S. H. Kim, Y. K. Hwang, Ch. S. Lee

Dual mediating effects of job stress and gratitude on the relationship between organizational incivility and life satisfaction of child-care teachers: a moderated mediation role of grit

**Introduction.** Child-care teachers who deal with colleagues, young children and parents are under a lot of stress. In addition, incivility at workplace, which are invisible non-social behaviors, further aggravate stress. Research is needed to relieve stress caused by such organizational incivility. This study tried to elucidate the role of grit in effects of job stress and gratitude on the relationship between organizational incivility and life satisfaction of child-care teachers.

**Study participants and methods.** Subjects of this study were 323 teachers who worked at daycare centers located in S, A, and C cities in Korea. there were 97.8% females and 2.2% males. The most common age group was in the 40s (38.8%), followed by the 50s (24.7%) and 30s (19.9%). For analysis, frequency analysis, reliability analysis, and correlation analysis were performed using SPSS 25.0. Moderated mediation effect was analyzed using PROCESS macro 3.5.3.

**Results.** First, there were significant correlations among organizational incivility, job stress, gratitude, grit, and life satisfaction. Gratitude and life satisfaction had the highest correlation \( r = 0.495, p < 0.01 \), and followed by the correlation between job stress and organizational incivility \( r = 0.436, p < 0.01 \). Second, a moderated mediation effect of grit on the path from organizational incivility to life satisfaction via job stress and gratitude was verified. The conditional indirect effect of grit on the relationship of organizational incivility → job stress → gratitude → life satisfaction was all significant when grit was low \(-.5266, -.0933 \sim -.0207\), average \(.0000, -.1156 \sim -.0396\), and high \(.5266, -.1515 \sim -.0471\).

**Conclusions.** Therefore, we found grit’s moderated mediation effect which increases gratitude and life satisfaction of child-care teachers with high incivility and job stress at workplace. These research results are significant in that they provided an alternative for improving the quality of childcare services in a situation where life satisfaction of childcare teachers has a high causal relationship with the quality of childcare services. In addition, since the role of grit was verified in this study result, it will be possible to contribute to improving the life satisfaction of childcare teachers and improving childcare service by utilizing the enhancement of grit.

**Keywords:** organizational incivility, job stress, gratitude, life satisfaction, grit, moderated mediation effect, SPSS PROCESS macro

**For Reference:**
Companies around the world are sparing no effort to create a good workplace. However, antisocial behavior behind the scenes exists in the workplace like a shadow. Among them, organizational incivility is a low-intensity deviant behavior that violates the norm of mutual respect among members of an organization. It can be established without the intention of the perpetrator [1].

The reason why organizational incivility is attracting attention from the academia and industry is that it has a negative effect on the overall life of an office worker [2]. In particular, organizational incivility has been predicted to be negatively related to life satisfaction.

Every human being wants a high level of happiness and a satisfying life, which is an essential human need. Scholars are trying to find an answer to the question, ‘What makes a satisfying life?’ Although a lot of research studies on life satisfaction have been accumulated, it is necessary to expand academic reflection further from the current level and study the relationship between life satisfaction and major variables [3].

Studies dealing with organizational incivility and life satisfaction, which are recently receiving attention in the field of organizational behavior and psychology, are sufficient. But studies on the process by which the relationship between these two variables is established are also limited. Variables closely related to organizational incivility and life satisfaction include job stress and gratitude. It has been found that job stress has a negative effect directly or indirectly on the performance of an individual as well as the organization [4], whereas gratitude has a positive effect on individuals and the organization [5].

In particular, child-care teachers experience a high level of stress [6]. Their gratitude makes them respond positively to negative situations [7] and reinforces positive psychology [8]. Therefore, in this study, job stress and gratitude were set as mediators and their roles as two mediators in the relationship between organizational incivility and life satisfaction were investigated.

Duckworth and colleagues [9] have named grit a common characteristic of people who have achieved and succeeded in various fields. Grit is related to stress [10] and life satisfaction [11]. It is closely related to gratitude in that it is a concept based on positive psychology [12]. Previous studies have shown that grit has a positive relationship with positive emotions [13] and that it could predict life satisfaction [14].

The positive disposition of child-care teachers to feel gratitude and express gratitude also raises their level of life satisfaction. It is predicted that persistence and passion for long-term goals will contribute to a more satisfactory life. Thus, grit was established as a moderating and moderated mediating variable to elucidate its role.

