguchi et al., 2022). For example, in a study it was shown that 27.5% of non-health workers experienced depression during the Covid-19 outbreak (Smith, Oudyk, Potter, & Mustard, 2021). Psychological problems have been identified as one of the consequences of covid-19 in non-hospital workers in Iran (Irajirad, 2020). Depression has been reported among military workers during the outbreak of COVID-19. (Khazaei, Jalali Farahani, & Salehi Sahlabadi, 2022). Considering the increase in the level of depression in non-hospital workers during the Covid-19 pandemic (Smith et al,

2021), examining the interpersonal variables that are related to it is crucial. In this study, variables such as mobbing, workplace incivility, and workplace ostracism have been selected as predictor variables, which have not been investigated in previous studies in the outbreak of Covid-19.

Mobbing is an intense process during which a person becomes the target of negative social actions; Mobbing is a specific form of discrimination in employee relationships that reveals the dysfunctional aspects of personal relationships (Vveinhardt & Streimikiene, 2015). A group of individuals can engage in mobbing behavior directly targeting one or more individuals. Mobbing, which can be verbal or non-verbal, is systematic and continuous; for a behavior to be considered mobbing, it must be repeated for at least 6 months and at least once per week. (Perry & Mankin, 2004). Mobbing is associated with psychological problems such as anxiety, depression, and low self-esteem, and mobbing victims are described as conscientious and strict with previous symptoms of anxiety and depression, as well as having low social skills (Kante, 2020). In a study 86.2% of employees were exposed to mobbing (Sener et al., 2023). Victims of mobbing experience less emotional stability than non-victims (Conte, 2020). In addition, mobbing is associated with low job performance (Kambur, 2022). The relationship between mobbing and depression, anxiety and stress has been confirmed (Machado, Bernardes, Monteiro, & Marin, 2021). Another study has revealed that mobbing victims experience greater depression than non-victims (Alfano, Ramaci, Landolfi, Lo Presti, & Barattucci, 2021). In another study, depression was linked to mobbing (Sener et al., 2023).

Workplace incivility refers to "deviant behaviors of low intensity with an ambiguous intent to harm others and a violation of workplace norms based on mutual respect. These behaviors are distinctly rude and uncivilized and show a lack of consideration for others" (Andersson & Pearson, 1999, p. 457). Although incivility overlaps with some other concepts such as bullying and employer abuse, it is a distinct variable from them (Yao, Lim, Guo, Ou, & Ng, 2021). Examples of workplace incivility-related behaviors include: "raising your voice while talking to the person", "opening the drawers of the person's desk without prior permission", "not consulting the person when it is usually expected to refrain" and "talking behind a person's" (Martin & Hine, 2005). Individuals who report workplace incivility also experience high negative affect and low emotional stability (Han et al., 2021), and low self-esteem (Yao et al., 2021). Various studies have shown that workplace incivility has a positive impact on employees' depression (Geldart, Langlois, Shannon, Cortina, Griffith, & Haines, 2018; Carter & Loh, 2017; Gilmer et al, 2023). Findings A study showed that daily experienced incivility positively predicts anger and depressive mood (Adiyaman & Meier, 2022).

Another variable that negatively affects employees is workplace ostracism (Howard, Cogswell, & Smith,

2020). Ferris first proposed the concept of workplace ostracism and stated that when employees are rejected in the workplace, they are not informed and perceived disrespectful behavior by others, they experience workplace ostracism (Ferris, Berry, Brown, & Lian, 2008). In other words, workplace ostracism is a form of violence in which employees ignore other employees (Liu & Xia, 2016). Compared to the behavior of incivility, bullying, etc., workplace ostracism is a passive-aggressive behavior that exists in the organization and its employees, and it seems like silence, ignorance, and not responding to a vague greeting (Hitlan, Clifton, & DeSoto, 2006). Workplace ostracism has a negative relationship with employee performance, psychological well-being and job satisfaction, commitment and organizational justice (Wang et al., 2023; Howard et al., 2020). Furthermore, research has demonstrated that workplace rejection is connected to a depressed mood (Williams, & Liu, 2022; Rudert, Janke & Greifeneder, 2021; Niu, Sun, Tian, Fan, & Zhou, 2016). A study has shown that one of the long-term consequences of ostracism is depression (Jiang & Chen, 2020).

