

# The Mediator Effect of Mindfulness Awareness on The Relationship Between Nomophobia and Academic University Adjustment Levels in College Students

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## Abstract

*This study explores the mediator effect of mindfulness awareness levels on the relationship between not being able to access information with mobile phone (nomophobia) and academic university adjustment rates in college students. 286 university students from Aydin Adnan Menderes University were recruited into the research and Mindful Attention Awareness Scale, University Life Scale and Not Being Able to Access Information Factor of Nomophobia Scale were given to participants to obtain the data. The consequences of this research showed up that there is a crucial negative correlation between nomophobia and academic university adjustment levels in college students and more vitally, nomophobia significantly predicts the academic adjustment level of college students. Also, it is found out that there is a significant mediator effect of mindfulness awareness levels of college students on the relationship between nomophobia and academic university adjustment rates.*

**Keywords:** Mindfulness, nomophobia, academic university adjustment.

## Introduction

In recent years, psychological and mental problems that are experienced and emerged during the transition from adolescence to young adulthood in human beings have been perceived and investigated in the fields of both clinical, social and developmental psychology (Ceyhan, 2006). The logic behind the occurrence of this case could be stated that the shaping and formation of personality, character, life dynamics and decisions that are crucial to life have the potential to deeply influence the life cycle of the individuals who have this mentioned transition process, with psychological disturbances or troubles that may arise during this period (Pancer, Hunsberger, Pratt and Alisat, 2000). Hence, researchers who are active in social, developmental and clinical psychology fields gravitated their interest into this life process of human beings in order to provide deeper and detailed comprehension for the psychological cases of individuals (Pancer, Hunsberger, Pratt and Alisat, 2000).

The psychology science indicates that it turns out that individuals are mostly examined and investigated during adolescence to young adulthood transition process through adjustment and adaptation abilities due to the importance of these features for the entire life process and progression (Chemers, Hu and Garcia, 2001). In this context, adjustment ability involves the terms of harmony, completion, fulfillment of adaptation according to the literature (Chemers, Hu and Garcia, 2001). Following to this case that, harmony could be displayed as a person's ability to adapt psychologically, physically, and individually to certain environmental and living conditions and also, another vital point could be explained that completion is a subject to a certain period, where it is seen that the individuals define and accept new conditions and conditions and shape themselves within new conditions (Chemers, Hu and Garcia, 2001). As a result of the full fulfillment of the adaptation, the individual adapts to the social environment and becomes able to use and manipulate its vital functions fully through having high level of harmony and completion abilities (Beyers and Goossens, 2003). When the life processes of individuals are taken as basis, it could be observed that adaptation skills and its progression rates are very important for resuscitating life conditions and regularities (Beyers and Goossens, 2003). According to evolutionary psychology perspective, adaptation could be mentioned as one of the most important element for survival process for human beings, and also, Sigmund Freud indicated that adaptation ability of individuals as a representative of existence, conditions of social adjustment. For this reason, it is seen as a very important process for the development and progress of psychological and mental development of a person in his / her life, experience or new experience (Beyers and Goossens, 2003).

In the university process, individuals are admitted with new knowledge in professional and social terms and experience a kind of oriental form of their life in university education process. For this reason, in the university process, the decisions made by the individuals and the dynamics of their lives, they are confronted as factors that shape their attitudes towards life events while they are in the adult life and their surroundings (Beyers and Goossens, 2003). Literature indicates that it is necessary to avoid the problem of the adaptation of the individuals in the university process in order for these dynamics to be fully realized. However, in today's world, many individuals in university life are experiencing certain psychological problems in terms of adapting and conforming to the new social and professional norms, values and principles (Beyers and Goossens, 2003).

Attending to the university for the first time can be a very challenging task for the young adults. A growing body of evidence shows that this transition places a great deal of stress on students' lives (Wintre and Yaffe, 2000). Hamilton and Hamilton (as cited in Buote et al. 2007) reported that 20% to 25% of 1st-year students do not complete the second year in university. A study found out that %40 of students face serious difficulties to the extent that they cannot complete their degrees (Pantages and Creedon, 2016). Furthermore, students successfully completing their degrees still may struggle with significant levels of stress during their university years (Zitzow, 1984).

