

The direct and indirect effects of workplace loneliness on FoMO: Nomophobia and general belongingness

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Highlights

- It is seen that general belongingness and nomophobia have significant and direct effects on the fear of missing out.
- It is observed that workplace loneliness has an indirect effect on the fear of missing out.
- It is explored that workplace loneliness has an indirect effect on the acceptance/ inclusion, not being able to access information, giving up convenience, losing connectedness and not being able to communicate.

Abstract

The fact that digital technologies have become an integral part of daily life and the widespread use of smartphones bring different problems with them. Fear of Missing Out (FoMO) and No Mobile Phone Phobia (Nomophobia) are among these problems. It is noteworthy that these interrelated concepts are considered as digital diseases of the 21st century and in recent years, research on the variables explaining these concepts has increased. It should be noted, however, that these studies generally focus on adolescents known as Generation Z. However, Nomophobia and FoMO are important sources of risk not only for young people, but also for adults called Generation Y, who spend most of their lives at workplaces. For employees, factors such as workplace loneliness and the need to belong can influence the risk of FoMO as much as Nomophobia. However, these influences that lead employees to FoMO syndromes are still under-researched. For this reason, the current study aims to examine the direct effects of workplace loneliness on FoMO and its indirect effects through general belongingness (GB) and Nomophobia (NMP). For this purpose, 204 people working in different sectors were reached and the data obtained from the voluntary participants were analyzed by structural regression analysis. The results indicate that the independent variables GB and NMP have a statistically significant direct effect on the dependent variable FoMO, with coefficients of $\beta = -0.207$ ($p < 0.001$) and $\beta = 0.578$ ($p < 0.001$), respectively." Additionally, the test model reveals that only the independent variable Loneliness at Work (LAW) has an indirect impact on the dependent variable FoMO, with a coefficient of $\beta = 0.160$ ($p > 0.05$). However, it is possible to say that while the direct effect of LAW is not significant on FoMO ($p > 0.05$); there is an observed indirect effect of GA and NMP ($B = 0.16$) on FoMO. Lastly, it was observed that workplace loneliness had an indirect effect on the acceptance ($\beta = -0.138$, $p < 0.001$) sub-dimension of general belongingness and all components of nomophobia, including not being able to access information ($\beta = 0.103$, $p < 0.001$), giving up convenience ($\beta = 0.145$, $p < 0.001$), losing connectedness ($\beta = 0.132$, $p < 0.001$), and not being able to communicate ($\beta = 0.110$, $p < 0.001$). In conclusion, all indirect effects were statistically significant except for the "rejection sub-dimension of GB ($\beta = 0.344$, $p > 0.05$). These results indicate that a low level of general belongingness has a negative effect on employees' FoMO levels, while a high level of belongingness has a positive effect. Similarly, it has been observed that employees' levels of nomophobia have a direct and positive impact on their FoMO (Fear of Missing Out) levels. Lastly, the acceptance dimension of general belongingness and all sub-dimensions of nomophobia indirectly influence the relationship between workplace loneliness and FoMO.

Article Info:

Research Article

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1. Introduction

With the speed of technological developments, digitalization and smartphones becoming a part of life, the increase in the use of social media platforms changes our behaviors and habits in daily life (Gürbüz & Özkan, 2020) and gradually shows its negative effects day by day. Among the most well-known of these negative effects are smartphone addiction, social media addiction and problematic internet use (Erçok Güler et al., 2023; Gürbüz et al., 2023; Karayiğit & Parlede, 2023). These uses may cause individuals to focus on their daily tasks and responsibilities at home, school or workplace or to perform these tasks by disrupting these tasks, as well as contributing to people to get away from the stress effects of real life, to avoid problems in a virtual environment, to compensate for what they cannot do in daily life, or to get pleasure by providing relative entertainment. The reflections and effects of the digital world have brought its own syndromes. Nomophobia and FoMO syndromes are among these (Betoncu & Ozdamli, 2019; Yıldırım & Kışioğlu, 2018).

Nomophobia is defined as the fear of being away from the cell phone/smartphone in its most general form and is considered as the phobia of the modern age (Olivencia-Carrión et al., 2018). Nomophobia is more clearly understood when the basic building blocks of the concept are considered. These are characterized by not being able to access information, giving up convenience, losing connectedness, and not being able to communicate (Yıldırım & Correia, 2015a). Not being able to access information reflects the discomfort of losing the comfort of having widespread access through smartphones, not being able to get information through smartphones and not being able to search on smartphones. Giving up convenience is related to the feeling of giving up the convenience provided by smartphones and includes the desire to use the convenience of the smartphone, while Losing connectedness is related to the feeling of losing the widespread connection provided by smartphones and feeling disconnected from one's online identity, especially on social media. Finally, not being able to communicate is related to the feeling of losing instant communication and not being able to use the services that provide instant communication, and also includes the feelings of not being able to communicate with people and not being able to communicate (Yıldırım & Correia, 2015a, Yıldırım & Correia, 2015b). As can be understood from the content of the dimensions, nomophobia is a fear that cannot be limited to staying away from cell phones and online connections. More precisely, it manifests itself with an irrational dependence on smart devices and creates anxiety of feeling disconnected from the outside world (Gilbert, 2020). Recent research on the prevalence of nomophobia (Gilbert, 2020; Gürbüz & Özkan, 2020; Kaplan Akıllı & Gezgin; 2016) indicates that nomophobia appears in a large majority of the population (Gilbert, 2020) and is an accepted disorder with its shocking effects. The prevalence rates show themselves with the research of what drives people to smartphones and the concepts associated with nomophobia, and one of the most prominent concepts at this point is FoMO, which is called Fear of Missing Out. The possibilities of internet use and access to social media through smartphones and opportunities such as socializing, accessing information, having fun, following developments in these networks reveal that nomophobia has a feature related to netlesphobia and FoMO (Aslan et al., 2023).

