

## Mindfulness and Work Engagement: Mediating Role of Basic Psychological Needs

### Bilinçli Farkındalık ve İşe Adanmışlık: Temel Psikolojik İhtiyaçların Aracılık Rolü

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Research Article

#### Öz

*Bu çalışmanın amacı çalışanların bilinçli farkındalık ve işe adanmışlık düzeyleri arasındaki ilişkinin ve bu ilişkide temel psikolojik ihtiyaçların aracılık rolünün incelenmesidir. Bu amaçla bir devlet üniversitesinde çalışmakta olan akademik ve idari personelden bilinçli farkındalık, işte yetkinlik, özerklik ve ilişkisellik ihtiyaçlarının karşılanması ve işe adanmışlık düzeylerine yönelik veriler Likert-tipi ölçekler aracılığıyla toplanmıştır. Çalışmanın hipotezlerini test etmek amacıyla bir çoklu aracılık modeli yürütülmüştür. Analiz sonuçlarına göre bilinçli farkındalık ve işe adanmışlık arasında pozitif yönde bir ilişki vardır ve bu ilişkiye yetkinlik ve özerklik ihtiyaçlarının karşılanması tam aracılık etmektedir. Çalışma bulguları örgütlerin çalışanların bilinçli farkındalığını artırmaya ve yetkinlik ve özerklik ihtiyaçlarını karşılamaya yönelik teşvik edici girişimlerinin çalışanlarının isteyken enerjik olma, kendini işe adama ve kendini işine verme eğilimlerini artıracaklarını göstermektedir. Ayrıca, gelecek çalışmalarda ilişkisellik ihtiyacının karşılanmasının aracılık işlevinin kültürden kültüre değişip değişmediğinin sınanması faydalı olabilir.*

**Anahtar Sözcükler:** Bilinçli farkındalık, temel psikolojik ihtiyaçlar, işe adanmışlık, yetkinlik, özerklik, ilişkisellik

#### Abstract

*The aim of this study was to investigate the relationship between employee mindfulness and work engagement, using basic need satisfaction at work as mediators of this relationship. Data on trait mindfulness, satisfaction of the autonomy, competence, and relatedness needs at work, and work engagement were raised via Likert-type questionnaires from the academic and administrative employees of a public university. A multiple mediation model was used to test the study hypotheses. Results revealed a positive relationship between mindfulness and work engagement. Satisfaction of the autonomy and competence needs fully mediated the relationship between mindfulness and work engagement. Findings of the study suggest that organizational efforts to foster employee mindfulness, competence and autonomy can be useful for improving employee vigor, dedication and absorption at work. Moreover, future research can address different cultural contexts where satisfaction of the relatedness need emerges as a potential mediator of the mindfulness - work engagement relationship.*

**Keywords:** Mindfulness, basic psychological needs, work engagement, competence, autonomy, relatedness

## Introduction

People spend a large portion of their time at work and the occupational health literature has shown that the work life is also relevant for public health (Tetrick and Quick, 2011). At the beginning of the new millennium, occupational health psychology has witnessed a shift in focus on positive psychology. Work engagement is one of the new constructs introduced by positive psychology. It refers to employees' physical, cognitive and emotional involvement with their work (Knight et. al., 2019). Most research on employee health has focused on work stress as a source of employees' health related symptoms and disorders. Job-related burnout is one of these symptoms, which takes place as a consequence of chronic occupational stress, and it is characterized by emotional exhaustion, depersonalization and reduced efficacy at work (Shirom, 2011). At the opposite end of burnout, work engagement is characterized by a sense of high energy, dedication and increased concentration at work (Gonzales-Roma et. al., 2006).

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In their review, Bailey et. al. (2015) have demonstrated that work engagement is predictive of employee health and wellbeing, as well as performance. Fairlie (2017) suggest work engagement itself to be considered as a form of employee wellbeing. Considering these individual and organizational outcomes, it is important to understand the antecedents of work engagement in order to cultivate it in organizations.

