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Table of Content

The relationships between the big five personality traits and attitudes towards seeking professional psychological help in mental health counselor candidates: Mediating effect of cognitive flexibility Ferah Çekici	501
Forgiveness and cyberbullying in Turkish adolescents Cagla Girgin Buyukbayraktar	512

Full Length Research Paper

The relationships between the big five personality traits and attitudes towards seeking professional psychological help in mental health counselor candidates: Mediating effect of cognitive flexibility

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The purpose of this study was to examine the relations between the five big personality traits (openness, conscientiousness, extraversion, agreeableness, neuroticism) and attitudes towards seeking professional psychological help in counseling students along with the mediating role of cognitive flexibility. The sample of the study consisted of 189 students (140 female and 49 male) attending the counseling program at Istanbul Medipol University. The age mean of the sample was 20.81 (SD=1.91). The data were collected in the fall term of the 2018 to 2019 academic year. The Big Five Inventory, Attitudes Toward Seeking Professional Psychological Help Scale and Cognitive Flexibility Scale were used as data collection instruments. The data were analyzed by using SPSS 20 Statistical Package Program and the mediation model was tested in SPSS using PROCESS macro developed by Hayes. Results revealed that cognitive flexibility has mediator role between big five traits and psychological help-seeking attitude. In conclusion, the proposed model has emerged statistically significant.

Key words: Big five personality traits, attitudes toward seeking professional psychological help, cognitive flexibility, candidate counselors.

INTRODUCTION

There are several lines of discussion regarding whether psychological counselors, or candidates require professional help for their own personal problems (Corey, 2009). Especially when it comes to psychodynamic, humanistic and existential psychotherapies, the experience of counselors who have taken on psychological help often see it as a necessity both as a an "educational tool" and a means of "personal development" for anyone

aiming to fulfill the role of a psychotherapist/counselor effectively (Elliott and Partyka, 2005).

As part of the training process, trainee-therapists enjoy the opportunity to observe the therapist in action during a therapy setting, and this offers an essential experiential learning opportunity in the development of the candidate's talents (Laireiter and Willutzki, 2005). But there are several benefits to this exposure being directed at the

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candidate themselves in “personal therapy” sessions, and this is backed up various by many studies. As a client, a trainee-counselor spends valuable time on self-discovery and gaining a practical understanding of the therapy process in a way that can no doubt help them increase their self-awareness related to the field especially (Corey, 2009). Similar to Corey, (2009) also mentions that “personal therapy” is an excellent experience that provides a lot of serious improvement for the counselors and candidate counselors.

Corey et al. (2007) state that the psychological counselor is responsible for possessing self-awareness in their own life. It naturally follows that psychological counselors who are aware of their own needs, unfinished business, conflicts, defense mechanisms and weaknesses, are thought to focus on the needs of the client in their psychological counseling process rather than their own needs. Various investigations have been conducted on psychological counselors, psychologists and various mental health workers in terms of the need to take “personal therapy”. Orlinsky et al. (2005) investigated the impacts of the personal therapy and they reported that more than 90% of mental health professionals explained to their satisfaction and positive outcomes from their own counseling experiences. Also, another researcher Norcross (2005) conducted many researches about the personal therapy. According to his inquires pointed that various positive gains about the personal therapy such as self-esteem, social life, emotional expression, intrapersonal conflicts, and symptom severity and work functioning. Corey (2009) claimed that personal therapy can be as an instrumental in healing the healer. He reported that if the candidate counselors do not involve in the pursuit of healing their wounds, they probably have considerable difficulty entering the world of a client. As seen in all these studies, personal counseling could provide emotional health and personal growth needed to support counselors and WHO training for mental health positions.

Psychological help-seeking attitude and personality traits

To seek psychological help is to seek various among effective means to deal with the challenges an individual faces in life (Nicholas et al., 2004). Many researchers reveal that psychological help seeking attitude is affected by many factors such as gender, culture, religion, social adjustment, emotionally openness, self-disclosure and the beliefs/cognitions about the benefits of the self-disclosure, public stigma and self-stigma” (Egisdottor and Gerstein, 2009; Vogel and Wester, 2003; Vogel et al., 2007a, b). Moreover, personality traits undoubtedly influence one’s attitude toward seeking help in general, and psychological help in particular. According to Corey (2009), effective counselors are professionals who have

the ability to establish and maintain an effective therapeutic relationship with their clients and at the same time apply the most appropriate techniques to their clients’ needs in order to control their own experiences and reactions and help their clients.