Fear of Missing Out, also known as FoMO, is defined as "a widespread concern that others may have enjoyable experiences while one is deprived of them" and is characterized by "the desire to be constantly connected to what others are doing" (Przybylski et al., 2013). Research shows that there is a close relationship between smartphone use and ease of access to social networks and the prevalence of social media use and FoMO (Aslan et al., 2023; Fioravanti et al., 2021). The results of a meta-analysis study conducted by Fioravanti et al. (2021) reveal that the concern that others may have satisfying experiences may be a factor that triggers obsessive use of social platforms, but it can also function as a control mechanism and is effective as a need to communicate with others or as a means of developing social competence. Indeed, Lee and Chiou (2013) reveal that people are increasingly dependent on social media to satisfy their social needs, especially the need to belong, and that people develop symbiotic relationships with social networking sites (SNSs) because they provide social connections that fulfill the need to belong.

The results of a study conducted by Alutaybi et al. (2019), in which 5 different classifications and a common ecology of the characteristics and nuances of FoMO were revealed through real-life experiences, also provide insightful results in understanding the causes of FoMO. The study emphasized that FoMO can occur in situations where the expected interaction with other people does not occur (e.g., interactions that make others feel disliked or unimportant, uninteresting or unpopular), when there is a need or expectation to interact continuously or when there is a need to interact without being tied to a specific time, when there is a need to miss a social event and a need to belong (e.g., online meetings, chat rooms), or when there is a reluctance to avoid social interaction, while worrying about missing opportunities, popularity, important information, or relatedness, online meetings, chat rooms, as well as in situations where there is a reluctance to avoid social interaction, it is emphasized that it can manifest itself with the concern of missing out on opportunities, popularity, important information or relevance. In conclusion, despite having different interests and personality traits, social norms, the desire to make a good impression on others and the need to belong seem to have a common share in the etiology of FoMO interactionally.

When the interaction between Nomophobia and FoMO, the fact that both are considered as digital diseases of the 21st century (Betoncu & Özdamlı, 2019; Sarıbay & Durgun, 2020; Yıldırım & Kişioğlu, 2018) and the widespread state of anxiety and belonging needs created in cases where they cannot interact with others are evaluated together, two basic concepts that play a role in addition to nomophobia in individuals' FoMO syndromes can be mentioned. These are Loneliness and Belonging. According to the Psychological Needs theory, which is one of the mini-theories of Self-Determination Theory (Deci & Ryan, 2000), when people's needs for autonomy, competence, and relatedness are not satisfied, problems such as loneliness and lack of belonging may arise and this may contribute to the development of FoMO (Dou, et al., 2023) Individuals who experience more loneliness and lack of belonging due to unsatisfied psychological needs may tend to constantly monitor others and seek approval by turning to social media and other technological platforms with the desire to compensate for these feelings, establish more social connections, and strengthen their relationships (Lemay et al.2019).

Indeed, loneliness is treated as an important explanatory factor for both nomophobia (Gezgin et al., 2018; Mert & Özdemir, 2018; Valenti et al., 2022) and FoMO (Bernard, 2020). On the other hand, in some studies, it is seen that Nomo (Kara et al., 2021; Yıldız Durak, 2018) and FoMO (Alinejad et al., 2022; Çiftçi & Kumcağız, 2023; Fumagalli et al., 2021) lead people to an increasing loneliness. These findings can be interpreted as showing that there is a vicious circle relationship between digital syndromes and loneliness. As a matter of fact, while the interactions provided through smartphones and social networks function as a means for individuals who feel lonely to share their loneliness and silence their loneliness by feeling belonging to a group (Kim, et al., 2017; Pittman & Reich, 2016), on the other hand, it can lead them to become increasingly lonely in real life with social isolation and to connect to smartphones as they become lonely (Zhen et al., 2021).

2. Literature

It is noteworthy that the relationship between loneliness and nomophobia and FoMO is mainly studied in adolescents and university students. This is understandable due to developmental characteristics and the fact that today's adolescents are intertwined with technology and the generation called Generation Z was born into technology. For adults and employees, it is noteworthy that Nomo and FoMO research is limited. However, it is seen that the use of smartphones/tablets for workplaces has become increasingly popular in recent years. The risk of nomophobia and FoMO is increasing for employees (Farivar & Richardson, 2021; Marsh et al., 2022) due to reasons such as the use of mobile technologies to perform more tasks at work for millennials and becoming a part of organizational environments, providing temporal and spatial flexibilities on the one hand, and the potential to interrupt other activities such as e-mail, notifications, etc. outside of working hours (Ivasciuc et al., 2022). Studies addressing these risks have mainly focused on the effects of nomophobia or FoMO. At this point, there is a need to investigate the negative effects of the increasing use of digital technology for employees as well as the effects that lead to FoMO syndromes. While

technological developments enable many jobs to be done independently, it also makes the division of labor increasingly clearer and reduces the opportunity for cooperation, damaging intimate human relations with the emerging virtual teams and contributing to the increasing isolation of people at work (Lam & Lau, 2012; Vega & Brennan; 2000). On the other hand, workplace loneliness can also lead to social media addiction positively affecting it (Aribaş & Özşahin, 2022).