In this study I investigated the relationship between employee trait mindfulness and work engagement. Employee basic psychological needs were tested as the potential mediators of this relationship. In previous research these concepts have been studied in pairs. For example Malinowski and Lim (2015) have reported positive associations between mindfulness and engagement. Chang et al. (2015) demonstrated evidence for the positive influence of mindfulness on the components of basic psychological needs. In a recent study by Wang et al. (2020), the researchers have found significant links between psychological need satisfaction and work engagement. However, there is not any previous research integrating all of the three constructs. This study aimed to fill this gap by testing the mediating effect of basic psychological need satisfaction at work on the relationship between mindfulness and work engagement. Conceptual background and research findings regarding mindfulness, basic psychological needs and work engagement are presented below, followed by research hypotheses.

### **1. Mindfulness**

In the last two decades psychological research has witnessed a great deal of interest in the construct of mindfulness. Mindfulness has its roots in Eastern contemplative traditions such as Buddhism and it is a meditation practice which improves present moment awareness (Kabat-Zinn, 2003; Ludwig and Kabat-Zinn, 2008). Brown and Ryan (2003) define it as attentiveness and a state of consciousness where one consciously attends to her or his moment-to-moment experience such as internal thoughts and bodily sensations or external events taking place in the physical and social environment. It also involves attending to these current experiences in a nonjudgmental manner. Mindfulness has the potential to escalate clear thinking, openheartedness and compassion. Intervention programmes have been designed where participants are trained in mindfulness meditation and they are guided to intentionally focus their awareness and attention to the present moment-to-moment stimuli, without judgment and evaluation, or without attempting to control them or assigning meaning to them (e.g., Chambers et al., 2009). Mindfulness-based interventions have been used and tested in both medicine and clinical psychology. Medical research into mindfulness has focused on pain, stress, coping and quality of life of medical patients (Ludwig and Kabat-Zinn, 2008). Research on mindfulness-based stress reduction training programs have provided empirical evidence for the effectiveness of such programmes, indicated by decrease in perceived pain, improvement of mood, ability to cope with daily life, improved immune functioning, and decreased somatic health complaints (e.g., Baer, 2003, Delgado et. al., 2010, Kabat-Zinn, 1982; Speca et al., 2000). Similar interventions have also resulted in positive outcomes in clinical psychology. For example, a meta-analysis by McCarney et al. (2012) demonstrated that mindfulness-based cognitive therapy was effective in reducing depressive symptoms for participants with a diagnosis of an axis 1 disorder according to the DSM-IV framework. In non-clinical settings such as education or the workplace, similar positive effects have been reported. Training teachers and students in mindfulness have improved teaching self-efficacy, ability to manage classroom behavior, and student academic and social skills (Meiklejohn et. al., 2012). For work settings, mindfulness-based stress reduction interventions are linked to work related outcomes such as experienced empathy, positive affect, citizenship behavior, relationship quality, job performance, emotion regulation, work stress and burnout (Giluk, 2010; Glomb et al., 2011; Tiptord, 2009).

Mindfulness interventions aimed at improving participants' capacities to experience more

mindful states. In this regard, mindfulness was conceptualized as a state variable. On the other hand, another line of research has examined mindfulness as an individual difference variable, relying on the fact that there might be differences between individuals in terms of the frequency with which they experience mindful states (e.g., Brown et al., 2007). Several scales have been developed for assessing trait mindfulness such as the Mindful Attention Awareness Scale (Brown and Ryan, 2003), the Philadelphia Mindfulness Scale (Cardaciotto et al., 2008), the Five Facet Mindfulness Questionnaire (Baer et al., 2006), and the Kentucky Inventory of Mindfulness Skills (Baer et al., 2004). These scales were used in research for examining the antecedents and consequences of trait mindfulness or for assessing the degree of change in mindfulness after participation in intervention programmes. In a meta-analysis of the relationships between trait mindfulness and personality dimensions Giluk (2009) reported strong positive correlations for conscientiousness and trait positive affectivity, whereas strong negative correlations were found for neuroticism and trait negative affectivity. Reb et al. (2015) found organizational constraints and organizational support as significant predictors of employee mindfulness at work. Constraints such as poor equipment, inadequate training, and conflicting job demands were detrimental for mindfulness, while a supportive, helping and forgiving supervisor was facilitative for mindfulness. Job experience was also studied as a predictor of employee mindfulness at work (Sutcliffe et al., 2016). In a study with trial lawyers Dane (2013) found highly experienced trial attorneys to be better at focusing their attention in the courtroom. In terms of its consequences, other research has associated mindfulness with better emotion regulation and reduced rumination (Brown and Ryan, 2003), effectiveness in responding to challenging and changing situations (Dane, 2011) and increase in implementation of one's plans and intentions into action (Chatzisarantis and Hagger, 2007). Therefore, mindfulness training can be used in order to help people develop their self-regulatory capacities (Masicampo and Baumeister, 2007).