The purpose of this study was to investigate the double mediation effect of job stress and gratitude and the moderated mediation role of grit in effects of organizational incivility on life satisfaction of child-care teachers. This study can be used as a new model for enhancing life satisfaction of child-care teachers. In order to achieve the purpose of this study, the following research questions are established: 1) what is the correlation between organizational incivility, job stress, gratitude, grit, and life satisfaction? and 2) does grit have a moderated mediating role in the effect of job stress and gratitude in the relationship between organizational incivility and life satisfaction?
Theoretical background

1. Relationship between organizational incivility and life satisfaction

Organizational incivility was introduced as a new form of organizational deviation by Anderson and Pearson [1]. It is defined as low-intensity deviant behavior with an unclear intention to harm others within an organization. Such behavior violates the norm of mutual respect in the workplace [1]. In other words, organizational incivility refers to the experience of low-intensity verbal and non-verbal deviant behaviors outside the norm of mutual reciprocity from members of the organization regardless of intentionality [1].

A variable closely related to organizational incivility is life satisfaction. Life satisfaction refers to subjective evaluation of an individual's overall life [15]. A high level of life satisfaction means a state of high satisfaction with life with many positive emotional experiences but few negative emotional experiences [15]. In other words, life satisfaction increases when an individual experiences positive emotions such as pleasure, happiness, and satisfaction strongly and frequently but experiences negative emotions such as fear, anger, and anxiety in a weak and small amount [16].

Organizational incivility has a negative effect on the overall life of an office worker [2; 17]. It has been reported that victims of organizational incivility can increase stress [18], depression [19] and negative emotions [20] but decrease organizational commitment [21] and job satisfaction [22].

Although active research studies on organizational incivility and life satisfaction are being conducted, studies on the relationship between these two variables targeting child-care teachers are very limited. Therefore, this study intends to understand how organizational incivility affects life satisfaction and what variables buffer negative effects in this process considering relationships and roles between major variables in an integrated manner.

2. The mediating effect of job stress and gratitude

Job stress is defined as a state of job-related time pressure, anxiety, and worry in an organization [23]. It is a psychological reaction state in which an individual is confused to various job demands or restrictions faced in the work environment [24]. The higher the job stress, the higher the depression [25]. If job stress is not properly relieved, it can cause burnout along with various physical and mental diseases [26]. Stress directly or indirectly affects teachers and children in charge [27].

On the other hand, positive psychology defines gratitude as a mental state to feel grateful and appreciate life itself [28] while viewing gratitude as an emotion. Gratitude is a tendency to recognize external causes of positive results for one's own happiness and response to them with a grateful heart with relatively persistent and stable characteristics [29].

It has been reported that the higher the gratitude, the higher the self-reflection ability [30]. In addition, the higher the self-esteem in the process of appreciating the kindness of others, the higher the tendency to accept all that one has as a blessing [31].

There are few direct-related studies on the mediation role of job stress and gratitude in the relationship between organizational incivility and life satisfaction. Thus, studies that
partially dealt with the relationship between these variables were reviewed. Organizational incivility has been found to have positive relationships with stress [32], job stress, and depression [33]. Incivility can work as a stressor [34]. It has been shown that organizational incivility behavior increases job stress [35].

In a study on job stress, gratitude, and life satisfaction, gratitude is positively correlated with psychological well-being and life satisfaction [36]. Gratitude is also positively correlated with subjective well-being, psychological well-being, and social well-being [37]. In addition, people who are more grateful not only have higher life satisfaction than those who are less grateful [30], but can also enhance well-being and satisfaction with life [38].

Based on these studies, we tried to understand the mediating role in the effect of job stress and gratitude on the relationship between organizational incivility and life satisfaction of child-care teachers by predicting that job stress and gratitude could explain how organizational incivility could affect life satisfaction.

3. The moderating effect of grit

Grit, one of positive temperaments of human beings, is a common characteristic of people who have achieved outstanding achievements in various fields. It is defined as persistence and passion for long-term goals [9]. In other words, it is not easy to change the long-term goal to be achieved. It can be said that it is the driving force for maintaining the goal for a long time even when one faces adversity or hardship.

People with high grit can maintain a consistent interest in long-term goals and strive to achieve their goals consistently. However, people with low grit often change their interests or goals. They are not only less interested in long-term goals, but also lose their purpose. When faced with obstacles or difficulties in the process of achievement, they easily give up or become frustrated [9]. It has been reported that people with high grit receive less stress even when they face negative life events than those with low grit [10]. They also have a higher meaning of life [39].