Since workplace loneliness is an emerging field in the literature in many ways, there may be differences in its definitions. In general terms, loneliness is an unpleasant experience that occurs when a person's network of social relationships is significantly inadequate in terms of either quality or quantity (Perlman & Peplau, 1984), and a complex set of emotions that arise in the absence of a needed relationship or relationship group (Cohen, 2000). Workplace loneliness is defined as a psychological pain caused by perceived relational deficits in the workplace (Wright & Silard, 2021). Therefore, workplace loneliness has led to nomophobia and FoMO, also commonly referred to as techno-stress, being considered as 21st century occupational diseases through the technologies that are currently being promoted (Rodríguez Elizalde, 2022). Indeed, Rodríguez Elizalde (2022) points out that the misuse or problematic use of social networks occurs in order to relieve one's ailments such as stress, loneliness or depression, where social networks provide a sense of belonging, a sense of efficacy, and a series of rewards, resulting in the substitution of virtual interactions for daily life interactions, further damaging real-life relationships. At this point, it can be said that for those in workplace loneliness, the rewards such as nomophobia and the sense of belonging brought by FoMO are also related to the general sense of belonging in daily life. Because the general sense of belonging is a concept characterized by an individual's attachment to a person, institution, group, society, culture, identity or a space or place (Duru, 2015) and is associated with loneliness, life satisfaction, social connection and social security (Malone et al., 2022). Therefore, sense of belonging is an important predictor of FoMO (Malouf et al., 2022) as well as nomophobia (Aşık, 2018). As a matter of fact, the lack of offline social relationships in real life motivates constructions to use social media networks more to meet the sense of belonging (Alabri, 2018; Baumeister & Leary, 1995). From this point of view, a high level of general sense of belonging in daily life of people with workplace loneliness may reduce the risks of Nomophobia and FoMO, while a low level may strengthen them.

To summarize, based on the emphasis in the relevant field; FoMO and nomophobia are emerging as widespread problems in all segments of society. These problems have come to the fore with research focusing particularly on young people (Gezgin & Çakır, 2016), but have recently begun to be recognized as an occupational disease among adults and especially among workers (Chow, & Blaszczyński, 2014; Tandon et al., 2021). However, it is noteworthy that there is a limited number of studies explaining FoMO and nomophobia in the workplace and among adults. In addition, it is observed that the vicious cycle of isolation and loneliness in the workplace contributes to the development of Nomophobia and FoMO syndromes. This situation can lead people to become more isolated by moving away from real relationships. In this context, the fact that the presence of a sense of belonging in daily life is considered as a protective factor and its absence as a risk factor constitutes the starting point of this research. From this point of view, the aim of the research is to examine the direct effects and indirect effects (through general belongingness and nomophobia) of employees' loneliness at work on FoMO in a structural regression model. The hypothetical model created for the model to be tested is presented in Figure 1.

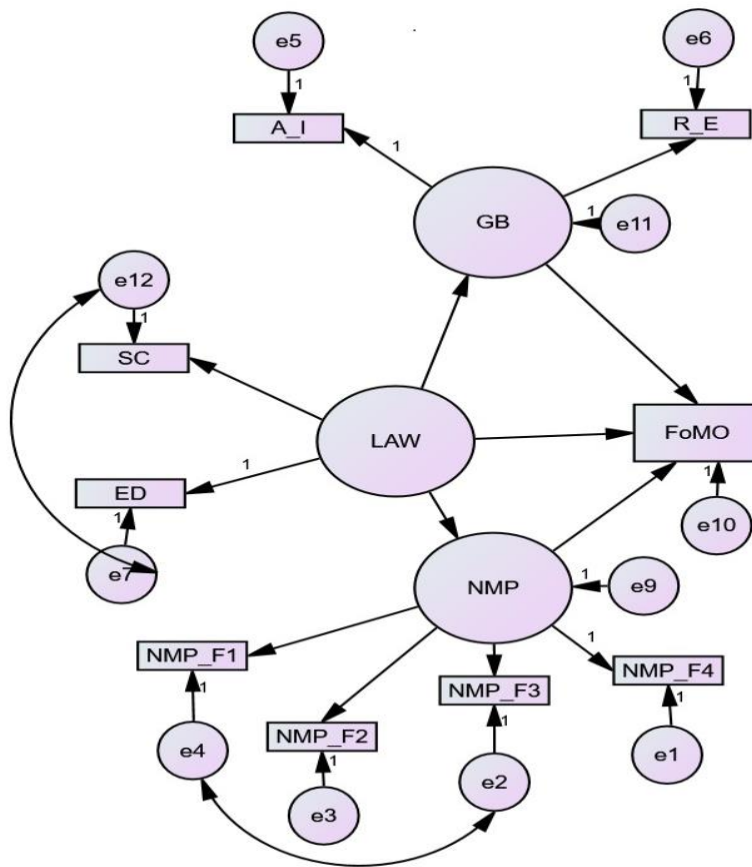


Figure 1. Hypothetical model tested

Within the framework of the model to be tested, the research questions formulated in line with the relevant literature and the purpose of the research are as follows.

- RQ1. What are the direct and indirect effects of workplace loneliness on FoMO levels of employees?
- RQ2. What is the direct effect of workplace loneliness on general belongingness and nomophobia levels of employees?
- RQ3. What is the direct effect of general belongingness and nomophobia on FoMO levels of employees?

3. Methodology

3.1. Research Model/Design

In this study, a quantitative research method was used to test the theoretical model that aimed to determine the direct and indirect effects of workplace loneliness on employees' FoMO levels. In line with the research questions, the relationships between variables were analyzed using structural regression analysis.

3.2. Sampling or Study Group

In this study, convenience sampling was used to select the research group. Convenience sampling is a commonly used sampling technique in the social sciences in which researchers select participants who are easily accessible, suitable, and willing to participate on a voluntary basis. In line with the purpose and method of the research, individuals over the age of 18 who work in the public and private sectors and are currently in business life were reached on a voluntary basis. Research data were collected through Google Forms, one of the online platforms. The sample of the study consisted of 130 female (63.7%), 72 male (35.3%) and 2 non-binary (1%) employees between the ages of 18-65 (Mean = 32.10, SD= 9.64) working in different sectors.