The aim of the present study was to investigate the relationship between mobbing, incivility and ostracism workplace in predicting depression among non-hospital employees during the outbreak of Covid-19. Considering that during the outbreak of Covid-19, depression among employees has been reported (Smith et al, 2021; Irajirad, 2020; Khazaei et al, 2022; Restrepo-Martínez, 2023; Conejero et al., 2023), Investigating variables related to employee depression in the Covid-19 outbreak is of particular importance. In addition, conducting the present research and identifying the most important negative variables related to depression in non-hospital employees during the period of Covid-19 can be useful in organizational planning to reduce the psychological problems of employees, including depression. In addition, the current research and its results will contribute to the research literature in the field of variables related to employee depression in a condition such as Covid-19 and will provide the necessary background for researchers to pay attention to the variables related to employee depression.

Method

Participants

The research method of this research was descriptive-correlation. Based on this method, predictor variables include mobbing, incivility, and ostracism in the workplace while depression is a criterion variable. The study population of this research was consisted of all employees of government and non-government offices (except hospital employees) of Kermanshah city. Research questionnaires were made distributed among 401 employees by convenience sampling method. Among the respondents, 372 (92.77%) people completed the questionnaires completely. Among the research sample, 112 (3.19%) were women and 259

(69.81%) were men; 36 (9.71%) employees had a diploma, 74 (19.94%) had an associate degree, 223 (60.11%) had a bachelor's degree, and 38 (10.24%) had a master's degree or higher. The mean age and work experience were 38.82 ± 10.46 and 16.33 ± 7.56 , respectively.

Instrument

Beck Depression Scale (BDI-13):

This scale was developed by Beck et al. (1974; cited by Dadfar & Klibatsiva, 2016) and has 13 items. The method of answering each item is based on a four-point scale from 0 to 3, and the total score varies from 0 to 39. In the research of Beck et al. (1974; cited by Dadfar & Klibatsiva, 2016), the correlation coefficient between the short and long version (21 items) of the questionnaire was between 0.89 and 0.97. Regarding the cut-off point of the questionnaire, scores 0 to 3, 4 to 7, 8 to 11, 12 to 15, and 16 to 39, respectively indicate normal, mild, mild-moderate, moderate, and severe depression in the general population. Cronbach's alpha coefficient, test-retest reliability, and quantification of this scale in Iran are 0.91, 0.94, and 0.89, respectively (Ebrahimi, Barekatin, Bornamanesh, & Nassir, 2015). In the present study, Cronbach's alpha coefficient of this scale was 0.83.

Luxembourg mobbing scale:

This scale was created by Steffgen, Sischka, Schmidt, Kohl, & Happ (2019) and has 5 items. The method of answering each question is based on a 5-point Likert scale from "never = 1" to "always = 5". Scores on this scale range from 5 to 25. Cronbach's alpha coefficient of this scale in the three countries of Luxembourg, Germany and France was 0.76, 0.73 and 0.71, respectively, and 0.73 in total (Steffgen et al., 2019). Also, a significant positive relationship was obtained between this scale with the scale of fatigue ($r=0.49$) and psychological stress ($r=0.50$), which shows the validity of this scale. In the study of Khairabadi Borchaloi, Ariapooran, & Karimi (2023), the Cronbach's alpha coefficient of this scale was 0.71 and the relationship of this scale with the workplace incivility scale (Cortina, Magley, Williams, & Langhout, 2001) was positive and significant ($r=0.57$). In the present study, Cronbach's alpha coefficient of this scale was 0.69.

Work environment incivility scale:

This scale was created by Cortina et al (2001) and is a

7-item scale that the respondent answers based on a 4-point Likert scale as "never"=1 to "always"=5. The range of scores of this scale is between 7 and 49. Cronbach's alpha coefficient of this scale was 0.89; In examining the convergent validity of this scale, results showed that this scale has a significant relationship with the workplace incivility scale of Donovan, Drago & Munson (1998; cited by Cortina et al., 2001). In the present study, Cronbach's alpha coefficient of this scale was 0.78.

Workplace ostracism scale:

This scale was created by Ferris et al, (2008) and has 10 items. The method of responding to each item is based on a five-point Likert scale (1=never to 5=always). The range of scores of this scale is between 10 and 50. Higher scores indicate a stronger feeling of ostracism in the work environment. This scale had convergent and discriminant validity, and criterion validity was shown through the relationship of the scale with well-being, job attitude, job performance, and withdrawal scales (Ferris et al., 2008). In one study, Cronbach's alpha for this scale was 0.94 (Zhu & Zhang, 2021). In Hosseini, Ghorbani Paji, and Akbari's research (2019), Cronbach's alpha coefficient of this scale was 0.92. In examining the validity of this scale, the correlation of each item with the whole scale was between 0.70 and 0.85 (Hosseini et al., 2019). In the present study, the Cronbach's alpha coefficient of this scale was 0.71.