Fourteen years after the appearance of the concept of grit, it has attracted attention of scholars in various fields such as education and psychology. Empirical research results on grit are continuing. Grit is known to be positively correlated with positive emotions but negatively correlated with negative emotions [13]. It also predicted positive factors of life such as maintenance of marriage and life satisfaction [14].

There are very few studies analyzing the moderating effect of grit on the relationship between gratitude and life satisfaction. But some studies have investigated the moderating effect of grit on its relationships with other variables. Grit moderated the relationship between job insecurity and customer orientation of hotel workers [40] and the relationship between adolescent problem behavior and life satisfaction [11]. In addition, grit moderated the mediating effect of the growth mindset on the relationship between job stress and happiness among college students [41].

Based on previous studies, grit is closely related to positive factors of life. Thus, grit is thought to be able to moderate the relationship between gratitude and life satisfaction. It is predicted that grit will have a moderated mediation effect on the relationship between organizational incivility and life satisfaction with job stress and gratitude as mediators. Therefore, we tried to verify the moderated mediation effect of grit in this study.
Research methods

1. Research model
In order to verify the double mediating effect of job stress and gratitude and the moderated mediation role of grit in the effect of organizational incivility on life satisfaction, a research model was established by applying model 87 of the SPSS PROCESS macro proposed by Hayes [42]. It is presented in Figure 1.

![Figure 1: Research model of this study](image)

2. Research subjects and data collection
Subjects of this study were teachers who worked at daycare centers located in S, A, and C cities of Chungcheongnam province. At least 209 subjects were calculated using the G*Power analysis program for the required number of subjects in this study. The number of study subjects was set to be 350. The number of subjects used for the analysis was 323. Therefore, a sufficient sample was secured for this study.

Regarding the gender of study subjects, there were 97.8% females and 2.2% males. The most common age group was in the 40s (38.8%), followed by the 50s (24.7%) and 30s (19.9%). As for working experience, those with more than five years but less than 10 years accounted for the most at 27.6%, followed by those with 1 year to less than 3 years (19.7%) and those with 10 years to less than 15 years (19.3%).

3. Research tools
Survey tools used in this study were organizational incivility, job stress, gratitude, grit, life satisfaction, and demographic characteristics. Demographic characteristics consisted of gender, age, and educational background.

3.1. Organizational incivility
Organizational incivility was measured with the scale used by Lee [43] which was developed by Cortina et al. [2]. This scale had a total of 10 items. Each item was measured on a 7-point Likert scale ranging from 1 “not at all” to 7 “always”, with higher score
indicating more frequent experiences of incivility from superiors or co-workers within the organization. In this study, the reliability of the organizational incivility scale had a Cronbach’s α value of 0.924.

### 3.2. Job stress
For job stress measurement, a scale developed by Parker and DeCotiis [44] was used. This scale consisted of a total of 13 items. Each item was measured using a 5-point Likert method ranging from 1 point of “not at all” to 5 points of “strongly agree”, with higher score indicating higher job-related stress level. In this study, the Cronbach’s α value of the job stress scale was 0.914.

### 3.3. Gratitude
Gratitude was measured using the Korean version of the gratitude scale (K-GQ-6) developed by McCullough et al. [29] and adapted by Kwon et al. [45]. This scale consisted of a total of six items. Each item was measured using a 5-point Likert method ranging from 1 point of “not at all” to 5 points of “strongly agree”. The higher the score, the higher the gratitude. In this study, the Cronbach's α value of the scale was 0.846.

### 3.4. Grit
Grit was measured with a tool developed by Duckworth and Quinn [46] and used by Hwang and Lee [47]. This scale had a total of eight items. Each item was measured using a 5-point Likert method ranging from 1 point of “not at all” to 5 points of “strongly agree”, with higher score indicating more passionate interest and sustained persistence. In this study, the reliability of the grit scale had a Cronbach’s α value of 0.774.

### 3.5. Life satisfaction
Life satisfaction was measured with SWLS (Satisfaction with Life Scale) developed by Diener and colleagues [48] and adapted by Cho and Cha [49]. This scale had a total of five items. Each item was measured on a 5-point Likert scale ranging from 1 point of “not at all” to 5 points of “strongly agree”, with a higher score meaning a higher level of satisfaction with life. In this study, the reliability of the life satisfaction scale had a Cronbach’s α value of 0.878.