3.3. Data Collecting Tools

In accordance with the purpose of the study, data on the relevant variables were collected using the Nomophobia Scale, Fear of Missing Out Scale, General Belonging Scale and Loneliness at Work Scale.

3.3.1. Nomophobia Questionnaire (NMP-Q)

It was developed by Yıldırım and Correia (2015a) to define and explain the dimensions of nomophobia, which is accepted as a modern age phobia, and Turkish adaptation studies were conducted by Yıldırım et al (2016). The 7-point scale consists of 20 items and 4 factors. These dimensions are conceptualized as not being able to communicate (NMPQ_F1), losing connectedness (NMPQ_F2), not being able to access information (NMPQ_F3) and giving up convenience (NMPQ_F4). In the adaptation study, the psychometric investigations of the scale were examined through confirmatory factor analysis (CFA) and Cronbach alpha coefficients. CFA results show that the four-factor scale has acceptable fit indices and the reliability coefficients calculated for the sub-dimensions (0.90, 0.74, 0.94, and 0.91, respectively) indicate that it is a valid and reliable measurement tool for the Turkish sample (Yıldırım et al., 2016). In the current study, the alpha internal consistency coefficient calculated for the overall scale was .89.

3.3.2. Fear of Missing out (FoMO) Scale

The scale developed by Przybylski et al. (2013) to assess the phenomenon of fear of missing out on developments through daily experiences based on empirical evidence allows to measure how much a person tends to stay in constant contact with friends and how such relationships (including information retrieval) vary depending on close friends. The scale was adapted into Turkish by Gökler et al. (2016). The validity of the scale was examined with principal component factor analysis and it was found that the factor loadings were 0.36-0.77 and explained 39.4% of the total variance. Consisting of 10 items and a single dimension, the alpha and test-retest reliability coefficients of the scale were both reported as .81. In the current study, the alpha internal consistency coefficient calculated for the overall scale was .79.

3.3.3. General Belongingness Scale (GBS)

The scale developed by Malone et al. (2012) to assess general attachment with a brief and psychometric measurement tool was adapted into Turkish by Duru (2015). The psychometric examinations of the Turkish form of the scale, which reflects the existence of a sense of belonging and the extent to which the need for this feeling is satisfied, were examined by Exploratory (Efa) and Confirmatory (Cfa) factor analysis and it was reported that the two dimensions of acceptance/inclusion and rejection/exclusion in the original form were confirmed. As a result of reliability analyses, the internal consistency coefficient of the

scale was calculated as .92 for the total scale, .91 and .89 for the sub-dimensions, respectively, and the test-retest coefficient was found to be .84 (Duru, 2015). The calculated alpha internal consistency coefficient for the total scale was .88 in the current study.

3.3.4. Loneliness at Work Scale (LAWS)

The original form of the scale was developed by Wright et al. (2006) and Turkish adaptation studies were conducted by Doğan et al. (2009). LAWS was designed to determine the level of loneliness experienced by employees at their workplaces. Within the scope of adaptation, the validity of the scale was examined by exploratory and confirmatory factor analysis and similar scales methods. The results showed that the structure consisting of two dimensions, emotional deprivation and social companionship, was confirmed. As a result of the reliability analysis, Cronbach alpha internal consistency coefficient was reported as .91, while these coefficients for the sub-dimensions were .87 and .83, respectively. The test-retest coefficient of the scale was calculated as .82. As a result of the psychometric analyses, the researchers reported that the scale adapted to Turkish culture is a measurement tool that measures loneliness in work life at a valid and reliable level (Doğan et al., 2009). The calculated alpha internal consistency coefficient for the total scale was .85 in the current study.

3.4. Data Analysis

Within the framework of the hypothetical model established in this research, structural regression analysis (SRA) was used, which allows the causal and correlation relationships between variables to be examined together. Prior to SRA, whether the data set meets the necessary conditions for parametric test assumptions was examined by converting the data set into standardized z-values and using skewness and kurtosis coefficients and Kolmogorov-Smirnov test for normality. The findings showed that all variables had values between ,010 and ,949 for skewness and between ,007 and -,863 for kurtosis. At the end of the skewness and kurtosis coefficients, it is seen that all values are between -1 and +1 accepted for social sciences at 5% significance level (Çokluk et al., 2012; Kerr et al., 2002). In addition, according to the results of the Q-Q pilot graph and Kolmogorov-Smirnov test, which were examined within the scope of normality tests, it was determined that the data were normally distributed for all variables ($p < .05$). Then, for SRA, extreme value examinations were examined by calculating the mahalanobis distance value, and multi-collinearity examinations were examined by calculating Variance Inflation Factor (VIF) and Condition Index (CI) values. As a result of the values obtained, it was observed that the highest VIF value was less than 10 with 1.039, the highest tolerance value was greater than 0.2 with .983 and the highest condition index value (CI=19.20) was not greater than 30 and it was determined that the data did not have multicollinearity problem. Finally, the autocorrelation between the error terms is examined with the Durbin-Watson statistic and it is concluded that there is no autocorrelation since the Durbin Watson value obtained for all variables (1.724) is between 1-3. All values obtained showed that the data set was suitable for SRA (Çokluk et al., 2012; Kerr et al., 2002). SPSS 23 and AMOS 23 programs were used for data analysis.

3.5. Findings

The relationship between all variables in the study was examined with Pearson Correlation coefficient and the values obtained are presented in Table 1. In addition, kurtosis-skewness values, means and standard deviations of the variables are given in the related table.

