Article

The Effects of Workplace Loneliness on Work Engagement and Organizational Commitment: Moderating Roles of Leader-Member Exchange and Coworker Exchange

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Abstract: This study aims to examine the effect of workplace loneliness on work engagement and organizational commitment and the moderating role of social relationships between an employee and his or her superior and coworkers in such mechanisms. Workplace loneliness decreased employees' engagement with their jobs and, as such, decreased engagement had a positive relationship with organizational commitment. Also, the negative influence of workplace loneliness on work engagement was found to be moderated by coworker exchange, and employees' maintenance of positive social exchange relationships with their coworkers was verified to be a major factor for relieving the negative influence of workplace loneliness.

Keywords: workplace loneliness; work engagement; organizational commitment; leader-member exchange; coworker exchange; deluxe hotel
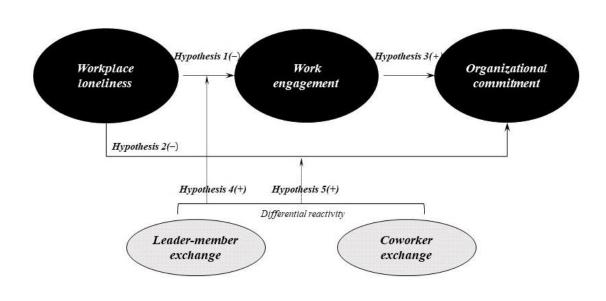
1. Introduction

Workplace loneliness does harm to an organization as well as its employees [1]. In an organization, employees perform their jobs amid diverse and complex interpersonal relationships, and if they fail to bear such relationships in a basic social dimension, they will be apt to feel loneliness [2]. Even though workplace loneliness is an important issue prevalent within an organization, it has drawn little attention in the area of human resources management. Workplace loneliness is an essentially unique emotion that employees experience within their workplace, and increased competition within the workplace makes it more and more difficult for them to establish genuine social relationships [3]. Social relationships are very important in human life [4], and individuals spend most of their time in their workplaces [5], but there has been restricted research that has investigated workplace loneliness and negative performance. Rokach [6] noted that a lonely (solitary) employee experiences pain due to little respect from his or her coworkers or superiors and, as a result, thinks that he or she has been left alone and makes a relatively negative evaluation of himself or herself. In addition, Lam and Lau [7] observed that those who feel lonely in their workplaces have low social skills, have a low level of perception about social risks, and concentrate more on negative social information than positive social information [8] and, therefore, are very likely to perceive threats rather than opportunities. In research performed thus far, loneliness was mentioned mostly in a clinical or individual dimension [9]. Moreover, a focus was made on the nature of the phenomenon of loneliness itself and an approach to it in terms of organizational climate was disregarded. In particular, whereas ordinary loneliness accompanies a wider range of relationships, including diverse interpersonal relationships in ordinary life, workplace loneliness is based on work situations, is not a psychological feeling or state, may be easily affected by work situations, and, therefore, is all the more important [10]. Thus far, however, research on workplace loneliness has

been very scarce, and, in this respect, the researcher judged that relevant research should be further developed.

In particular, in order to obtain a sustainable development with a competitive edge, deluxe hotels need to attract and maintain high quality employees in the present situation where competition grows fierce [11,12]. Typical problems inherent in the hotel industry include long work hours, irregular and inflexible work schedule, and weekend duties [13]. Furthermore, a hotel job pays poorly, involves a narrow range of duties, and requires intensive emotional labor [14,15]. For this reason, policies are needed that improve hotel employees' social relationships and mitigate their feeling of loneliness at the workplace. Therefore, an interesting working environment can be a good method used by an organization to attract and maintain employees [16,17], and this study will provide meaningful suggestions by verifying the influence of a climate of loneliness in an organization. Hence, obtaining knowledge about the causes and outcomes of workplace loneliness will be an important issue for both workers and researchers. From a viewpoint of workplace flexibility, efforts to promote hotel employees' social relationship and manage their feelings of loneliness can facilitate sustainable growth of the hotel industry.

In consideration of the facts that people currently spend more time in their workplaces than in any other domain of life and that workplace loneliness has a negative effect on job performance, this study aims to examine the effect of workplace loneliness on work engagement and organizational commitment and the moderating role of social relationships between an employee and his or her superior and coworkers in such mechanisms (Figure 1).