## 2. Basic Psychological Needs

The Basic Psychological Need Theory has been proposed under the broader framework of the Self Determination Theory (SDT) (Ryan and Deci, 2017; Vansteenkiste et al., 2020). Basically SDT is a meta-theory of human motivation and personality aiming to explain human agentic action and it consists of mini-theories intermingling with each other (Deci and Ryan, 2012). At the core of the theory lies the distinction made between intrinsic versus extrinsic motivation and the differentiation of motivation in terms of being autonomous versus controlled. SDT is a humanistic theory since it assumes that individuals seek for growth and strive to expand themselves by fostering their needs, relating to other people and interacting with the outside world (Legault, 2017).

The Basic Psychological Need Theory argues that all individuals strive for the three basic psychological needs of autonomy, competence and relatedness, satisfaction of which are essential for one's wellbeing, internalization, growth, and flourishing (Ryan, 1995). According to SDT, *autonomy* is defined as one's need to act with a sense of ownership of their behavior and feel psychologically free (Deci and Ryan, 2000). It involves the experience of volition, willingness, self-endorsement and authenticity which in turn leads to a sense of integrity within the individual (Vansteenkiste et al., 2020). In other words autonomy is the opposite of being controlled by external forces but rather being the origin of one's own actions (Van den Broeck et al., 2016). The need for *competence* is defined as an aspiration for a sense of effectiveness, mastery and development of new skills. According to SDT, competence is inherent to our natural tendency to explore and manipulate the environment and it resembles to the primary motivational principle of self-efficacy as proposed by the social cognitive theory (Deci and Ryan, 2012). Finally, the need for *relatedness* is satisfied when one is connected with others and mutually shares warmth, bonding, love, and care (Baumeister and Leary, 1995; Ryan and

Deci, 2017). Sense of communion and being a member of a group also contribute to the satisfaction of this need. Alienation, exclusion and loneliness leads to frustration in terms of the need for relatedness (Vansteenkiste et al., 2020).

There are several studies empirically examining the antecedents and consequences of basic psychological need satisfaction. For example Wei et al. (2005) found attachment anxiety and attachment avoidance to be detrimental for the satisfaction of each need. Controlling parenting is suggested to hinder child development by thwarting the essential need for autonomy and at the same time escalating childhood anxiety (Laurin et al., 2015). Basson and Rothmann's (2018) study on the antecedents of basic psychological need satisfaction of pharmacy students portrayed that social resources such as peers and family positively contributed to the satisfaction of need for autonomy, relatedness and competence. However, students' workload hindered satisfaction of relatedness and autonomy needs. External events, the culture and the environment in general also have impact on the extent to which basic psychological needs are satisfied (Legault, 2017; Ryan and Deci, 2000). Supportive environments increase the likelihood of need satisfaction. Gonzalez et al. (2016) found amount of education, personal annual income and occupational rank to be positively associated with the satisfaction of basic psychological needs. With regard to the workplace, Jensen and Bro (2018) demonstrated transformational leadership to be inductive for need satisfaction of employees, which in turn resulted in increased intrinsic motivation. Job characteristics, leadership, pay satisfaction, leader-member relationship, organizational support, and organizational justice are among the other variables that have been found to be positively associated with employee need satisfaction (Deci et al., 2017). In terms of individual difference variables, integrative emotion regulation style (Benita et al., 2020) and lower levels of self-critical perfectionism (Boone et al., 2014) were found to promote psychological need satisfaction. The meta-analytic findings by Van den Broeck et al. (2016) indicate that self-esteem, self-efficacy, optimism, mindfulness, and proactive personality are positively correlated with need satisfaction. According to Joussemet et al. (2008) parenting as a social context plays a critical role for the satisfaction of basic psychological needs. Researchers also argue that intergenerational transmission of psychological needs might take place, where satisfied parents might be more successful in facilitating the satisfaction of their children's psychological needs through parental educational practices (Costa et al., 2019; Ryan and Deci, 2017).