Table 1.**Mean and Standard Deviation Values of Variables and Pearson Correlation Analysis Coefficients**

	X	SD	SK	KR	1	2	3	4	5	6	7	8	9	10	11	12
ED(1)	16,21	5.74	,710	-,219	-											
SC(2)	10.40	3.43	,929	,007	.544**	-										
LAW(3)	26,60	8.13	,684	-,256	.935**	.806**	-									
GB(4)	45,95	4,53	-,269	-,035	.164**	-,078	.083	-								
A_I(5)	36,05	4,39	-,482	-,593	-,246**	-,241**	-,275**	.508**	-							
R/E(6)	9,89	4.43	,949	,439	.411**	.159*	.357**	.520**	-,472**	-						
FoMO(7)	23.64	7.20	,118	-,688	.176*	.046	.144*	.275**	-,047	.328**	-					
NMP(8)	70,58	24.01	,049	-,863	.165*	-,007	.114	.166*	-,046	.216**	.588**	-				
NMP_F1 (9)	16.15	6.01	-,120	-,831	.123	.064	.114	.024	.011	.014	.372**	.699**	-			
NMP_F2(10)	17.03	7.34	,260	-,669	.241**	.074	.201**	.101	-,106	.208**	.531**	.563**	.896**	-		
NMP_F3(11)	25.53	9.73	,010	-,823	.067	-,093	.008	.207**	-,009	.221**	.491**	.872**	.407**	.735**	-	
NMP_F4(12)	11.87	6.20	,777	-,161	.129	-,029	.079	.176*	-,049	.228**	.517**	.766**	.434**	.587**	.542**	-

$n=204$ *** $p<.001$; ** $p<.01$; * $p<.05$,

Abbreviations:

X: Mean; *SD*: Standard Deviation; *N*: Number ; *SK*: Skewness; *KR*: Kurtosis

LAW: Loneliness at Work; *ED*: Emotional Deprivation; *SC*: Social Companionship;

GB: General Belongingness; *A_I*: Acceptance/Inclusion; *R_E*: Rejection/Exclusion;

NMP: Nomophobia ; *NMP_F1*: Nomophobia Factor_1 (not being able to information); *NMP_F2*: Nomophobia Factor_2 (giving up convenience); *NMP_F3*: Nomophobia Factor_3(losing connectedness); *NMP_F4*: Nomophobia Factor_4 (not being able to communicate)

FoMO: Fear of Missing Out

In the analysis of Table 1, it is observed that the skewness and kurtosis coefficients of the collected data range from +1 to -1, indicating a normal distribution (Mertler & Vannatta, 2017). According to the correlation values obtained, it is observed that the relationships between FoMO and all variables except SC and A_I are significant. When the direction of the values are analyzed, there are positive relationships between ED and FoMO ($r=0.176$, $p<0.01$), LAW and FoMO ($r=0.144$, $p<0.01$), GB and FoMO ($r=0.275$, $p<0.001$), R_E and FoMO ($r=0.328$, $p<0.001$) and NMP and FoMO ($r=0.588$, $p<0.001$). Similarly, the correlation coefficients between nomophobia and the variables show positive and statistically significant relationships between ED and NMP ($r=0.165$, $p<0.01$), GB and NMP ($r=0.166$, $p<0.01$) and R_E and NMP ($r=0.216$, $p<0.001$). Finally, there was a positive linear relationship between general belongingness (GB) and ED, one of the sub-dimensions of workplace loneliness ($r=0.164$, $p<0.01$).

The model tested in the study was analyzed and validated with the structural regression technique and the findings are presented in Table 2.

Table 2.
The Achieved Fit Index Values in the Level-One CFA

Fit index values	Perfect fit	Acceptable fit	Fit Index Value Achieved in the Level-One CFA
χ^2/df	$0 \leq \chi^2/df \leq 2$	$2 \leq \chi^2/df \leq 3$	2,57
GFI	$0.95 \leq GFI$	$0.85 \leq GFI$	0,94
AGFI	$0.90 \leq AGFI \leq 1.00$	$0.85 \leq AGFI$	0,88
CFI	$0.95 \leq CFI \leq 1.00$	$0.90 \leq CFI \leq 0.95$	0,94
IFI	≥ 0.95	≥ 0.90	0,94
RMSEA	$0.00 \leq RMSEA \leq 0.05$	$0.06 \leq RMSEA \leq 0.08$	0,08
SRMR	$0.00 \leq SRMR \leq 0.05$	$0.06 \leq SRMR \leq 0.10$	0,06

According to the fit values in Table 2, the model has acceptable and perfect fit values ($\chi^2 = 56,590, df = 22$, $\chi^2/df = 2,57$; RMSEA = 0,08; SRMR = 0,06; CFI = 0,94; GFI = 0,94; AGFI = 0,88) (Baumgartner & Homburg, 1996; Browne & Cudeck, 1993; Kline, 2011; Schermelleh-Engel & Moosbrugger, 2003). Additionally, the direct and indirect effects on the variables tested in the model via structured regression analysis is provided in Table 3.