First-year students generally experience a wide range of adjustment problems. Homesickness, friend sickness, depression and other psychological disturbances are among these could be demonstrated as the most observed psychological problems that first-year students suffer (Buote et al. 2007). Problems can also affect academic performance (Buote et al. 2007) within turn may lead to other problems.

Adjustment is a complex process where the individuals try to better fit to the environment (Ramsey et al. 1999). So, arguably there can be many reasons and predictors to the success of this "fitting process". The current research aimed to concentrate on three of these: mindfulness awareness, nomophobia and academic university adjustment process in order observe to what extent mindfulness awareness levels of college students has a mediation effect on the relationship between nomophobia and academic university adjustment rates of university students.

### *Nomophobia*

While the technology is evolving every day, the fears surrounding human beings are also changed during the time. According to a research conducted in England, today's new phobia is "Nomophobia" (King, Valença, Silva, Baczynski, Carvalho and Nardi, 2013). This new psychological problem might be demonstrated as covering the rest without mobile phones. It has been stated that the reason why the mobile phone is so addictive for individuals is the desire of people to keep in constant contact with their family and friends (King, Valença and Nardi, 2010). These people who are actually having nomophobia are so addicted to their mobile phones that the stress of not being able to find where the phone ends charging or where the phone is putting up a lot (King, Valença and Nardi, 2010).

Following that, nomophobia is a fear of extreme fear of being disconnected from communication via mobile phones. This causes physical side effects such as panic attacks, shortness of breath, dizziness, tremors, sweating, increased heart rate, chest pain and nausea. Staying indoors, standing in the open, not afraid of the heavens, a new phobia of modern times appeared as nomophobia (Yildirim and Correia, 2015). Since this psychological problem is observed as a new phenomenon, extensive research has not been conducted on the subject. In a study through 2100 cell phone users, one of the two people who attended said

that they never turned off their phones (Yildirim and Correia, 2015). One in ten people said that they wanted to be always accessible because of their work (Yildirim and Correia, 2015). Researchers displayed that "nomophobia" can affect 53 percent of mobile phone users, 58 percent of men, 48 percent of women who are worried that they have lost their phones, lost their phones or dropped out of their coverage when their charges run out in negative way for the psychological well-being.

Additionally, nomophobia symptoms could be ordered as;

- If losing a mobile phone or signal is causing a negative physical indication, or if the person never turns off the phone,
- If the person is aware of a panic attack or an excessive reaction to the end of the charge,
- Obsessively checking to see if it's next to your mobile phone or mobile device,
- Even if the mobile phone is in a safe place, the concern of losing it is observed in constant way,
- If the phobia goes on for a very long time and affects the health or daily life of the person.

It can be said that the fear of losing the mobile phone connection is a dependency. Mobile phone and social media addiction is working with the same mechanism as other addictions (Yildirim and Correia,2015). If a person is deprived of what he / she is addicted to, and if he / she needs more and more, the same effect is seen in the nomophobia. In fact, again, as with addiction, many people are less likely to use the phone (Yildirim and Correia,2015). It is observed that the nomophobia is very common among college students, especially those who have given themselves a certain personal freedom (Yildirim, Sumuer, Adnan and Yildirim, 2016). Especially when the university campuses are observed with deeper attention and interest, it might be very regular to be able to observe young people who are walking down the building with their heads on their smartphone and who are not even aware of what is happening around them. It seems that the lives of these young people, who are constantly or intermittently busy on the floor, in the garden, in the cafeteria, on the bed, at home, on the bus, on the metro, in the minibus, or even with the smartphones, seem to be under the influence of these smart and attractive devices. It is reported that traffic lights are placed on the sidewalks in Germany in order to prevent possible accidents by attracting the attention of the individuals who do not pay attention to the traffic lights, especially because they look at the smart phones of their permanent owners (Yildirim, Sumuer, Adnan and Yildirim, 2016).