Research in terms of consequences indicates that satisfaction of basic psychological needs is connected with eudemonic wellbeing referring to optimal functioning in life, experience of meaning, and self-realization (Legault, 2017). Among other correlates are positive affectivity, general wellbeing, life satisfaction, job satisfaction, and affective commitment to the organization. On the other hand, when these needs are not satisfied people experience increased burnout, strain, turnover intentions (Van den Broeck et al., 2016), apathy, psychopathology, irresponsibility, insecurity, and arrogance (Ryan and Deci, 2000).

### **3. Work Engagement**

The movement of positive psychology has brought with it an interest in the study of work engagement as the opposite state of burnout (Maslach et al., 2001). According to Schaufeli and Bakker (2004), work engagement is a fulfilling, accomplishing, and positive state of mind at work and it is built upon the three dimensions of vigor, dedication and absorption. Vigor is related with high energy levels, resilience, and perseverance and putting in the necessary effort to achieve work tasks. Dedication is concerned with a sense of meaning, being enthusiastic, inspired and challenged by one's work tasks. Finally, absorption refers to being concentrated and pleasantly engrossed in one's work, similar to a flow state at work. A recent meta-analysis study by Mazetti et al. (2021) put forward the antecedents and consequences of work engagement. Accordingly, supervisor support, coworker support, organizational resources such

as organizational justice and personal resources such as resilience and self efficacy positively contributed to work engagement. On the other hand, strong relations were reported for the consequences of work engagement such as job satisfaction, job commitment, and performance. Engagement also positively contributed to employee health and life satisfaction.

Malinowski and Lim (2015) found a positive relationship between mindfulness and work engagement, mediated by positive affectivity. Liu et al. (2020) reported a similar finding, this time using recovery as the mediator variable. Moreover, team mindfulness was a significant moderator of the individual mindfulness – work engagement relationship. In an intervention study by Coe and Salanova (2018), researchers found a controlled trial of a Mindfulness based Intervention program to elevate employee work engagement, as well as happiness and performance levels. Pertaining to the association between basic psychological need satisfaction and work engagement, Rahmadani et al. (2019) have found need satisfaction to mediate the relationship between leadership and engagement. Similarly, Van den Broeck et al. (2008) showed need satisfaction as a significant mediator of the relation between job characteristics and work engagement. In Wang et al.'s (2020) study, daily positive work events were predictive of daily need satisfaction, which in turn positively predicted daily levels of work engagement. All these studies used basic psychological need satisfaction as a potential mediator in the prediction of work engagement. Following a parallel reasoning, in the current study, need satisfaction is expected to mediate the relationship between mindfulness and work engagement.