Table 3.
The Effects of Variables

Dependent variables	Independent variables	Total effect	Direct effect	Indirect effect	Standard error	Critical ratio (t)
GB(1)	LAW(3)	-0,318	-0,318	-	0,074	-1,605
NMP(2)	LAW(3)	0,162	0,162	-	0,068	1,787
NMP_F4(12)	NMP(2)	0,675	0,675	-		
NMP_F3(11)	NMP(2)	0,812	0,812	-	0,131	9,952***
NMP_F2(10)	NMP (2)	0,893	0,893	-	0,130	10,571***
NMP_F1(9)	NMP (2)	0,635	0,635	-	0,127	7,983***
A/I(5)	GB(1)	0,436	0,436	-		
R_E (6)	GB(1)	-1,082	-1,082	-	0,655	-2,790**
ED(1)	LAW(3)	1,163	1,163	-		
FoMO(7)	GB(1)	-0,207	-0,207	-	0,176	-3,403***
FoMO(7)	NMP (2)	0,578	0,578	-	0,110	7,638***
FoMO(7)	LAW(3)	0,148	-0,012	0,160	0,060	-0,219
SC(2)	LAW(3)	0,472	0,472	-	0,647	2,990**
R_E (6)	LAW(3)	0,344	-	0,344	0,106	-0,451
A/I(5)	LAW(3)	-0,138	-	-0,138	0,052	7,995***
NMP_F4(12)	LAW(3)	0,110	-	0,110	0,051	9,009***
NMP_F3(11)	LAW(3)	0,132	-	0,132	0,049	7,011***
NMP_F2(10)	LAW(3)	0,145	-	0,145	0,038	4,823***
NMP_F1(9)	LAW(3)	0,103	-	0,103	0,067	8,813***

*** $p < .001$; ** $p < .01$; * $p < .05$

Abbreviations:

LAW: Loneliness at Work; ED: Emotional Deprivation; SC: Social Companionship;

GB: General Belongingness; A_I: Acceptance/Inclusion; R_E: Rejection/Exclusion;

NMP: Nomophobia ; NMP_F1: Nomophobia Factor_1 (not being able to information); NMP_F2: Nomophobia Factor_2 (giving up convenience); NMP_F3: Nomophobia Factor_3 (losing connectedness); NMP_F4: Nomophobia Factor_4 (not being able to communicate)
FoMO: Fear of Missing out

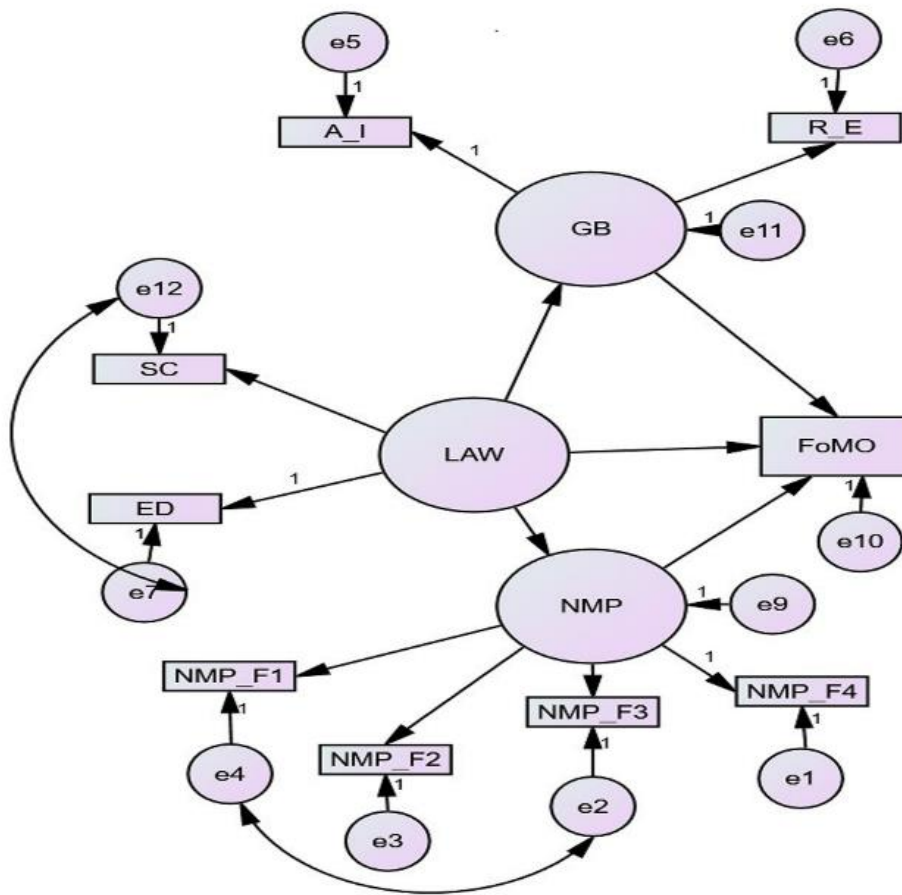


Figure 2. The results for the tested model

When Figure 2 and Table 3 are analyzed together, it is seen that the GB and NMP independent variables have a significant direct effect on the F dependent variable respectively ($\beta=-0,207, p<0.001$; $\beta=0.578, p<0.001$). Additionally, in the test model it is seen that only the LAW independent variable has an indirect effect on the FoMO dependent variable ($\beta=0.160$). However, it is possible to say that while the direct effect of IY is not significant on FoMO ($p>0.05$); there is an observed indirect effect of GA and N ($B=0.16$) on FoMO. Although the indirect effects of the independent variable of LAW is not aimed to test on the dependent variables of R_E, A_I, NMP_F4, NMP_F3, NMP_F2, and NMP_F1; it is observed that LAW independent variable have an indirect effect on the A/I, NMP_F4, NMP_F3, NMP_F2, and NMP_F1 dependent variables respectively ($\beta=-0,138, p<0.001$; $\beta=0,110, p<0.001$; $\beta=0,132, p<0.001$; $\beta=0,145, p<0.001$; $\beta=0,103, p<0.001$).