Figure 1. A proposed model of workplace loneliness, work engagement, organizational commitment, leader-member exchange (LMX), and coworker exchange (CWX).

2. Literature Review and Conceptual Model

2.1. Workplace Loneliness, Work Engagement, Organizational Commitment, Leader-Member Exchange (LMX), and Coworker Exchange (CWX)

Ernst and Cacioppo [18] observed that workplace loneliness was a feeling experienced by employees when their social desires were not satisfied, and Wright et al. [10] noted that workplace loneliness was pain occurring due to a lack of interpersonal relationships of good quality among members in a work environment. In addition, Russell, et al. [19]

asserted that workplace loneliness was employees' subjective perception about what was insufficient in their social relationships. Most research on workplace loneliness emphasizes that it affects individual and organizational performance very negatively [2,20,21]. Work engagement refers to a mental state of employees that is energetic, devoted, and full of vitality when participating in their jobs [22] and when they have high engagement, employees feel all the more happy and spend relatively more time in the organization [23]. In addition, organizational commitment means an employee accepts the organization's goals and values and makes considerable efforts to achieve them [24]. It is also the extent to which an individual identifies with a specific organization and commits to it [25]. LMX (leader-member exchange) and CWX (coworker exchange), used as moderating variables in this study are concepts based on social exchange theory. LMX is a very important theoretical basis for explaining the relationship between a superior and his or her subordinates in an organization [26]. When a positive pattern of exchange in relationships is formed between a superior and his or her subordinates, employees develop very positive attitudes toward their jobs [27]. Furthermore, CWX shows the quality of relationships formed as a result of interaction with coworkers by an employee as a member of an organization [28].

2.2. Relationship between Workplace Loneliness and Work Engagement

Research on workplace loneliness and employee engagement is very scarce. As the only relevant research thus far, Öge et al. [29] noted that workplace loneliness and engagement had a negative relationship and when an employee did not feel loneliness any longer, they became more positive about his or her job and felt engaged to the extent that he or she lost count of time. In addition, although they did not research employees, Zhang et al. [30] asserted that loneliness reduced social participation, and Park et al. [31] also noted that social participation decreased loneliness; in other words, there is a negative correlation between participation and loneliness. When burnout is defined as exhausted participation in daily work by a generalized theory on engagement [32], Gerstein et al. [33] explained that an employee felt lonely when he or she had the severest burnout, and Fernet et al. [34] asserted that loneliness perceived by an employee in an organization had a very close relationship with burnout. In the same vein, happiness is a positive, emotional response to work, and workers' sense of happiness weakens because of loneliness they feel at workplace [35]. Garg and Anand [36] said that workers' emotional commitment is lowered when they feel lonely at the workplace. Therefore, based on the existing empirical evidence from previous studies, we propose that workplace loneliness reduces employee engagement. The following hypothesis is posited:

Hypothesis 1 (H1). *Workplace loneliness is negatively associated with employee engagement.*

2.3. Relationship between Work Engagement and Organizational Commitment

Previous studies have suggested that employee engagement can be an attitudinal factor that enhances commitment within an organization. A study of different organizations verified that a highly engaged employee is very important for achieving useful business performance [37–39]. Albdour and Altarawneh [40] asserted that when an employee had high job performance capabilities and work engagement, they came to have normative and emotional engagement with the organization, and Hanaysha [41] identified that work participation affected employees' level of engagement. Mills and Fullagar [42] suggested that employee engagement plays a significant role in increasing occupational commitment. Kim et al. [43] observed that work engagement focused on the relationship between an employee and his or her tasks and that commitment emphasized the relationship between an employee and organization, adding that the two had a very positive relationship. In addition, Walden et al. [44] asserted that when an employee came to have engagement with their job, commitment to the organization increased as well. Cao et al. [45] also noted that when an employee experienced engagement and a high level of commitment to an organization, he or she developed strong faith in the organization's goals and values and

made considerable efforts and willingly accepted sacrifices for the organization. Consequently, positive psychological conditions of employees, such as their engagement, can increase their commitment to organizations. Therefore, the following hypothesis is posited:

Hypothesis 2 (H2). *Employee engagement is positively associated with their commitment.*

2.4. Relationship between Workplace Loneliness and Organizational Commitment

Wright [2] noted that in the case that an organization's employees did not feel intimacy and the need for social relationships, their organizational commitment and the possibility for them to find satisfactory relationships decreased, adding that organizational loneliness had a negative correlation with organizational commitment. In addition, Yilmaz [46] found that loneliness perceived by an employee in an organization was an important factor for determining his or her organizational commitment, and psychological support was necessary in order to increase commitment when he or she felt lonely. Erdil and Ertosun [20] explained that the loneliness that an employee felt in an organization negatively affected organizational commitment, and Ayazlar and Güzel [47] also observed that when an employee had no friends to share opinions with and no social relationships, he or she came to negatively predict organizational commitment. In other words, the existence of a social companion in an employee's workplace was an important factor for inducing their commitment to the organization. Erkan and Mithat [48] argued that the loneliness an employee perceived in an organization was a considerable predictor of they will toward the organization and negatively affected organizational commitment. Promsri [49] said that the loneliness an employee experienced in an organization and work engagement and commitment to the organization had a negative correlation, and Ozcelik and Barsade [4] suggested that an employee felt a sense of alienation due to loneliness in their workplace, which, in turn, decreased emotional commitment. From a similar perspective, Morrison [50] noted that whether or not there was a companion in an employee's workplace did not directly affect organizational commitment, but it had an indirect influence through job satisfaction. Ellingwood [51] asserted that when there were more opportunities for friendship in an employee's workplace, they more actively participated in and became more committed to the organization. Garg and Anand [36] argued that individuals and organizations interact closely, and emotionally committed employees identify themselves with the organization by actively participating in organizational activities and through their will of pursuit. Loneliness can be seen as a state that lacks such close interactions, and thus, shows a negative correlation with employees' organizational commitment. Heinrich and Gullone [52] demonstrated that loneliness affected individuals' emotional and cognitive attitude, and their immersion. Lawler [53] suggested that employees' positive emotion that derives from interactions with other people significantly stimulates their positive immersion in other individuals or organizations, but a negative emotion has negative impact on immersion. That is, individuals who feel lonely at workplace focus more on negative information than on positive information, and this leads to the lack of social interactions or immersion with the organization [54]. Therefore, the following hypothesis is posited:

Hypothesis 3 (H3). *Workplace loneliness is negatively associated with employees' commitment.*

2.5. Moderating Effects of LMX and CWX

Social exchange theory proposes that the quality of relationships between an employee and his or her superior and coworkers [28,55,56] affects job attitude and organizational performance. An employee's coworkers and superior constitute a very important part of the social environment of the workplace [57]. In particular, support from a supervisor or coworkers is an essential job resource for relieving negative experiences in an organization [58] and is a motivating force that makes an employee engage with their job [59]. As part of research that dealt with workplace loneliness and exchange relationships with a

superior and coworkers, Gable and Berkman [60] noted that a lonely employee mostly disregarded or ended meaningful relationships in the workplace and tended to evade the process of maintaining positive relationships. In addition, followers who prefer loneliness make negative evaluations of other persons, are reluctant to communicate with their leaders, and fear risks in social exchanges [61]. Furthermore, Wright et al. [10] asserted that loneliness depended on an inability to form interpersonal relationships that led an employee to be obsessed with social opportunities.

Lam and Lau [7] suggested that workplace loneliness had a negative relationship with LMX and organizational member exchange (OMX) and mentioned that the higher the LMX, the lower the negative effect of workplace loneliness on organizational citizenship behaviors became; in other words, LMX had an important moderating role. They also asserted that a lonely employee negatively judged and distrusted his or her leader. Chen et al. [21] observed that a lonely employee was lacking in capabilities to become a member of a group and did not make efforts to improve such a condition, adding that LMX increased as workplace loneliness decreased. Anand and Mishra [1] found that the stronger an employee's exchange relationship with their superior, the lower the negative effect of workplace loneliness on emotional exhaustion became, and asserted that the relationship between loneliness and emotional exhaustion was very strong in an employee with a low level of LMX. Therefore, a lonely employee who does not trust his or her leader and coworkers much is likely to have a negative opinion about the leader's roles and intentions, compared to an employee who is not lonely. In other words, such a negative psychological process is highly likely to be offset by a strong social exchange relationship. Based on such previous research, it can be inferred that an employee's positive relationship with his or her coworkers and superior may relieve the negative influence of workplace loneliness. Even though workplace loneliness decreases an employee's engagement and commitment, the negative influence of loneliness may be minimized if he or she maintains positive exchanges or relationships with their superior and coworkers. The following hypotheses are therefore proposed:

Hypothesis 4 (H4). *LMX moderates the effects of workplace loneliness on engagement and organizational commitment.*

Hypothesis 5 (H5). *CWX moderates the effects of workplace loneliness on engagement and organizational commitment.*

3. Research Methodology

3.1. Sample and Data Collection

Data for use in this study were collected in 2018 from employees working for the food and beverage departments of deluxe hotels located in Seoul. A deluxe hotel was defined as a five-star hotel with at least 200 rooms. A total of 10 hotels, whose human resources personnel had approved of the survey, were selected. Because it was realistically impossible to obtain consent from all employees, convenience sampling was used. Furthermore, employees voluntarily participated in the survey. They were anonymously surveyed and made aware that the answers would be confidentially managed. A total of 400 questionnaires were distributed to 10 deluxe hotels by the researcher. The size of the sample was determined in proportion to the population. The average number of employees in 22 deluxe hotels located in Seoul was 500, and the appropriate size of the sample was judged to be 400, given a percentage error of 5%. A total of 311 questionnaires were collected. Among them, 292 questionnaires were used for the final analysis. The employees were 42.8% male and 57.2% female. 50.0% of the employees were between 30 and 39 years. Most had a university degree (57.5%), and 84.2% had been with a deluxe hotel for less than 10 years. Also, their job positions were back of house (54.1%) and front of house (45.9%).

3.2. Instrument Development

The questionnaire consisted of six parts. The first part contained questions about the participants' demographic information (e.g., gender, age, education level, tenure). The second part requested employees to rate their overall recognition of workplace loneliness. To measure employees' perceptions of workplace loneliness, this study adapted Wright et al.'s [10] multi-item scales. The conflict management climate was measured through 12 items using a 7-point scale: "How much do you agree or disagree with these statements?" (1: strongly disagree to 7: strongly agree). The third and fourth parts focused on employee engagement and commitment. Employee engagement was measured with 5 items using a 7–point scale based on those developed by Schaufeli et al. [22,23]. Also, organizational commitment was measured by five items developed by Allen and Meyer [62] and Mayer and Schoorman [24]. The fifth and sixth parts focused on LMX and CWX. LMX was measured using five items developed by Borchgrevink and Boster [63,64]. Respondents' CWX was evaluated using five items developed by Sherony and Green [28]. As Brislin [65] specified, the questionnaire written in English was translated into Korean through reverse translation by a research worker fluent in both languages.

3.3. Data Analysis

The researcher employed the Statistical Package for the Social Sciences (SPSS) and the Analysis of Moment Structures (AMOS) programs for the analysis of the study data. The SPSS program was used for demographic analysis, reliability analysis, and correlation analysis of the measurement items. In order to examine the validity of the measurement items, the researcher employed the AMOS program. The hypotheses were verified using a two-step approach. The validity of the measurement items was identified through confirmatory factor analysis, assessment of composite construct reliability (CCR), and calculation of average variance extracted (AVE). The hypotheses were identified through structural equation modeling and multi-group analysis. In addition, in order to verify the mediating effect of engagement, the researcher employed bootstrapping and the Aroian version of the Sobel test.

4. Results

4.1. Measurement Model

The researcher identified convergent validity, discriminant validity, and nominal validity in order to verify the validity of the measurement items. Table 1 shows the result of confirmatory factor analysis on the theorized five-factor model (workplace loneliness, work engagement, organizational commitment, LMX, and CWX). The analysis showed that the study model had an excellent fit (χ^2 = 856.650; df = 454; χ^2/df = 1.887; GFI = 0.821; NFI = 0.905; CFI = 0.957; RMSEA = 0.058). The researcher reviewed factor loading (0.7 or higher), AVE (0.5 or higher), and CCR (0.7 or higher) in order to verify convergent validity, and all were found to satisfy their appropriate standards [66,67]. In addition, the square root (correlation) of each of the measurement items was smaller than the AVE, and the AVE was greater than the average shared variance (ASV) and maximum shared variance (MSV), whereby discriminant validity was verified (Table 2).