Procedure

Researchers explained the aim of the study to the participants. All participants signed the written consent forms. Participants were assured that their data would be confidential. The researchers presented the results, interpretation, and possible solutions if the participants were interested in the results or interpretation. Participants answered the questionnaires for 25 to 35 minutes. Finally, Data were analyzed by SPSS-26 using the Pearson correlation and stepwise regression.

Results

Table 1 shows that 64.15% of employees were without depression, 11.59% had mild depression, 9.97% had mild to moderate depression, 8.62% had moderate depression, and 6.47% had severe depression. In other words, the prevalence of moderate to severe depression was 15.9%.

Table 1. The Prevalence of Depression Symptoms in Employees

	without depression	mild depression	mild to moderate depression	moderate depression	severe depression
Frequency	235	43	37	32	24
Percent	64.15%	11.59%	9.97%	8.62%	6.47%

Table 2 shows the mean and deviation of the variables. Also, in this table, the values of skewness and kurtosis, which are between -2 and +2, show that the data distribution is normal (Byrne, 2013) and parametric

tests can be used. Table 3 shows the results of Pearson's correlation coefficient to examine the relationship between predictor and criterion variables.

Table 2. The Mean (M), Standard Deviation (SD), Skewness, and Kurtosis of the Independent and Dependent Variables

Variables	M	SD	Skewness	Kurtosis
Mobbing	13.79	2.37	-0.59	0.35
Workplace incivility	24.61	5.17	-0.40	0.81
Workplace ostracism	25.41	6.18	0.07	-1.16
Depression	7.15	6.79	0.71	-.90

According to Table 3, there is a significant negative relationship between mobbing ($r=0.33$), workplace incivility ($r=0.46$) and workplace ostracism ($r=0.41$) with employee’s depression. The increase in mobbing, incivility, and ostracism in the workplace has resulted in an increase in the level of depression among employees, and vice versa. Table 3 shows the results of regression with the stepwise method for predicting depression symptoms based on mobbing, workplace incivility and workplace ostracism. Before the stepwise regression analysis, the variance inflation factor (VIF) value and

the tolerance value were conducted to linearly correlation between variables. The VIF value should be less than 3, and the tolerance value close to 1 (less than 1). In other words, if the VIF and tolerance values are appropriate, it shows that the predictor variables are linearly related to the criterion variable. However, there is no high correlation between predictor variables. In addition, the Durbin-Watson value was 1.93, which is a value between 1.5 and 2.5, indicating that there is no autocorrelation between the data (Guha and Bandyopadhyay, 2016).

Table 3. Pearson correlation results to investigate the relationship between mobbing, incivility and ostracism in the workplace with depression

Variables	Mobbing	Incivility	Ostracism	Depression
Mobbing	1.0	0.55**	0.15*	0.33**
Incivility		1.0	0.26**	0.46**
Ostracism			1.0	0.41**
Depression				1.0

* $p<0.05$ ** $p<0.01$

According to Table 4, approximately 27% of the variance of depression symptoms in employee is explained by predictor variables ($f=21.16$, $p<.001$). The results of stepwise regression showed that the Incivility

and workplace ostracism have been able to predict depression symptoms, respectively ($p<.01$). But the role of mobbing not meaningful.

Table 4. Stepwise regression results to investigate the prediction of depression through mobbing, incivility workplace, and ostracism workplace

Model	R ²	Adj.R ²	Unstandardized Coefficients		Standardized Coefficients		t	Sig.	Collinearity Statistics	
			Std. Error	B	Beta	Tolerance			VIF	
Incivility	.464	.22	.806	.080	.464	10.072	.001	1.0	1.0	
Ostracism	.52	.266	.366	.070	.257	5.250	.001	.825	1.21	
Mobbing	.524	.269	.288	.438	.083	1.52	.13	.66	1.51	

Discussion

The purpose of this study was to investigate the prevalence of depression in employees and the predictive role of mobbing, incivility and ostracism in the workplace in predicting depression symptoms. According to descriptive findings, 15.9% of non-hospital workers had moderate to severe depression. This research is in line with previous findings (Smith et al, 2021; Irajirad, 2020; Khazaei et al, 2022), which showed that non-hospital workers experienced depression in the Covid-19 outbreak.

In the explanation of this finding, it can be argued that in the period of covid-19, the employees faced closure and quarantine conditions, and in the difficult conditions of covid-19, many of them were working in shifts or part-time in offices; as a result, they may experience stress from contracting Covid-19 (Sener et al., 2023), and this can cause negative mood and depression in them. In addition, employees may have exposed family members to the risk of contracting Covid-19 during

their commutes to the workplace and may have contracted Covid-19 themselves; Therefore, it can be said that the experience of such stress may lead to an increase in depression symptoms in them.