In this context, psychological counselors are expected to exhibit a certain set of characteristics in order to be effective, namely professional “personality traits” and “professional expertise”. In terms of “personality characteristics,” this means having an identity, self-respect and appreciation, being open to change, being life-oriented, showing authentic behavior; be sincere and honest, have a sense of humor, are capable of making mistakes and tend to accept their mistakes. In terms of their “professional expertise”, effective counselors have effective interpersonal communication skills, competent in basic counseling skills, ability to conceptualize the counseling process, apply various techniques in psychological counseling, passionate about their work and have a meaning in their work. Also they are ambitious and sensitive to cultural differences (Norcross et al., 2007; Corey, 2009; Hackney and Cormier, 2008; Skovholt and Jennings, 2004).

The characteristics of “having an identity” from the characteristics related to the possible personality traits are thought to affect the attitudes of counselors’ seeking attitudes in being able to know themselves, knowing how much they can help their clients and understanding their priorities. According to Hackney and Cormier (2008), having an identity means to have a personal awareness and understanding ability. From these perspectives, “having self-esteem and appreciation” means that having the awareness of self-worth and self-strength in order to be able to help others or ask for help from others (Corey, 2009). Cormier and Cormier (1991) describe this feature as “self-awareness” and report that psychological counselors transfer their own tendencies in this regard to their client, whether for better or worse. According to this, psychological counselors who feel inadequate and insufficient in themselves, reflect these negative beliefs to their clients through their behavior; conversely, those who are aware of their own strengths reflect these characteristics in their interaction with clients. In summary, then, the self-awareness of psychological counselors has an active role in the effectiveness of the counseling process. Therefore, in order for the consultation process to be carried out to better success, it is important that the psychological counselor knows their own conception of self-awareness, namely that they know their personal strengths, needs, expectations, goals and limitations.

In terms of “openness to change”, the most effective counselors are those bold in tackling the circumstances in which they must revise their approach. Effective counselors can decide how they should be able to change and become the person they wish to be intuitively (Corey, 2009). Hackney and Cormier (2008) describe the openness to change as simply “being open-minded”.

Another personality trait, having “life-oriented” characteristics, implies that early life experiences effect personalities, but hold that this is not a situation that is therefore fated and can change. Having “authentic, sincere and honest” features refers to ones ability to be sincere and honest about not hiding behind masks, and not defending them. “Having advanced sense of humor” is another helpful feature, and effective counselors are found to be those who can laugh at their own flaws and contradictions. They are therefore “capable of making mistakes and tend to accept their mistakes”. Showing “moment-oriented living (now and here) characteristics, counselors are aware that life can be experienced by focusing on the present. Finally, “creating the boundaries in a healthy way”, is meant to make one aware on how to protect the personal boundaries in a relationship with a client and to be able to say no when necessary (Corey, 2009; McLeod, 2003).

In this study, the big five personality scale was used in the measurement of personality traits among psychological counselor candidates because of the fact that most of the features constituting the human personality can be grouped somewhere along this scale (Burger, 2006). The big five-factor personality scale consists of five dimensions; openness to experience, conscientiousness, extraversion, agreeableness and neuroticism. The dimension of openness to experience subscale is described to people who are open to innovations and are intellectually curious, open to learning are open to experience; people who are traditional and intellectually unrelated are people with low openness to experience. In terms of self-control, planned, determined and success-oriented individuals show conscientiousness, while those who are unplanned, postponed, and lack self-control are low in conscientiousness. It is via the trait of extraversion by way one can exhibit social, entertaining, talkative, joking and loving nature; whereas introversion causes individuals to become non-social, comfortable away from others, silent, distant, passive and shy. According to the sub-dimension of agreeableness, friendly, close, warm, social and reliable people are agreeableness; argumentation, low attitudes towards others, non-cooperative and hard-tempered individuals are individuals with low levels of compliance. The dimension of neuroticism means people who are generally anxious, restless, sad and weak in coping with stress are defined as neurotic. People who are calm, emotionally balanced and capable of dealing with stress are defined as persons with low neuroticism (McCrae and Costa, 2003; Glass, Prichard et al., 2013; Lounsbury et al., 2009).