The conflict-like psychological conditions that are concerned with smartphones in classes and lectures, such as the conflicts they experience when they are taken away from mobile phones or when they are forced to close the for a moment, are also striking, as these young friends, who have their own attention and adversely affect their classmates'. The issue of how to deal with students who use smartphones in high school is discussed in the internet based academic sharing environments as teaching staff. The vast majority of teaching staff from various countries and cultures in the world who comment on the online academic sharing environment report that they see this as a serious problem that prevents learning in class (Yildirim, Sumuer, Adnan and Yildirim, 2016). Students who do not leave the smartphone even when they are asleep can end up having to spend less time on their lessons as a result of their lessons in learning the lesson, reinforcement and reinforcement, and the limited time spent in the preparation of the exams are affected by the time they spend with the smartphone. It is also reported that the use of smartphones has also increased the stress levels of individuals (Yildirim, Sumuer, Adnan and Yildirim, 2016).

### *Mindfulness*

The term mindfulness can, in fact, have different meanings (Chase, 2009). Mindfulness (1) is a philosophical or religious practice originated from eastern religions, (2) is a set of skills and abilities that can be learned, (3) is a set of beliefs about the world, (4) is a cognitive style and (5) mindfulness is a personality like, trait. It could be argued that the common part to all definitions is that mindfulness requires to be fully present in the moment and to be aware of internal and external stimuli. The teachable skills definition may be the most used and most referred among mental health professionals. Many studies have been made regarding specific mindfulness-based intervention programs (Bishop et al. 2004). One of these intervention programs, Mindfulness-based stress reduction (MBSR), was developed by Kabat-Zinn (Chang et al. 2004). MBSR, designed as a group intervention is widely used in clinical practice. MBSR has shown to be effective in reducing stress. Chase (2009) indicated that in a sample of cancer outpatients concluded that those who had an MBSR training showed fewer stress symptoms than the control group.

Brown and Ryan (2003) studied on the effects of dispositional and state mindfulness with well-being. Dispositional mindfulness, measured by the Mindful Attention Scale, "is focused on the presence or absence of attention to and awareness of what is occurring in the present rather than on attributes such as acceptance, trust, empathy, gratitude, or the various others that have been associated with mindfulness "(Brown and Ryan, 2003) which can be seen as components of the more inclusive state mindfulness term. Brown and Ryan (2003) displayed that both dispositional and state mindfulness predicts self-regulation behavior and positive emotional states.

In addition to this circumstance that, Fravell (1979) displayed that, mindfulness awareness levels of college students were found as playing significant role in social cognition, problem solving, memory, attention, language acquisition, writing, reading comprehension, verbal persuasion. It was indicated that awareness could improve motivation and academic learning for college students. Mindfulness awareness provides an individual assessment of the learners' beliefs and supports independent learning. In this respect, mindfulness awareness is seen as an important variable in the course work, which in turn leads to an increase in the academic achievement of learners or college students (Fravell, 1979). Therefore, the individual cognitive processes are based their mindfulness awareness level play an important role in self-regulation and academic performance for university students (Zimmerman, 2000). Hence, it was inferred that students who think they are aware of their own learning process in such a process will catch a higher academic success by themselves. If a learner is aware of the preliminary information they possess before learning a subject, how much it will affect the new subject, and if you ask yourself what you know and complete the deficiencies (Zimmerman, 2000).

In short, mindfulness awareness could be defined as the conscious and periodic control of whether the individual can achieve his or her goal and, if necessary, the freedom to choose and implement different strategies. When we look at all these definitions, mindfulness awareness is interwoven with all dimensions of thinking dimensions, more importantly, mindfulness awareness levels of university students were observed as playing a vital role in academic achievements and performances (Zimmerman, 2000).

### *The Present Research*

University adjustment is an important issue which can positively or negatively affect students' life. Mindfulness has been shown to be effective in relieving stress and attention is considered by many as one of the prerequisites to start a self-regulation process and, nomophobia at its part is known to facilitate self-regulation and management regarding the

cases on academic adaptation abilities in college students. In this study Not Being Able to Access Information Factor of Nomophobia Scale was used.

This study aims to investigate the mediator effect of mindfulness awareness levels on the relationship between nomophobia and academic university adjustment rates in college students. The hypotheses of this research are formed as;

1. Is there a significant inter-correlation between nomophobia, mindfulness awareness and academic university adjustment levels in college students?
2. Do mindfulness awareness levels of college students show mediator effect on the relationship between nomophobia and academic university adjustment rates?