### 4. Data Analysis
Frequency analysis, reliability analysis, and correlation analysis were performed using SPSS 25.0. The moderated mediation effect was analyzed with the bootstrap method using PROCESS macro 3.5.3. The conditional effect was based on three conditions (M±SD, M). Gratitude and grit were mean centered.

#### Results

1. **Correlation and descriptive statistics**
Pearson's correlation analysis was performed to determine correlations among organizational incivility, job stress, gratitude, grit, and life satisfaction. Results are shown in Table 1. There were significant correlations among organizational incivility, job stress, gratitude, grit, and life satisfaction. Specifically, organizational incivility had a positive correlation with job stress, but negative correlations with gratitude, grit, and life satisfaction. Life satisfaction was negatively correlated with job stress, but positively correlated with gratitude and grit. Gratitude and life satisfaction had the highest
correlation ($r = 0.495$, $p < 0.01$), and followed by the correlation between job stress and organizational incivility ($r = 0.436$, $p < 0.01$).

According to descriptive statistics analysis, gratitude ($M = 4.0540$), grit ($M = 3.6441$), and life satisfaction ($M = 3.2967$) were higher than the median value. However, job stress ($M = 2.5557$) and organizational incivility ($M = 1.6216$) did not exceed the median value.

Table 1

<table>
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**$p < 0.01$.**

2. Moderated mediation effect

In order to understand the moderated mediation effect of grit on the relationship among organizational incivility, job stress, gratitude, and life satisfaction, model 87 of the SPSS PROCESS macro was applied. In the analysis, a bootstrap confidence interval of 95% and 5,000 samples were set. Gratitude and grit were mean-centered. Analysis results are presented in Table 2.

Organizational incivility had a significant effect on job stress ($0.5316$, $p<0.001$) and gratitude (-0.2016, $p<0.01$). However, it did not affect life satisfaction ($0.0203$, $p>0.05$). Job stress had a significant negative effect on gratitude (-0.2732, $p<0.001$) and life satisfaction (-0.1549, $p<0.05$). Gratitude had a significant positive effect on life satisfaction (0.5058, $p<0.01$). The interaction term between gratitude and grit also had a significant effect on life satisfaction ($0.2684$, $p<0.05$). The increase in R2 according to the interaction term ($\Delta R^2 = 0.0141$, $p<0.05$) was also significant.

Next, the conditional effect of gratitude on life satisfaction was analyzed. Three conditions ($M$, $M \pm 1SD$) were set according to the grit value. Conditional effects of gratitude at low ($M-1SD = -0.5266$, $p<0.001$), average ($M = 0.0000$), and high ($M+1SD = 0.5266$, $p<0.001$) were all significant. In all three conditions of the grit value, the conditional effect of gratitude on life satisfaction increased as grit increased.

In order to specifically identify the area where the conditional effect of gratitude was significant, the Johnson-Neyman method was applied. In the area where the grit value was greater than -1.0250, the conditional effect of gratitude was significant. The majority (97.2%) of total survey subjects belonged to this significant region. However, the conditional effect of gratitude was not significant in the smaller region where the grit value was $-1.0250$. Therefore, gratitude can affect life satisfaction. This relationship depends on grit. When grit increases, the conditional effect of gratitude on life satisfaction also increases.
Table 2

Results of analysis of moderated mediation effect of grit

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<th>p</th>
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Conditional effects of gratitude at values of grit

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<td>.0000(M)</td>
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<td>.5266(M+1SD)</td>
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Significant area of conditional effect of gratitude according to the grit value

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*LLCI = Lower limit within the 95% confidence interval of boot  
**ULCI = Upper limit within the 95% confidence interval of boot

The conditional effect of grit was visualized by dividing grit into low, medium, and high groups. Results are shown in Figure 2. In all three conditions of grit (M, M±SD), life satisfaction increased as gratitude increased. It was found that the slope of life satisfaction increase for the low grit group was gentle as gratitude increased. However, the high grit group showed a steeper slope. That is, even when gratitude increases the same, life satisfaction of people with high grit increases more than people with low grit.
Direct and indirect effects on the relationship between organizational incivility and life satisfaction were analyzed. The direct effect was not significant at 0.0203 (p>0.05). However, the unconditional indirect effect of grit on the relationship of organizational incivility → job stress → life satisfaction was -0.0823 (-0.1611 ~ -0.0106). Since there was no '0' between the lower and upper limits of bootstrap at 95% confidence interval, the indirect effect was significant. The conditional indirect effect of grit on the relationship of organizational incivility → gratitude → life satisfaction was all significant when grit was low (-0.5266, -0.1414 ~ -0.0210), average (0.0000, -0.1752 ~ -0.0376), and high (0.5266, -0.2287 ~ -0.0470) because '0' did not appear between lower and upper bounds of the bootstrap at the 95% confidence interval. Finally, the conditional indirect effect of grit on the relationship of organizational incivility → job stress → gratitude → life satisfaction was all significant when grit was low (-0.5266, -0.0933 ~ -0.0207), average (0.0000, -0.1156 ~ -0.0396), and high (0.5266, -0.1515 ~ -0.0471) because there was no '0' between lower and upper bounds of bootstrap at 95% confidence interval. Therefore, a moderated mediation effect of grit on the path from organizational incivility to life satisfaction via job stress and gratitude was verified.