#### 4. Research Hypotheses

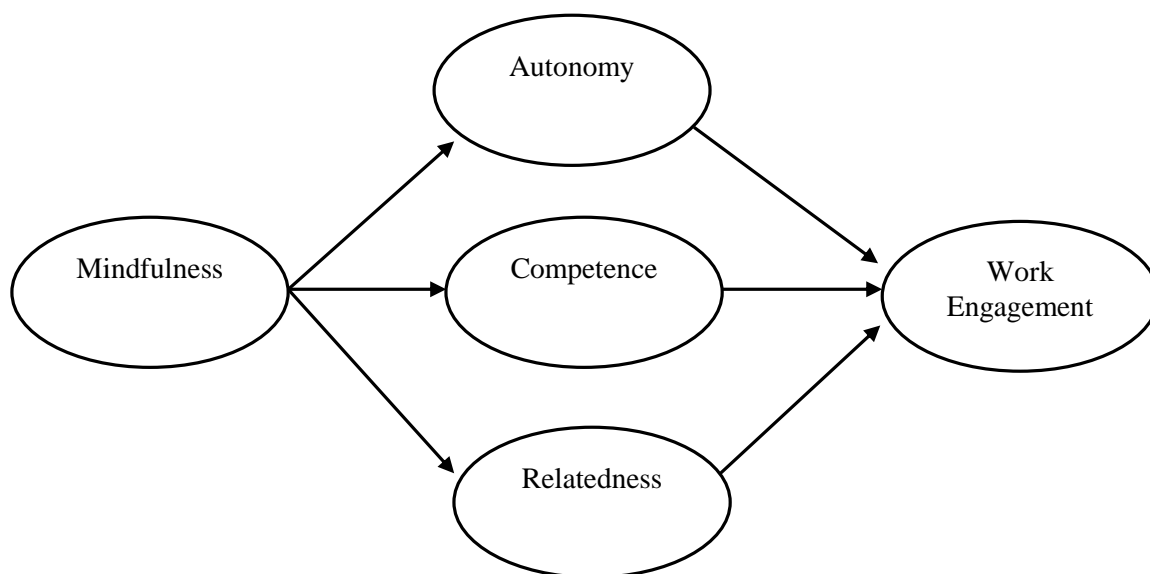
Based on the above mentioned theoretical framework and previous empirical research, the hypotheses of the current study are as follows:

*H1.* There is a positive and significant relationship between mindfulness and work engagement.

*H2.* Satisfaction of basic psychological needs mediates the relationship between mindfulness and work engagement.

In order to test these hypotheses, the following model was tested.

Figure 1. The tested model



## 5. Research Methodology

### Participants

Data were collected from the academic and administrative employees of a public university in Turkey. Among the 200 questionnaires distributed, 172 were returned and 140 were left after data cleaning of the univariate and multivariate outliers. Fifty four percent of the participants were female and 46% were male. Average age of the participants was 35.4 (S.D.= 7.99) with an average tenure of 7.59 years (S.D.=6.55).

### Measures

**Mindfulness.** The Mindful Attention Awareness Scale originally developed by Brown and Ryan (2003) and adapted to Turkish by Özyeşil, Arslan, Kesici and Deniz (2011) was used for assessing trait mindfulness. The scale consisted of 15 items (eg., “I find it difficult to stay focused on what’s happening in the present.”; “I find myself doing things without paying attention.”) and the internal consistency of the scale was found to be .80 in the current study.

**Work-Related Basic Need Satisfaction.** The 18-item scale developed by Van Den Broeck et al. (2010) and adapted to Turkish by Doğan & Eryılmaz (2012) was used for assessing work-related basic need satisfaction. The scale consisted of three dimensions; (1) Need for Autonomy; “I feel free to do my job the way I think it could best be done.”, (2) Need for Competence; “I feel competent at my job.”, and (3) Need for Relatedness; “I don’t really mix with other people at my job. – reverse item”. Cronbach alpha values for each dimension were respectively .73, .73, and .85.

**Work Engagement.** Turkish adaptation (Turgut, 2011) of Schaufeli et al.’s (2002) 17-item Utrecht Work Engagement Scale was used. The scale consisted of three dimensions; (1) Vigor; “When I’m doing my work, I feel busting with energy.”, (2) Dedication; “I am enthusiastic about my work”) and (3) Absorption; “I get carried away when I am working.” In this study, the internal consistency values for the dimensions were found to be .79, .90, and .84 respectively. Overall reliability of the 17-item scale was .91.

## 6. Results

Initially descriptive statistics were calculated for study variables using the SPSS program. In Table 1, the mean and the standard deviation values for each variable and the bivariate correlations among the variables are presented. As can be seen from this table, most of the correlations among the variables are significant and in the expected direction. Mindfulness is significantly correlated with the satisfaction of the competence need, autonomy need, and relatedness need at work. Mindfulness is also correlated with work engagement. Moreover, all of the needs have significant correlations with work engagement. As a result Hypothesis 1 was supported.