## Method

### *Participants*

Participants in this study were 196 women and 90 men ( $N = 286$ ) who were students at Adnan Menderes University in Aydın. Participants' ages change between 17 and 29. Also, a total of 199 students (68.9%) are living in student dormitory, 15.6 %with flat mate and6.2 % with their family. Also, 187 participants (64.7%) are not using cigarette and 165 participants (57.1%) alcohol; 98 participants (33.9%) are using cigarette and 117 (40.5%) alcohol. For 159 of participants didn't any chance about using cigarette and for 174 of participants about using alcohol after they begin to university. In addition, 109 participants in the metropolitan city, 75 participants in the city, 63 participants in the district, 35 participants in the village said that they spent a large part of their lives. More than half of the participants (67.5%) said that were at normal levels of income.

### *Instrumentations*

*Socio Demographic Information:* Form was prepared to learn the socio-demographic characteristics of the participants by researchers. The form included information about age, gender, marital status, alcohol and cigarette use, the place they live (home, dormitory etc.), the place they spent their lives for a long time (big city, district etc.), income situation.

*University Life Scale:* The scale used to measure the level of adjustment of the university life of the university students is developed by Aladağ et al. (2003). The internal consistency coefficient is .90. The Cronbach's alpha fort this scale was found .91 in this study. It has 48 items and 6 subs-scales; Adaptation to university environment (12 items). Emotional adjustment (9 items), Personal compliance (7 items), Counter-Sex relations (7 items), Academic compliance (7 items), Social cohesion (6 items). This scale is a Likert type scale of 7.

*Mindful Attention Awareness Scale:* This scale was developed by Brown and Rayn (2003) measures the frequency of open and receptive attention to and awareness of ongoing events and experience. The scale was adapted to Turkish by Özyeşil et al. (2011). The Cronbach's Alpha internal consistency of the scale was .80 and test-retest correlation was .86. In additional to in this study, Cronbach's Alpha was found .89. The high scores on the scale indicate that conscious awareness is high.

*Not Being Able to Access Information Factor of Nomophobia Scale:* This scale was generated by Yıldırım and Correia (2015) in order to observe the level of phobia for individuals in terms of spending time without smart phones. Not Being Able to Access Information Factor of Nomophobia Scale has 4 items that are measured through answering 1- Nothing to 4 – Very. Also, the Cronbach's Alpha was found out as 0.95 and higher scores that

are obtained from the scale indicate high level of nomophobia that the participants have according to the norms of this scale.

### Procedure

After the approval of the ethics committee, the study was conducted with 286 voluntary students of Adnan Menderes University. First of all, students were informed about the purpose of studying by entering the classes. After that informed consent forms, socio-demographic forms and scales were given who wanted to participate in the study. This study is designed as a descriptive survey model. The data was analyzed with a computer program which is SPSS (Statistical Package for Social Sciences) for Windows 18.0. During the assessment of data, descriptive statistics methods were used which are numbers, percentages, means and standard deviations. The difference between two groups are analyzed with t- test, One Way ANOVA was used for analysis of more than two groups difference. Additionally, Pearson correlation test was used for analysis of relationship between predictor and predicted variables; and predictability of variables were tested with regression analysis. Hierarchical regression was performed with variables resulting in statistically. To test the significance of mediation effect sobel test was used.

### Results

To test the mediation effect of mindfulness awareness on the relationship between nomophobia and academic university adjustment levels of participants, Pearson Correlation analysis was primarily used in order to observe inter-correlation between these displayed variables. According to the outcomes, there was a significant positive relationship between academic university adjustment and mindfulness awareness scale rates of participants,  $r=.412^{**}$ ,  $n= 240$ ,  $p=.000$ . This consequence showed up that while mindfulness awareness levels of individuals are increasing, academic university adjustment rates of them are also augmenting simultaneously. Furthermore, there was a negative significant association between mindfulness awareness and nomophobia levels of university students,  $r=-.246^{**}$ ,  $n= 242$ ,  $p=.000$ . This evidence would be determined that while mindfulness awareness levels of individuals were increasing, nomophobia rates of college students were also seen as reduced in simultaneous way. Another found out outcome might be indicated that participants' academic university adjustment rates and nomophobia levels were found as significantly correlated in negative way,  $r=-.151^{**}$ ,  $n= 238$ ,  $p=.000$ . This described that while academic university adjustment levels of students were augmenting, their nomophobia levels were also decreasing at the same time and path.