Table 1. Confirmatory factor analysis and reliability analysis.

Construct	Standardized Estimate	*t*-Value	Corrected Item-Total Correlation	CCR [a] Cronbach's Alpha
Workplace loneliness				0.963
WL$_1$ I often feel abandoned by co-workers when I am under pressure at work	0.905	fixed ***	0.897	0.982
WL$_2$ I often feel alienated from my co-workers	0.911	24.113 ***	0.903	
WL$_3$ I feel myself withdrawing from the people I work with	0.918	24.594 ***	0.908	

Table 1. *Cont.*

Construct	Standardized Estimate	*t*-Value	Corrected Item-Total Correlation	CCR [a] Cronbach's Alpha
WL_4 I often feel emotionally distant from the people I work with	0.906	23.733 ***	0.897	
WL_5 I often feel isolated when I am with my co-workers	0.908	23.879 ***	0.899	
WL_6 I experience a general sense of emptiness when I am at work	0.894	22.888 ***	0.886	
WL_7 I have social companionship/fellowship at work	0.899	23.255 ***	0.893	
WL_8 I feel included in the social aspects of work	0.896	23.008 ***	0.888	
WL_9 There is someone at work I can talk to about my day to day work problems if I need to	0.886	22.334 ***	0.876	
WL_{10} There is no one at work I can share personal thoughts with if I want to	0.925	25.191 ***	0.916	
WL_{11} I have someone at work I can spend time with on my breaks if I want to	0.927	25.368 ***	0.919	
WL_{12} I feel part of a group of friends at work	0.922	24.912 ***	0.913	
Work engagement				0.936
WE_1 I really "throw" myself into my job	0.814	fixed	0.842	0.949
WE_2 At my work, I feel bursting with energy	0.967	20.456 ***	0.892	
WE_3 I am proud on the work that I do	0.777	14.486 ***	0.814	
WE_4 I get carried away when I am working	0.854	16.571 ***	0.862	
WE_5 I am highly engaged in this job	0.968	20.483 ***	0.887	
Organizational commitment				0.925
OC_1 Working at my organization has a great deal of personal meaning to me	0.907	fixed	0.876	0.953
OC_2 I find that my values and the organization's values are very similar	0.909	23.391 ***	0.878	
OC_3 I care about the fate of this organization	0.886	21.893 ***	0.865	
OC4 I am proud to tell others I work at my organization	0.885	21.832 ***	0.860	
OC5 I feel a strong sense of belonging to my organization	0.890	22.127 ***	0.868	
Leader-member exchange				0.917
LMX1 My working relationship with my supervisor is better than average	0.804	fixed	0.758	0.907
LMX_2 I feel close to my supervisor	0.802	14.162 ***	0.762	
LMX3 My supervisor and I see things the same way	0.799	14.096 ***	0.753	
LMX4 I speak often with my supervisor about job-related issues	0.843	15.126 ***	0.787	
LMX5 My supervisor and I speak with each other about issues not related to work	0.820	14.577 ***	0.771	
Coworker exchange				0.923
CWX1 My coworker understands my job needs	0.846	fixed	0.810	0.930
CWX2 I feel close to my coworkers	0.849	16.966 ***	0.808	
CWX3 My coworker would personally use his/her power to help me solve my work problems	0.844	16.792 ***	0.806	
CWX_4 My working relationship with coworkers is extremely effective	0.870	17.695 ***	0.832	
CWX_5 I always know how satisfied my coworker is with what I do	0.853	17.100 ***	0.818	

Note: [a] CCR = composite construct reliability; Standardized estimate = β-value; χ^2 = 856.650 (df = 454) $p < 0.001$; χ^2/df = 1.887; goodness of fit index (GFI) = 0.821; normed fit index (NFI) = 0.905; Tucker Lewis index (TLI) = 0.953; comparative fit index (CFI) = 0.957; incremental fit index (IFI) = 0.957; root square error of approximation (RMSEA) = 0.058; root mean square residual (RMR) = 0.059; *** $p < 0.001$.