**Table 1.** Descriptive statistics

	Mean	SD	1	2	3	4	5	6	7
1. Sex	-	-	-						
2. Age	35.35	7.99	.12	-					
3. Mindfulness	3.63	.56	.03	.11	<b>.80</b>				
4. Autonomy	3.79	.69	.04	.26**	.39**	<b>.73</b>			
5. Competence	3.81	.75	.03	.14	.23**	.51**	<b>.73</b>		
6. Relatedness	3.71	.69	.02	.20*	.18*	.65**	.39**	<b>.85</b>	
7. Work Engagement	3.63	.62	.00	.30**	.20*	.47**	.59**	.33**	<b>.91</b>

\*  $p < .05$  \*\*  $p < .01$ . Note: Cronbach alpha values are presented in the diagonal.

In order to test Hypothesis 2 (the mediating role of need satisfaction in the relationship between mindfulness and engagement) the SPSS Macro Model 4 developed by Preacher and Hayes (2008) was used, which enables testing for multiple mediators that are parallel to each other. As part of the analyses, initially work engagement was regressed on mindfulness (path c). In the second step, each mediator (basic needs) was regressed on mindfulness (path a). In the final step, work engagement was regressed on basic needs (path b), and mindfulness (path c'). Results of the regression analyses are presented in Table 2, and Figure 2.

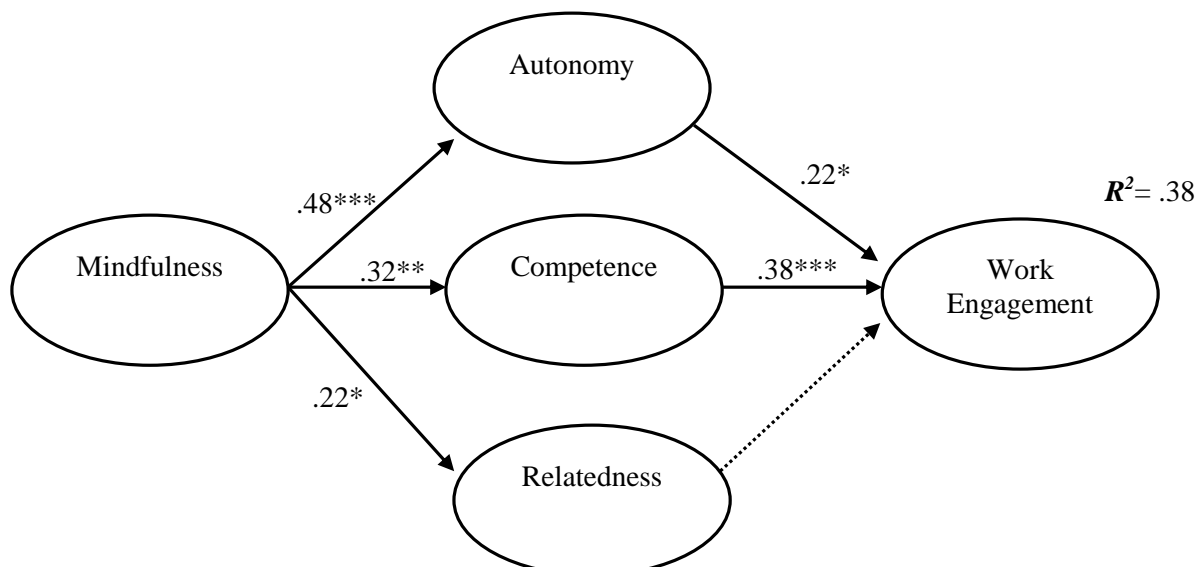
Findings of the regression analyses showed that, with the inclusion of the mediator variables in the model, the once significant path c regression coefficient became non significant (path c'). This suggests that the satisfaction of the autonomy and competence needs at work fully mediates the relationship between mindfulness and work engagement. However, satisfaction of the relatedness need was not a significant mediator. Based on 5000 bootstrap resamples, 95 % LLCI and ULCI values for autonomy was .01 - .25, for competence was .03 - .25, and for relatedness was -.06 - .03. As can be seen, the interval for relatedness included the value of 0, indicating that it was not a significant mediator. Based on these findings it can be concluded that Hypothesis 2 was mostly supported.