In brief, the five factor personality scale dimensions: openness to experience equates with personal curiosity to explore; conscientiousness covers the fact that the person wants to achieve what he wants to follow and perseverance; extraversion governs sociability; agreeableness equates with a desire to avoid conflict;

neuroticism expresses that a person, such as depression anxiety, experiences a negative mood in a continuous manner (The ACA Encyclopedia of Counseling, 2009). Consequently, there is a significant relation between personality traits and psychological help-seeking attitudes in counselor and other mental health professionals.

The mediator role of cognitive flexibility

Cognitive flexibility is the ability to think flexibly and to shift perspectives and approaches with ease. Cognitive flexibility also describes a kind of information processing and ability to adapt to new things. Especially it implies the ability to regulate cognitive information processing. Thus, cognitive flexibility increases with experimental learnings (Canas et al., 2006). Cognitive flexibility is also defined as individuals' ability to realize suitable options and alternatives, being eager to be flexible while being adaptable to the situation and considering themselves competent in flexible thinking and behaving (Martin and Rubin, 1995).

In order to behave in a flexible manner, it is necessary to think in a flexible way. Individuals with cognitive flexibility do not limit themselves to only one solution when encountering an issue; on the contrary, they tend to review all possible alternative solutions. Individuals with cognitive flexibility are also creative people displaying creativity, fluency and originality in thinking (Martin and Anderson, 2001). Individuals who possess cognitive flexibility experience new ways of communicating, face situations they are not accustomed to, and are willing to adapt their behavior effectively in dealing with problematic situations (Martin and Anderson, 1998). Moreover, since a significant portion of cognitive flexibility constitutes the concept of self-efficacy, individuals with cognitive flexibility believe in self-confidence and believe in their ability to act effectively (Bandura, 1982).

Cognitively, flexible thinking and behavior is a feature that can be applied to a variety of situations that require communication or creativity in the face of the issues brought up in everyday life (Martin and Anderson, 2001). In a way, it is a kind of cognitive and behavioral ability that can be applied in any case. According to Rational-Emotional Behavioral Therapy (REBT), Cognitive-Behavioral Therapy (CBT) and the theories posed regarding these cognitive-behavioral psychotherapies, people with certain inflexible thinking styles dogged by dogmatic, rigid and absolutist approaches suffer a form of psychological dysfunction that can ultimately cause them to experience various mental disorders such as neurosis. Therefore, both REBT and CBT are called into play as therapeutic approaches that specialize in encouraging people to think and act more flexible (Ellis and Dryden, 2007). Practitioners of cognitive-behavioral therapies confirm that cognition is followed by emotion, then behavior. Therefore, in order to behave cognitively

flexible, it is necessary to think first. For this reason, this study aims to find out the relations between personality dimensions (openness, conscientiousness, extraversion, agreeableness, neuroticism) and attitudes toward seeking professional psychological help in counseling students along with the mediating role of cognitive flexibility.

METHODOLOGY

Research design

This study was designed through correlational research model with quantitative research approach. The mediating effect of cognitive flexibility in the relationship between personality traits and attitudes towards seeking professional psychological help was examined to use a multiple mediator bootstrapping method (Hayes, 2013). Figure 1 shows the research model.

According to this method, firstly, the effect of big five personality traits, which is an independent variable, on cognitive flexibility, which is a mediating variable, should be evaluated. Then, the effect of cognitive flexibility on psychological help-seeking and then the effect of big five personality traits should be examined. In this study, using the mediator variable analysis method, the hypothesis that cognitive flexibility has a mediating effect between big five personality traits and psychological help-seeking was tested.

Workgroup/sample

The sample of the study consisted of 189 students (140 female, 49 male) attending to the Psychological Counseling and Guidance Program at Istanbul Medipol University. The mean age of the participants came to 20.81 (SD = 1.91). The convenient sampling method was used to determine the sample (Fraenkel et al., 2011).

Data collection procedures

Firstly, ethical permission was gotten from the ethical committee of the university; then data was collected from undergraduate students at the fall term in 2018. The scales were given to the students during the lecture and were asked to fill. Participation in the study was on voluntary basis. Before starting to collect data, a written informed consent form in which participants were informed about the purpose of the study and assured of confidentiality was given. The participants who confirmed their consent to participate in the study were given the scales in paper-pen format. It took about 15 min to fill all of the scales.