Table 2. Correlation analysis and discriminant validity tests.

Construct	1	2	3	4	5	AVE	Mean ± SD
1. Workplace loneliness	1	*0.076*	*0.069*	*0.168*	*0.087*	0.815	3.71 ± 1.34
2. Work engagement	−0.276	1	*0.461*	*0.288*	*0.259*	0.773	4.61 ± 0.97
3. Organizational commitment	−0.263	0.679	1	*0.233*	*0.129*	0.801	4.14 ± 1.17
4. Leader-member exchange	−0.410	0.537	0.483	1	*0.252*	0.661	3.33 ± 0.80
5. Coworker exchange	−0.296	0.509	0.360	0.502	1	0.726	3.63 ± 0.93

Note: AVE = Average variance extracted; Grey shaded types are significant at $p < 0.01$; Italic type are presented in squared correlation; SD = standard deviation.

4.2. Structural Equation Modeling

The hypotheses of this study were analyzed using structural equation modeling. Table 3 shows the result of the analysis with structural equation modeling and represents standardized path coefficients and t-values of all relationships. The model's fit was relatively good (χ^2 = 527.359; df = 206; $p < 0.001$; GFI = 0.835; NFI = 0.930; CFI = 0.956; RMSEA = 0.079). Hypothesis 1, which stated that an employee's workplace loneliness negatively affects work engagement (β = −0.284; t = −4.543; $p < 0.001$), was supported. This result is consistent with that of Öge et al. [29]; when an employee feels lonely in an organization, the possibility of him or her doing work engagement in organization decreases. In addition, Hypothesis 2, which stated that an employee's engagement positively affects organizational commitment (β = 0.653; t = 11.698; $p < 0.001$) was also supported. Such a result was consistent with those of others already verified; multiple studies [42,44,45] report the result that an employee's organizational commitment was increased by their work engagement. Nonetheless, the negative relationship between an employee's workplace loneliness and organizational commitment was rejected (β = −0.085; t = −1.657; $p > 0.05$). This study did not identify a direct causal relationship between an employee's loneliness and organizational commitment, which was in contrast with the results of previously performed multiple studies [4,20,48], but consistent with the result of research by Chan and Qiu [68], where workplace loneliness had no correlation with organizational commitment. Although a direct relationship between workplace loneliness and organizational commitment was not clarified, an indirect relationship between workplace loneliness and organizational commitment was expected from the mediating role of engagement, given Hypotheses 1 and 2. In order to verify this, the researcher made an evaluation of such a relationship based on the method by Baron and Kenny [69] and found that workplace loneliness negatively affected organizational commitment through engagement (β = −0.158; $p < 0.05$). The Sobel test also showed the importance of engagement, supporting its mediating effect (Z-score = −5.263, $p < 0.05$) [70]. Therefore, an employee's engagement completely mediated the negative relationship between workplace loneliness and organizational commitment.

Tables 4 and 5 show the result of the verification of whether LMX and CWX, as social exchange relationships, play a moderating role in the influential relationship between workplace loneliness and engagement and commitment. The researcher performed analysis by differentiating the subjects into a group with high LMX and CWX and another one with low LMX and CWX, based on their average values, and verifying the moderating effect with the difference in the degrees of freedom between the unconstrained model and the metric invariance model. According to the analysis result, LMX did not have a significant moderating effect on the influence of workplace loneliness on engagement and commitment. Therefore, Hypothesis 4 was rejected.

Table 3. Structural estimates model.