**Table 2. Results of the multiple mediation analyses**

	$\beta$	SE	<i>t</i>	<i>p</i>
<b>Mindfulness to Work Engagement (c path)</b>				
Mindfulness	.22	.09	2.34	.02*
<b>Mindfulness to Basic Needs (a paths)</b>				
Autonomy	.48	.10	4.97	.00***
Competence	.32	.11	2.83	.01**
Relatedness	.22	.10	2.15	.03*
<b>Basic Needs to Work Engagement (b paths)</b>				
Autonomy	.22	.09	2.38	.02*
Competence	.38	.06	5.91	.00***
Relatedness	-.01	.08	-1.13	.90
<b>Mindfulness to Work Engagement (c' path)</b>				
Mindfulness	-.00	.08	-.09	.93

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

**Figure 2. Regression coefficients for the tested model**



To summarize, both of the study hypotheses were supported. Mindfulness facilitated work engagement and satisfaction of the basic psychological needs of autonomy and competence fully mediated this relationship. Relatedness did not emerge as a significant mediator. Mindfulness positively contributed to the satisfaction of the relatedness need, however relatedness did not predict work engagement. Implications of the findings are discussed in the next section.

## Discussion

Mindfulness has become a waxing topic of interest in the field of organizational psychology (Glomb et al., 2011; Tuckey et al., 2018). Empirical evidence has accumulated indicating the positive effects of mindfulness on work outcomes and employee wellbeing (i.e., Hülsheger et al., 2013). Similarly, work engagement is another construct that emerged as a significant predictor of employee wellbeing (Schaufeli and Bakker, 2010). Previous research revealed significant positive associations between mindfulness and work engagement (e.g., Leroy et al., 2013; Malinowski and Lim, 2015). The current study contributed to the understanding of the dynamic of this relationship, by exploring the satisfaction of basic needs at work as the potential mediators in this process. Collecting cross-sectional data on mindfulness, satisfaction of autonomy, competence, and relatedness needs, and work engagement, a multiple mediator model was tested. As a result, mindfulness was found to be positively related with work engagement and satisfaction of autonomy and competence needs at work were found to fully mediate the relationship between trait mindfulness and work engagement.

According to my knowledge this is the first published study to test and portray the basic needs framework as the mediating force in the mindfulness and work engagement relationship. This finding, on the one hand, validates SDT as a useful approach in understanding organizational phenomena. On the other hand, it also helps us highlight the mechanism through which mindfulness exudes its positive influence on workplace and employee outcomes. Previous research presented empirical evidence for need satisfaction as a mediator of the relationship between mindfulness and subjective wellbeing (e.g., Chang et al., 2014; Chang et al., 2018), however in these studies need satisfaction was measured as an overall construct, rather than a multidimensional one. In the current study autonomy and competence emerged as full mediators of the mindfulness – work engagement relationship. Neufeld et al. (2020) reported significant positive correlations between mindfulness and the satisfaction of competence, autonomy and relatedness needs, with descending order in terms of relationship strength. Elphinstone et al. (2021) also reported a similar pattern of findings, mindfulness having strongest relationship with competence, followed by autonomy and relatedness. In the current study mindfulness was predictive of autonomy, followed by competence and relatedness need satisfaction. Regarding the relationship between need satisfaction and work engagement, Rahmadani et al. (2019) found overall need satisfaction as a positive predictor of work engagement. Similarly, in Van den Broeck et al. (2008) study, overall need satisfaction positively predicted the vigor dimension of work engagement. In a study by Prokesova et al. (2019), only competence was found to predict work engagement, while autonomy and relatedness were nonsignificant. Finally, in Wang et al.'s (2020) study, competence and relatedness successfully predicted work engagement, while autonomy was nonsignificant. In the current study, competence and autonomy were predictive of work engagement, whereas relatedness was nonsignificant.