Additionally, Table 1 displays the inter-correlation between nomophobia, academic university adjustment and mindfulness awareness levels of participants below.

*Table 1 The Relationship Between Nomophobia, Academic University Adjustment and Mindfulness Awareness Levels Of Participants According to Pearson Correlation*

|                       | Mindfulness Awareness | Academic University Adjustment | Nomophobia |
|-----------------------|-----------------------|--------------------------------|------------|
| Mindfulness Awareness | 1                     |                                |            |
| Academic Uni. Adj     | .412**                | 1                              |            |
| Nomophobia            | -.246 **              | -.151 **                       | 1          |

Note: \*\* $p<.01$ . N=221.

After conduction of correlational analyses, regression method was used in order to observe the future based relationships between the nomophobia and academic university adjustment abilities in college students. The regression revealed that, mindfulness awareness levels of university students contributed significantly to the regression in terms of nomophobia  $F(1, 240) = 15.459, p < .01$ . Additionally, it is found out that nomophobia levels of university students contributed significantly to the regression,  $F(1, 236) = 5.510, p < .01$  and accounted for 0.2 % of the variation in academic university adjustment ability. Also, mindfulness awareness levels of university students contributed significantly to the regression in terms of university adjustment  $F(1, 238) = 48.696, p < .01$ . Table 2 shows the regression relationship between nomophobia and academic university adjustment levels and mindfulness awareness levels and university adjustment levels in university students below.

Table 2. *Regression Analysis for the Relationship between Nomophobia, Mindfulness Awareness and Academic University Adjustment*

| Variable               | $\beta$ | t       | $sr^2$ | R    | $R^2$ | $\Delta R^2$ |
|------------------------|---------|---------|--------|------|-------|--------------|
| Nomophobia and Mind.   | -.079   | -3.932* | .020   | .246 | .061  | .057         |
| Nomophobia / Uni Adj.  | -.365   | 20.971* | .156   | .151 | .023  | .019         |
| Mindfulness / Uni Adj. | .308    | 6.978*  | .044   | .412 | .170  | .166         |

Note: \*\* $p < .01$ . N=237.

Also, mediation analysis indicated that mindfulness awareness levels of participants has a significant mediator effect on the relationship between nomophobia and academic university adjustment levels in college students. All of the relationships between mindfulness and nomophobia ( $\beta = -.079, p < 0,01$ ); nomophobia with academic university adaptation ( $\beta = -.365, p < 0,01$ ); and mindfulness with academic university adaptation ( $\beta = .308, p < 0,01$ ) were significant. In the last step both mindfulness and nomophobia added to regression together, the effect of nomophobia on academic university adjustment was weaker. Furthermore, results of the Sobel test indicated that the association between nomophobia and academic university adjustment is significantly mediated by mindfulness awareness levels of college students ( $z' = -2.22, p < 0.01$ ).

Together, these results suggested that nomophobia predicts academic university adjustment levels of college students by strengthening academic university adjustment abilities through application of higher levels of mindfulness awareness levels. Table 3 and Figure 1 will present the mediator effect of mindfulness awareness levels of college students on the relationship between nomophobia and academic university adjustment levels in university students below;