Hypothesized Path (Stated as Alternative Hypothesis)	Standardized Coefficients	*t*-Value	Results
H1(−) Workplace loneliness → work engagement	−0.284	−4.543 ***	Supported
H2(+) Work engagement → organizational commitment	0.653	11.698 ***	Supported
H3(−) Workplace loneliness → organizational commitment	−0.085	−1.657	Not supported
Goodness-of-fit statistics	$\chi^2_{(206)} = 527.359$ ($p < 0.001$) $\chi^2/\text{df} = 2.560$ GFI = 0.835 NFI = 0.930 CFI = 0.956 RMR = 0.066 RMSEA = 0.079		

Note: (1) GFI = goodness of fit index; NFI = normed fit index; CFI = comparative fit index; RMR = root mean-square residual; RMSEA = root mean square error of approximation; *** $p < 0.001$. (2) Mediating role of work engagement. Indirect effect: Workplace loneliness → work engagement → organizational commitment. Point estimate: −0.158 ($p < 0.05$); bias-corrected bootstrap 95% CI: −0.233(LL); −0.093(UL) Aroian version of the Sobel test: Z = −5.263 ($p < 0.05$).

Table 4. Moderating effects of employees' leader-member exchange (LMX).

	High-LMX (*N* = 148)		Low-LMX (*N* = 144)		Unconstrained Model Chi-Square (df = 412)	Constrained Model Chi-Square (df = 413)	$\Delta\chi^2$ (df = 1)
	Standardized Coefficients	*t*-Value	Standardized Coefficients	*t*-Value			
Workplace loneliness → work engagement	−0.111	−1.207 ns	−0.208	−2.307 *	783.293	783.861	0.568 ns
Workplace loneliness → organizational commitment	−0.052	−0.747 ns	−0.087	−1.040 ns	783.293	783.392	0.099 ns

Note: $\chi^2/\text{df} = 1.901$; GFI = 0.783; NFI = 0.891; TLI = 0.938; CFI = 0.945; IFI = 0.945; RMSEA = 0.060; * $p < 0.05$, ns Not significant.

Table 5. Moderating effects of employees' coworker exchange (CWX).

	High-CWX (*N* = 154)		Low-CWX (*N* = 138)		Unconstrained Model Chi-Square (df = 412)	Constrained Model Chi-Square (df = 413)	$\Delta\chi^2$ (df = 1)
	Standardized Coefficients	*t*-Value	Standardized Coefficients	*t*-Value			
Workplace loneliness → work engagement	−0.158	−2.064 *	−0.441	−3.978 **	781.272	785.319	4.047 *
Workplace loneliness → organizational commitment	−0.037	−0.593 ns	−0.107	−1.022 ns	781.272	782.390	2.118 ns

Note: $\chi^2/\text{df} = 1.896$; GFI = 0.786; NFI = 0.895; TLI = 0.940; CFI = 0.947; IFI = 0.947; RMSEA = 0.060; * $p < 0.05$, ** $p < 0.01$, ns Not significant.

Nonetheless, CWX had a significant moderating effect on the influence of workplace loneliness on work engagement. The negative influence of organizational loneliness on work engagement was significantly greater in a group with low CWX than in a group with high CWX. In other words, when an employee's positive interaction with his or her coworkers is insufficient, the negative relationship between workplace loneliness and work engagement becomes stronger. Therefore, Hypothesis 5 was partially supported. This was a result similar to that of the research by Lam and Lau [7], where an employee's close social exchange relationships with their team members decreased the negative effect of workplace loneliness.

5. Discussion and Implications

This study dealt with workplace loneliness, a very important but underestimated phenomenon thus far. Our research supports the position that workplace loneliness is harmful to both employees and their organizations. To this end, this study investigated the link between workplace loneliness, engagement, and commitment and looked at the moderating role of exchange relationships between an employee and his or her superior and coworkers in such causal relationships. The evidence derived from the result of tests performed on data collected from employees at deluxe hotels in Seoul using the study model supported all proposed hypotheses, excluding Hypotheses 3 and 4. According to the result of this study, workplace loneliness decreased employees' engagement with their jobs and, as such, decreased engagement had a positive relationship with organizational commitment. Such a study result shows that, as we proposed, workplace loneliness has a considerable negative influence on work engagement. In addition, the negative influence of workplace loneliness on work engagement was found to be moderated by CWX, and employees' maintenance of positive social exchange relationships with their coworkers was verified to be a major factor for relieving the negative influence of workplace loneliness. In other words, the relationship between workplace loneliness and engagement was relatively weaker in employees with high CWX.