In general, the findings of the study are in line with previous studies investigating the mindfulness – basic need satisfaction, and basic-need satisfaction – work engagement relationships, yet there are not any previous studies examining all three constructs simultaneously. The only intriguing finding was the nonsignificant association between relatedness and work engagement. One rather obvious explanation for this finding is that



autonomy and competence are stronger predictors and they take on any predictive power of relatedness, leaving no unique predictive variance of its own. It might be especially useful to evaluate this finding within the cultural context of Turkey. Turkish culture is characterized by interdependent agency, with a heavy emphasis on relatedness (Güngör et al., 2014) and high power distance (Özdemir et al., 2022). Since relatedness is a critical ingredient of the Turkish culture, individuals might be likely to meet their relatedness needs to a great extent outside the work life. Moreover, considering the definitions of the components of work engagement such as, vigor, dedication and absorption, one can see that engagement requires one to relate to the job rather than to other people at work. All these factors might help us to explain why the satisfaction of the relatedness did not come out as a predictor of work engagement. On the contrary, competence and autonomy are conceptually and inherently are much more associated with the construct of work engagement.

### ***Implications for Practice***

Study findings proved that promoting mindfulness among the employees can have benefits for organizational and employee outcomes. For that purpose, organizations are called to introduce mindfulness training and intervention programs for their employees. Such programmes include the traditional 8-week mindfulness-based stress reduction program developed by Jon Kabat-Zinn, 2-3 week mindfulness meditation retreats, or internet and smartphone mindfulness applications such as Headspace (Creswell, 2017). In a review by Jamieson and Tuckey (2017), researchers have examined 40 published articles on mindfulness interventions carried out in the workplace and they conclude these interventions to be useful for facilitating employee wellbeing, indicated by reduced stress, fatigue, anxiety and negative affect, and enhanced sleep quality (i.e., Gregoire and Lachance, 2015; Hülshager et al., 2015). In summary, employee training programs are useful tools that can be employed by organizations to assist employees in coping with work stress. However, implementing training programs is not sufficient for organizations, considering the fact that the sources of stress reside in the work environment. Therefore, organizations should be also kept responsible for arranging the work environment in a way that ensures lower levels of stress as much as possible. For example such arrangements could include enhancing organizational justice, hiring supportive and transformational leaders, providing resources for balancing work-family conflict, arranging work hours accordingly, etc. These practices would make it more likely for employees to experience mindfulness at work.

Organizations can also implement interventions or practices for enhancing basic need satisfaction at work. Previous examples of such interventions have proved to improve need satisfaction in several organizations (i.e., Deci et al., 1989; Hardre and Revee, 2009). Jobs can be redesigned or job characteristics can be arranged in a way to make employee feel more competent, autonomous and related at work. Employees can be included in decision making processes and they can be allowed to use discernment in their own tasks. Managers can regularly provide feedback to employees on their work performance in order to facilitate the satisfaction of the competence need. Managers can make face-to-face meetings with employees to directly evaluate current levels of need satisfaction and can discuss ways for further improvement. Such meetings can be also integrated into the ongoing goal setting or performance feedback meetings already being carried out in the organizations.

### ***Limitations and Future Research***

There are several limitations of the current study. First of all, the study had a cross-sectional design and findings are based on correlational data. Therefore, one cannot make cause and effect inferences based on study findings. I relied on previous empirical research in building the model to be tested, where the variables were sequenced in the following order; mindfulness – basic need satisfaction – work engagement. Some could argue need satisfaction to precede mindfulness. In order to highlight such cause and effect relationships, longitudinal research

needs to be carried out in future studies. Secondly, sample size of the study was relatively low. Future studies with larger samples could reveal even stronger relationships among study variables. Another limitation pertains to the characteristics of the study participants. Data were collected from university employees in Turkey. The study needs to be replicated on different groups of employees from other occupations and also from other cultures. Strength of the relationship of the different dimensions of needs with mindfulness and work engagement might differ from one culture to another, or from one occupation to another. For example in service jobs, such as nursing or psychotherapy, one could expect the relatedness need to be more essential for work engagement rather than the competence need. Furthermore, future studies can test more enriched versions of the model examined in this study. For example, it would be an intriguing research idea to include positive affect or emotion regulation in the model.

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**Peer Review:** Externally peer-reviewed.

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