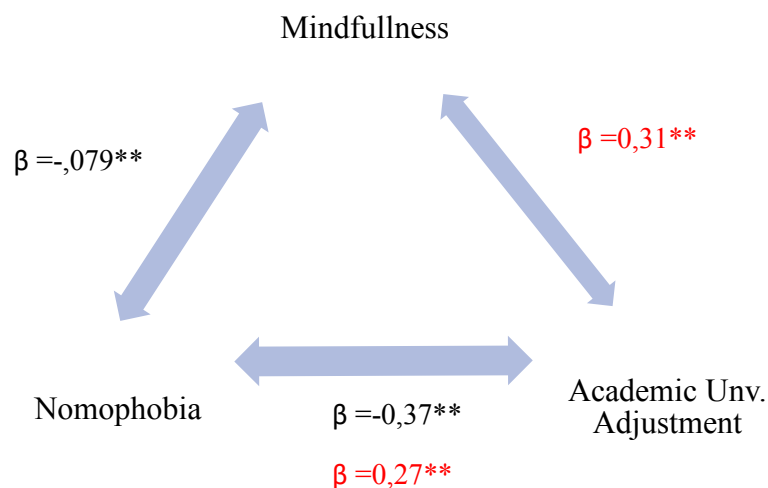


Figure 1  
*Mediator Effect of Mindfulness Awareness on the Relationship between Nomophobia and Academic University Adjustment* ( $p = *0,05$ ,  $**0,01$ )

## Discussion

In this research, it was purposed to analyze the mediator effect of mindfulness awareness on the relationship between nomophobia and academic university adjustment abilities in college students. According to the findings of this study, nomophobia is significantly predicting the academic university adjustment rates of college students. It means that if the nomophobia levels of university students are observed in high rates, their academic university adjustment levels would be displayed in lowered rates due to fear of being without smart phone, internet connection and social media applications. Therefore, students might have difficulty in concentrating on their academic achievement, performances and academic university adaptation processes. More importantly, nomophobia is seen playing a crucial role in determining the academic university adjustment levels in college students.

On the other hand, previous investigations that were conducted in this field indicated that nomophobia might not be taken as one single factor that could be able to determine the level of academic university adjustment ability rates in college students (Gezgin, Sumuer, Arslan and Yildirim, 2017). Because, an adjustment process contains more than one variable and their influences within its contexts, and in university students, mindfulness awareness levels could be taken as an important factor that affects the adjustment and adaptation process in university (Gezgin, Sumuer, Arslan and Yildirim, 2017). Therefore, this study taken mindfulness awareness variable as a mediator one in order to observe its effects on the predictive relationship between nomophobia and academic university adjustment abilities in college students. According to the findings of this research in terms of measuring the mediator effect of mindfulness awareness on the relationship between nomophobia and academic university adjustment levels in college students, there was a significant mediator effect of mindfulness awareness levels in university students on the relationship nomophobia and academic university adjustment rates. This information could be evaluated that although nomophobia level of a student is seen in augmented levels, if his/her mindfulness awareness rate is observed as increased, his/her academic university adjustment ability could be monitored in raised rates. Because, he/she would aware of the negative influences of nomophobia on his/her academic university adjustment process and then, he/she would

prepare his/herself for the possible obstacles that could be emerged due to his/her nomophobia. Therefore, he/she might create his/her own coping mechanism toward nomophobia in order to provide better level of academic university adjustment abilities in his/her university education process.

Additionally, Mittal, Rajasekar and Krishnagopal (2015) indicated although university students have cell phone dependence or addiction, their awareness level toward the influences of excessive usage of cell phone might play an important role in regulating their academic performance and adaptation process in university. Therefore, awareness could be seen as a mediator variable within the context of mentioned study, which is observed as valid with our study's results. Also, another study displayed that personal awareness and mindfulness levels might be taken as crucial factors in determining the academic adjustment processes while there are external variables within the context (Ehrenberg, Juckes, White and Walsh, 2008). To explain this case that, researchers indicated that although there is severe effect of intensive cell phone usage on academic performances and adjustment process in college students, self-awareness and mindfulness levels could be taken as intervening factor that might interfere the negative influences of excessive cell phone usage and nomophobia for academic adjustment and performances in college students. Hence, mindfulness and awareness rates of individuals has to be taken as crucial components while determining the academic performance and university adjustment processes of them.

In summary, this research purposed to measure the mediator effect of mindfulness awareness on the relationship between nomophobia and academic university adjustment levels. This study found out that mindfulness awareness levels of college students were found as an mediator variable on the relationship between nomophobia and academic university adjustment abilities in college students through recruited 286 participants from Aydın Adnan Menderes University.

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