Data collection instruments

In this study, The Big Five Inventory (BFI), Attitudes Toward Seeking Professional Psychological Help Scale (ATSPPHS) and The Cognitive Flexibility Scale (CFS) were used as data collection instruments.

The big five inventory (BFI)

BFI was developed by Benet-Martinez and John (1998), a 5-item self-report measure with a five factor structure. The scale dimensions include extraversion, agreeableness, openness to

experience, conscientiousness, and neuroticism. The inventory was adapted into Turkish by Sümer and Sümer (2005). The Turkish form of the BFI consists of a 44 item self-report measure with a five factors structure. Items on the scale are rated according to a 5-point Likert scale (1: Totally disagree; 5: Totally agree). According to the results of the reliability analysis, the subscales' Cronbach Alfa Coefficient range from 0.64 and 0.77.

Attitudes toward seeking professional psychological help scale (ATSPPHS)

ATSPPHS, developed by Fischer and Farina (1995), is a 10 item self-report measure with a single factor structure. The scale was adapted into Turkish by Topkaya (2011). Items on the scale are rated on a 4-point Likert scale (1: Totally disagree; 4: Totally agree). The Cronbach Alpha value for internal consistency was 0.76 for the overall scale.

The cognitive flexibility scale (CFS)

CFS developed by Martin and Rubin (1995), consists of a 12 item self-report measure with three subscales (awareness, willingness, self-efficacy). The scale was adapted into the Turkish language by Altunkol (2011). The Turkish form of the scale consists of 2 subscales (naming as reverse and non-reverse items scale). Items of the scale are rated on a 6-point Likert scale (1: Totally disagree; 6: Totally agree). The Cronbach Alpha value for internal consistency was 0.81 for the overall scale.

Analysing data

In the first part of the data analysis, raw data was screened and cleared through SPSS 20 statistical package program (IBM, 2011). Then correlations between variables were calculated using Pearson Correlation Coefficient Analysis. The mediation model was tested by utilizing Hayes' PROCESS macro in SPSS (Hayes, 2013). For this purpose, the Serial Multiple Mediator Model was used to determine whether cognitive flexibility has a mediating role between big five personality traits and psychological help seeking attitude. 5000 bootstrap sampling was used in the analyzes and estimates were corrected for bias error and evaluated at 95% confidence interval reflecting corrected results.

The limitations of the study

The current study has a number of limitations. Firstly, all data was based on self-reported measures, which might introduce response bias. In many researches, self-reported scales were commonly used but these measures may cause social desirability effects in participants' response. That is, participants may not have given honest answers to the questions in the survey. Thus socially desirable response may have affected the reliability of the results adversely. Secondly, the number of female was more than the male counterparts which mislead the results in terms of a possible gender effect. Furthermore, this study results have generalizability problem due to the fact that participants were undergraduate students at a private university in Istanbul.

Thirdly, it is reported that there are many different variables affecting this study's model. But in this study, it is limited by ignoring the effects of these variables. Lastly, personality traits and help-seeking attitudes are commonly studied in clinical population but in this study, these variables are tested in non-clinical population.

Table 1. Inter-correlations between variables.

Variable	1	2	3	4	5	6	7
Openness	-						
Conscientiousness	0.30***	-					
Extraversion	0.33***	0.27***	-				
Agreeableness	0.21**	0.31***	0.24**	-			
Neuroticism	-0.25**	-0.39***	-0.34***	-0.32***	-		
Cognitive flexibility	.51***	0.56***	0.48***	0.22**	-0.49***	-	
Psychological help-seeking attitudes	0.25**	0.34***	0.29***	0.33***	-0.21**	0.38**	-

N = 189; ***p < 0.001, **p < 0.01 (2-tailed).

Table 2. The results of the serial multiple mediator model for the investigating of mediator role of cognitive flexibility in the effect of openness personality trait on psychological help-seeking attitude.

Outcome variable	M (Cognitive flexibility)			Y (Psychological help-seeking attitude)		
	β	SE	p	β	SE	p
Openness (X)	0.72	0.09	0.000	0.04	0.04	0.375
Cognitive flexibility (M)	-	-	-	0.14	0.03	0.000
C (Consant)	25.38	3.19	0.000	21.09	1.64	0.000
	R ² = 0.26			R ² = 0.15		
	F(1,187) = 65.83			F(2,186) = 16.18		
	p = 0.000			p = 0.000		

FINDINGS

Descriptive statistics

A Pearson product-moment correlation analysis was conducted in order to explore the correlations between variables. The inter-correlations between the variables of the proposed model are shown in Table 1.