Table 3

<table>
<thead>
<tr>
<th>Effect</th>
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Conditional indirect effect of organizational incivility → gratitude → life satisfaction

<table>
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<th>BootLLCI*</th>
<th>BootULCI**</th>
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Conditional indirect effect of organizational incivility → job stress → gratitude → life satisfaction

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*LLCI = Lower limit within the 95% confidence interval of boot  
**ULCI = Upper limit within the 95% confidence interval of boot

Discussion and Conclusion

This study was conducted to verify the dual mediating effect of job stress and gratitude and the moderated mediation effect of grit on the effect of organizational incivility on life satisfaction of child-care teachers. The discussion and conclusions of this study are as follows.

First, as a result of correlation analysis among major variables, there were significant correlations among organizational incivility, job stress, gratitude, grit, and life satisfaction. These findings are in line with previous study results showing that there is a significant positive correlation between organizational incivility and job stress [33; 50] and that organizational incivility is associated with stress [18; 32] while it has a negative relationship with increasing level of well-being [32] and life satisfaction [33].

These results also support previous results showing that gratitude is positively correlated with life satisfaction [36] and that people with high grit receive less stress due to negative life events than those with low grit [10]. These results also support previous findings that people with high grit have a high meaning in life [39]. In other words, if the organizational incivility of child-care teachers increases, job-related stress also increases, which in turn reduces gratitude and leads to lower satisfaction with life.

Second, the moderated mediation role of grit in the effect of organizational incivility on life satisfaction through job stress and gratitude was verified. In other words, the effect of organizational incivility on life satisfaction through job stress and gratitude depends on grit. Eventually, the effect of organizational incivility behavior on life satisfaction decreases as grit increases.

This study confirmed the process that child-care teachers with high organizational incivility had increased job stress, but decreased gratitude, and consequently lowered life satisfaction. In other words, high organizational incivility eventually leads to low life satisfaction. Grit as a moderating variable can moderate this negative relationship. Even if incivility is frequently performed within an organization, if grit is improved, life satisfaction can be increased as a result.

Suggestions for further studies and practice are as follows.

First, child-care teachers are exposed to stressful environments due to work and interpersonal relationships by performing heavy tasks. In this study, although job stress could decrease life satisfaction, the logic that life satisfaction could be decreased by decreasing...
gratitude was verified. Further studies from the field and academia are needed to increase gratitude in organization.

Second, this study found that organizational incivility was a major variable that could reduce life satisfaction. If a healthy organizational culture is formed in which members of the organization do not experience incivility, life satisfaction can be increased. Since incivility happens regardless of the member’s intention and tends to be overlooked because of its low intensity in the organization, it is urgent to develop and apply a program to prevent organizational incivility.

In spite of these limitations, the role of grit in the relationship between organizational incivility and life satisfaction of child-care teachers was comprehensively analyzed. The academic discussion has been expanded by identifying the relationship and roles of grit with related variables. This study is meaningful in that it is the first study to verify a life satisfaction enhancement model using gratitude and grit under incivility.

REFERENCES

Information about the authors

Sun Hee Kim
(South Korea, Seosan city)
Doctor, Doctor of Counseling, Director
Child care center
E-mail: seeS264@naver.com
ORCID ID: 0000-0002-0273-816X

Youn Kyoung Hwang
(South Korea, Seosan city)
Doctor, Doctor of Lifelong Education
Professor for Academic Research
Korea Research Foundation
ORCID ID: 0000-0002-4530-3641
E-mail: 01020707980@hanmail.net

Name Chang Seek
(South Korea, Seosan city)
Doctor of Philosophy
Chairman, Professor
Department of Health, Counseling and Welfare
Hanseo University
E-mail: lee1246@hanmail.net
ORCID ID: 0000-0002-9222-1953