3.5.1.Effect Size

In the study it is seen that the variance that GB and NMP independent variables account for on the F dependent variable are 39% ($r^2=0,39$). According to Cohen (1988), this method assesses the calculated effect size and determines whether the significant results obtained from the model are practically significant. To achieve this, it is recommended to calculate the (f^2) value as follows:($f^2 = R^2 / (1 - R^2)$) for regression analyses and linear models. Accordingly, f^2 values between 0.02 and 0.15 indicate small effects,

f^2 values between 0.15 and 0.35 indicate medium effects, and f^2 values greater than or equal to 0.35 indicate large effects, as determined by dividing the multiple correlation coefficient (R^2) by its subtraction from 1 ($1-R^2$) (Cohen, 1988). It can be argued that the effect on the calculated F equation is significant, with an f^2 value of 0.64. Thus, the tested model indicates that only the GB and the NMP have a clear and significant impact on the FoMO. In addition, it has been observed that LAW has an indirect and significant effect on A_I, NMP_F4, NMP_F3, NMP_F2, and NMP_F1.

4. Conclusions and Discussion

In this study, which primarily examined the direct and indirect effects of workplace loneliness on FoMO, the first of our main findings regarding direct effects shows that workplace loneliness has a direct effect on FoMO, but this effect is not significant. Similarly, the effects of workplace loneliness on nomophobia and general belongingness levels were not statistically significant. When the related literature is examined, it is noteworthy that most of the studies focus on the relationships between loneliness, nomophobia and FoMO, especially on adolescents and university students (Çelebi et al., 2020; Gezgin & Ümmet, 2021; Pourmohseni Koluri et al., 2020). As a matter of fact, in a systematic review study conducted by Rodríguez-García et al. (2020), 42 studies were specifically analyzed to examine the existing literature on nomophobia, and according to the results of these studies, it was revealed that nomophobia was generally investigated among adolescents and university students. In this context, Gezgin et al. (2018) examined the relationship between nomophobia and loneliness in adolescents and the effects of smartphone and mobile internet use. According to the results of this study, a statistically significant relationship was found between nomophobia and loneliness and it was determined that adolescents' loneliness levels predicted their nomophobia levels to a certain extent (Gezgin et al., 2018). Similarly, in another study examining the role of personality traits and loneliness in predicting nomophobia in university students, it was found that 15 percent of the total variance of nomophobia was explained by loneliness and personality traits (Pourmohseni Koluri et al., 2020). These findings do not coincide with the fact that the direct effects between loneliness and nomophobia were not statistically significant in our study. On the other hand, there are also study results showing that there are no significant findings on the relationship between loneliness and nomophobia. For example, in a study conducted by Çelebi et al. (2020), it was found that there was no significant relationship between nomophobia and loneliness, and therefore, it was emphasized that more research is needed to better understand the relationship between nomophobia and loneliness. These results and emphases seem to be in line with the results of the current study. A similar situation is also valid for studies examining the relationship between loneliness and FoMO. It is stated that FoMO tends to increase pre-existing feelings of loneliness and therefore people who spend a long time on social networking sites are likely to experience more intense feelings of loneliness after using these platforms (Markham, 2018). A study conducted by Bernard (2020) on university students showed that there is a predictive relationship between loneliness and fear of missing out (FoMO). In addition, this study emphasized that time spent on social media platforms, FoMO, and loneliness are three important issues that are well-known among today's university students. These findings do not coincide with the fact that the direct effects between loneliness and FoMO levels were not statistically significant in our study. On the other hand, in line with the findings of our study, there are other studies that show that there are no significant findings regarding the relationship between loneliness and FoMO. For example, in a study conducted by Tayiz et al. (2022), there was no significant relationship between FoMO and loneliness, and it was also found that individuals living with friends had higher levels of FoMO. Based on these findings, the researchers emphasized that the prevalence of FoMO and its lack of understanding, as well as the limited number of studies addressing the relationship between loneliness and FoMO, and therefore suggested that more research is needed to better understand the relationship between loneliness and FoMO.

Another direct effect examined in the hypothetical model established in our research is the effect of general belongingness on FoMO. These emphases and different findings in the literature described above indicate that studies generally focus on young people or emerging adults called "Generation Z". It also points to the

need to identify variables that predict FoMO. However, FoMO is considered to be an important source of risk not only for young people but also for adults, so-called Generation Y, who spend most of their lives at workplaces (Farivar & Richardson, 2021). Considering the increase in the use of mobile technologies in workplaces in recent years and the fact that they have become a part of organizational environments (Ivasciuc et al., 2022), it is clear that the statistically significant effect of the general sense of belonging on FoMO levels of employees in our study presents remarkable results. Although the indirect effects of workplace loneliness on FoMO through general belongingness are not significant, when the results obtained are evaluated as a whole, it can be said that low or high sense of belongingness plays a role in the effect of workplace loneliness on FoMO levels. These results can be associated with the fact that sense of belonging is considered as basic human needs and lack of belonging can lead to social and psychological problems (Hagerty et al., 2002). Sense of belonging is a concept that reflects the individual's experience that he/she feels himself/herself to be a part of the environment in which he/she lives and that he/she completes this environment at the same time. Adults' sense of belonging is based on childhood experiences, especially as a result of this attachment relationship with parents (Hagerty et al., 2002; Hagerty et al., 1992). Based on these emphases in the literature, it can be said that low sense of belonging may pose risks such as FoMO for individuals who lack a sense of belonging in their real-life environment (e.g. family, friends, married life, etc.). In general, a high sense of belonging may function to reduce the use of media technologies and prevent negative effects such as FoMO. Indeed, a study examining the relationship between community belonging and adults' leisure time sedentary behaviors, and determining whether this relationship is explained by perceived health, provided findings supporting this point. This study showed that sedentary behaviors, including television viewing, increased with age, and adults with a general sense of community belonging were more likely to report less sedentary time in their leisure time (Anderson et al., 2016). Nowadays, it is seen that physical communication has been replaced by digital communication, and thus smartphones and social media constitute an important part of sedentary activities (Lepp et al., 2013; Rodríguez-García et al., 2020). In this context, the lack of a sense of belonging in adults motivates people more to use social media networks to meet their need for belonging (Baumeister & Leary, 1995) and thus plays a role in increasing sedentary behaviors (Anderson et al., 2016). In a study examining the effects of meeting belonging needs through social media use on fear of missing out (FoMO) and self-esteem, it was found that individuals with high levels of FoMO also have a high need to belong, and the results showed that those with a desire to belong experience FoMO (Malouf et al., 2022). Similarly, in another study conducted by Aşık (2018), the relationship between nomophobia and sense of belonging among university students and the effects of sense of belonging on nomophobia were examined. The results of the study showed that there was a negative relationship between sense of belonging and nomophobia and that sense of belonging explained nomophobia in a significant way (Aşık, 2018). Based on these results in the literature, when we examine the direct and indirect effects of workplace loneliness on FoMO in our current study, and when we also consider the direct effects of general belongingness and nomophobia on FoMO; we can say that general belongingness makes a partial contribution to the indirect effect of workplace loneliness on FoMO.