This study contributes to the existing literature in different ways. First, this study verified the organic causal relationships between hotel employees' workplace loneliness and work engagement and organizational commitment. Thus far, there has been no empirical research on such relationships in hotel employees. Therefore, this study is judged as contributing to increasing existing knowledge on workplace loneliness because it employed the variable of loneliness, rarely studied in the area of workplaces, as an independent variable. Second, although discussion on workplace loneliness is on the increase compared to in the past, there is almost no empirical research on the outcomes of workplace loneliness. Thus far, loneliness among individuals has been perceived as important, and its negative influence has been emphasized in areas like psychology and sociology, but research on loneliness in the job environment has been relatively underestimated. From the perspective of change-oriented behaviors, this study examined the outcomes of workplace loneliness, thereby identifying engagement and commitment as resulting variables related with loneliness, which is consistent with the view that workplace loneliness triggers a few negative results. Therefore, this study stressed loneliness as an important element for explaining an employee's engagement and commitment, and it will contribute to the human resource management-related literature. Third, this study explored the mediating role of social exchange relationships on workplace loneliness from the perspective of social exchange theory. In detail, this study discovered a process mechanism that may moderate the effect of CWX on workplace loneliness and engagement. In addition, this study identified engagement as a medium that connects workplace loneliness and commitment. This result will provide meaningful academic suggestions in that it identified that loneliness indirectly affects commitment through engagement, and workplace loneliness may be moderated by an employee's positive relationship with coworkers as social exchange relationships.

This study's practical suggestions are as follows: It is important for every company to understand an employee's demands and maintain his or her job satisfaction at a high level, but in the hotel industry, human resources are particularly important, and, in this respect, maintaining a competitive advantage in a hotel is crucial. In particular, for the sustainable development of the hotel business, retaining and retaining excellent employees will be very meaningful in improving performance. Furthermore, loneliness perceived by hotel employees may do great harm to organizational efficiency because such loneliness is closely related with the essence of their job. Hence, the results of this study provide many useful implications for the management of employees. In particular, it was verified that controlling loneliness was important to an organization. Moreover, the importance of an employee's exchange relationships with coworkers in the formation of the link between loneliness and engagement was re-verified. Then, what can be done to minimize employees' experience of

loneliness? Diverse activity and training programs aimed at improving social relationships need to be provided on an organizational level. So that employees can have organic social relationships with their coworkers, places for social and emotional exchange should be provided, and such places should be developed further to benefit the organization on a long-term basis. Such activities involve club activities, the mentor/mentee system for voluntary exchange between an employee and his or her superior and seniors, and provision of other opportunities for them to grow socially. In addition, it is important to encourage employees to participate in team activities and to satisfy their social needs by providing social connections, so that they can form meaningful relationships in the workplace. In addition, another meaningful policy is to provide opportunities for employees to socialize outside their workplace. Furthermore, by forming an organizational climate of helping each other, an organization will be able to alleviate its employees' loneliness. It should also take appropriate measures to satisfy psychological desires of those under affected social relationships. In particular, an organization's practices and climate are very closely related with organizational performance, and it is important for an employee to clearly perceive his or her organization's environmental characteristics and climate. Because such practices form employees' perceptions of their organizational atmosphere and affect their collective behaviors and organizational performance, an organization should have its employees know that it is making efforts to prevent their loneliness on an organizational level, thereby inducing them to positively perceive their organizational climate [71].

There are a few limitations that readers should keep in mind with regard to the results of this study. Such limitations will present the direction of future research. The sample selected in this study provides beneficial characteristics and advantages, making clear the focus of the study, but, on the contrary, such unique characteristics of the sample make it difficult to generalize the study results. If the study model is tested in a more general setting than the current one, more generalized universal results will be obtained. Further, additional research in other work environments will be conducive to better identifying and making clear the relationship between the study variables. In addition, the measurement items of this study were measured under the self-reporting method, and, therefore, the subjects were able to respond in the way they thought desirable and able to make judgments based on their subjective views. Future research should complement this study through evaluation using more objective measurement tools. This study employed organizational commitment as a final dependent variable, but future research should use additional variables in order to evaluate organizational performance. In addition, more research is necessary to investigate the relationship between diverse independent variables that can affect workplace loneliness and dependent variables.

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