The relationship between mobbing and depression symptoms was positive, but the regression results did not confirm the role of mobbing in predicting depression. Until this research, no research was found on the relationship between mobbing and depression in the outbreak of Covid-19. This result is consistent with previous findings that showed a positive correlation between mobbing and employee depression (Machado et al., 2021; Conte, 2020; Alfano et al., 2021; Sener et al., 2023).

It is argued that employees who experience mobbing in the workplace and are exposed to it weekly may experience psychological problems, including depression. In other words, if colleagues are harassed in the workplace by other colleagues or by the management, mobbing is a constant stress for them,

causing them to be more apprehensive and worried in the workplace than their colleagues, which can lead to depression.; because the presence of a harassing colleague in the work environment causes severe stress in colleagues, and based on the theory of emotional events of the abusive person and the harassing colleague, it creates stress in the work environment and not only creates negative emotions in colleagues (Chen et al., 2022; Sener et al., 2023), but also it causes psychological problems including depression in them.

There was a positive correlation between workplace incivility and depression symptoms, and based on the regression results, workplace incivility was significant in predicting depression. This result is consistent with previous findings that showed that workplace incivility has a positive relationship with depression in employees (Geldart et al., 2018; Carter & Loh, 2017; Adiyaman & Meier, 2022; Gilmer et al., 2023).

It can be argued that based on the Luxembourg mobbing questionnaire (Steffgen et al., 2019), harsh criticism, paying little attention to a colleague's statements and opinions, disrespectful statements towards a colleague, and unprofessional behavior towards a colleague are workplace incivility behaviors, removing or Ignoring colleagues in professional friendships, doubting colleagues' judgments, and trying to discuss colleagues' personal issues. All these behaviors can cause negative emotions, low job satisfaction and reduced self-confidence of coworkers who have experienced workplace incivility from other coworkers (Han et al., 2021; Yao et al., 2021; Sahputri & Ahyakudin, 2023). Therefore, if coworkers in the workplace experience incivility-based behaviors from other employees, their negative attitude towards the workplace and ultimately the organization is likely to cause them to experience symptoms of depression in the workplace.

There was a positive correlation between workplace ostracism and employee depression symptoms, and based on regression results, the role of workplace ostracism in predicting organizational creativity has been confirmed. This finding is in line with previous findings that stated that workplace ostracism is related to depression (Williams, & Liu, 2022; Rudert, Janke & Greifeneder, 2021; Niu, Sun, Tian, Fan, & Zhou, 2016; Jiang & Chen, 2020).

Workplace ostracism includes behaviors such as being ignored in the work environment, not responding to colleagues' greetings, loneliness in the work environment, colleagues not looking at the rejected person and avoiding him, not having a conversation and not consulting with the rejected person (Ferris et al., 2008); Coworkers encountering these workplace ostracism behaviors from other co-workers not only reduces co-worker engagement (Suyono et al., 2023) but can also lead to low job satisfaction (Howard et al., 2020) and burnout (Qian et al., 2019); Therefore, if coworkers experience workplace ostracism, fatigue, and low satisfaction, it is probably possible for them to experience depression symptoms. In addition, excluded people in the workplace are deprived of communication

interaction with organizational members and experience an interpersonal stressful work environment (Chung & Kim, 2017) and this deprivation and interpersonal stress can most likely lead to an increase in depression among employee.

Conclusion

The results confirmed the relationship between mobbing, workplace incivility and workplace ostracism and depression in non-hospital employees, and paying attention to the role of negative variables influencing employee depression can provide the necessary ground for organizational planning to adjust these variables in organizational environments. In this way, it can help to reduce the depression of employees in situations like Covid-19. In other words, organizational planning and holding training workshops on the negative effects of mobbing, workplace incivility, and workplace ostracism in the workplace on depression in organizations can help reduce employee depression symptoms.

One of the limitations of this study was related to research questionnaires that generally examine mobbing, workplace incivility, and workplace ostracism; If questionnaires that separate mobbing, workplace incivility and workplace ostracism in the work environment from the side of the management and from the coworkers are used in future researches, the results will be interesting. Another limitation of the study was that in this research, the control group, i.e. hospital employees, was not investigated; Therefore, it is suggested to investigate the prevalence of depression in hospital and non-hospital employees in future researches. Considering that in the explanations, the role of stress caused by mobbing, workplace incivility, and workplace ostracism in the work environment was mentioned and this variable was not investigated in the present study, it is suggested that in future studies, the mediating role of stress in the relationship between the destructive variables of the work environment and depression symptoms should be investigated.

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