Another direct effect that is analyzed within the model and found to be statistically significant on FoMO is the effect of nomophobia. Our findings indicate that nomophobia plays an important role in employees' FoMO levels. In addition, workplace loneliness was found to have significant indirect effects on all sub-dimensions of nomophobia. When these results are evaluated as a whole, it can be interpreted that each of the subcomponents of nomophobia can increase the negative effects of workplace loneliness on FoMO levels. In a study examining pre-service teachers' perceptions of the concepts of smartphone, nomophobia and FoMO through metaphors, it was observed that the metaphors of "loneliness and nothingness" for nomophobia and "falling behind and need" for FoMO were prominent (Gezgin, et al., 2019). In line with these metaphors, the findings of the current study show that the increase in feelings of loneliness contributes to the increase in nomophobia, but the main effect reflected in FoMO levels stems from the need to eliminate feelings of lack and nothingness and therefore emerges through nomophobia. As a matter of fact,

many studies have supported the positive linear relationship between nomophobia and FoMO (Aslan et al., 2023; Fioravanti et al., 2021; Gezgin et al., 2018) and these results seem to be consistent with the findings of our current study.

5. Conclusion and Suggestions

In this study, the direct and indirect effects of employees' loneliness in their work life on FoMO were examined. The results of the study show that a low level of general belongingness has a negative effect on employees' FoMO levels, while a high level of belongingness has a positive effect. Similarly, it was observed that employees' FoMO levels were directly affected by nomophobia. It was concluded that the sub-dimensions of general belongingness and nomophobia separately have an indirect effect on the relationship between loneliness in work life and FoMO.

When the results of the research are compared with previous studies, it is noteworthy that similar studies were conducted mainly on adolescents and university students. In these studies, it was found that the relationships between loneliness and nomophobia, loneliness and fomo, belongingness and nomophobia, adornment and fomo, and nomophobia and fomo were mainly addressed and the variables were found to have significant relationships with each other. However, as explained in the discussion section, there are also study findings showing that these relationships are not significant. The related literature highlights that the relationships between FoMO and loneliness are not yet sufficiently understood and more research is needed. In addition, there is no study directly addressing the role of belongingness and nomophobia in the indirect effects of loneliness on FoMO.

In recent years, the increasing use of smartphones and tablets in the workplace and the fact that digital technologies have become a part of business processes have increased the risk of experiencing Nomophobia and FoMO syndrome for employees. The most striking result of this study is that the general sense of belonging can be considered as a factor that increases this risk. When the foundations of the sense of belonging go back to childhood, the prevalence rates of Nomophobia and FoMO, and the alarming results of these problems, especially in the children of parents who have children, are evaluated as a whole; it is clear that it is important to ensure and increase the sense of belonging. Therefore, it is thought that conducting studies to strengthen the sense of belonging on behalf of children and families can play a preventive role against FoMO risks. However, the results of this study cannot be generalized to children and adolescents. Therefore, it may be recommended to conduct similar studies on children and adolescents. In addition, it may be useful to conduct group psychological counseling studies to strengthen the general sense of belonging for employees. On the other hand, this study is limited to the direct role of general belongingness in employees. For this reason, it is thought that there is a need to conduct comparative studies by examining the relationships between workplace loneliness and Nomophobia and FoMO as well as workplace belongingness.

Finally, in this century, when the widespread use of technology has brought its negative effects to every aspect of life, the need and importance for adult workers to become aware of how to use technology has become clear. Specifically, the unmet psychological needs for social connectedness in contemporary life increases feelings of loneliness and lack of belonging, which in turn exacerbate risks of nomophobia and FoMO, creating a vicious cycle of reinforcing effects. Looking at the results of this study and making a general assessment, it is believed that the reduction of the feeling of loneliness and the strengthening of the sense of belonging in the workplace is necessary to reduce the risks of FoMO among employees. Therefore, the importance of lifelong learning and in-service training is once again in the spotlight. The provision of training and resources to employees is essential for the effective and conscious use of technology in the workplace. Given the prevalence and importance of technology in workplaces, planning these trainings within the framework of Educational Technologies is thought to not only help employees use technology more efficiently but also assist in reducing nomophobia and FoMO risks. This is because educational technology in the 21st century encompasses various topics, including human-technology interaction,

performance technologies, computer-assisted education, and virtual learning (Şimşek et al., 2009). Furthermore, in today's digital age, it is imperative to carefully design learning environments that take into account individual differences and personality traits (Şahin et al., 20-22). In this context, the training and resources provided to employees can increase work productivity and play a crucial role in maintaining mental well-being. In line with the aforementioned emphases, future research should investigate the effectiveness of in-service training programs organized within the framework of educational technologies for employees.

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