Based on Table 1, it can be assumed that significant correlations exist between the variables of the proposed model. The absolute values of Pearson's correlations for the study variables ranged between -0.21 and 0.56, and all the correlations are significant at 0.001 and 0.01 level.

In Tables 2 to 6, the results of the regression analysis used for testing mediating effects of the cognitive flexibility between big five personality traits and psychological help-seeking attitudes were presented.

As shown in Table 2, according to the results of multiple regression analysis, the openness personality trait (X; indicator variable) significantly predicts the cognitive flexibility (M; mediator variable) (a path; $\beta=0.72$, SE=0.09, $t=8.11$, $p<0.001$, CI [0.55, 0.90]).

Also the multiple regression analysis was used to analyze the effects of both cognitive flexibility (M) (b) and openness personality trait (X) (c') on the psychological help-seeking attitude (Y, outcome variable). As shown in Table 2, cognitive flexibility significantly predicts psychological help-seeking attitude (path b; $\beta=0.14$, SE=0.03, $t=4.37$, $p<0.001$, CI [0.08, 0.21]).

In a model where the mediator variable (M) is not present, the effect of the openness personality trait (X) on the psychological help-seeking attitude (Y) (path c) is called the total effect. Accordingly, in the absence of cognitive flexibility, openness personality trait significantly predicts on help seeking (c path; $\beta=0.14$, SE= 0.04, $t=3.46$, $p<0.001$, CI [0.07, 0.23]).

On the other hand, when openness personality trait (X, indicator variable) and cognitive flexibility (M, mediator variable) were taken simultaneously to the equation, the direct effect between the openness personality trait and psychological help-seeking attitudes was found not significantly (c' path; $\beta = 0.04$, SE = 0.04, $t = 0.88$, $p >0.001$, CI [-0.04, 0.13]). According to this finding, it was revealed that cognitive flexibility, the mediating variable added to the equation, mediates the relationship between openness personality trait and psychological help-seeking attitude.

According to findings, it was concluded that the indirect effect of the study on openness (X, indicator variable) and cognitive flexibility (M, mediator variable) psychological help-seeking attitude (Y) (c-c') was significant. It means the indirect effect of openness personality trait on psychological help seeking attitude was significant; thus, cognitive flexibility mediates the relationship between openness personality trait and psychological help-seeking attitude (c- c') point prediction = 0.10, SE = 0.04, BCa CI [0.03, 0.18]).

Besides, when Table 2 is examined, it is seen that the

Table 3. The results of the serial multiple mediator model for investigating mediator role of cognitive flexibility in the effect of conscientiousness personality trait on psychological help-seeking attitude.

Outcome variable	M (Cognitive flexibility)			Y (Psychological help-seeking attitude)		
	β	SE	p	β	SE	p
Conscientiousness (X)	0.86	0.13	0.000	0.11	0.05	0.024
Cognitive flexibility (M)	-	-	-	0.12	0.03	0.000
C (Consant)	22.96	3.07	0.000	20.15	1.59	0.000
	$R^2 = 0.31$			$R^2 = 0.17$		
	F(1,187) = 85.02			F(2,186) = 18.75		
	p = 0.000			p = 0.000		

Table 4. The results of the serial multiple mediator model for investigating mediator role of cognitive flexibility in the effect of extraversion personality trait on psychological help-seeking attitude.

Outcome variable	M (Cognitive flexibility)			Y (Psychological help-seeking attitude)		
	β	SE	p	β	SE	p
Extraversion (X)	0.72	0.10	0.000	0.08	0.04	0.078
Cognitive flexibility (M)	-	-	-	0.13	0.03	0.000
C (Consant)	31.20	2.71	0.000	20.84	1.53	0.000
	$R^2 = 0.23$			$R^2 = 0.16$		
	F(1,187) = 55.29			F(2,16) = 15.55		
	p = 0.000			p = 0.000		

Whole model is significant ($F(2, 186) = 16.18, p < 0.001, R^2 = 0.15$) and explains 15% of the total variance.

As shown in Table 3, according to the results of multiple regression analysis, the conscientiousness personality trait (X; indicator variable) significantly predicts the cognitive flexibility (M; mediator variable) (a path; $\beta = 0.86, SE = 0.13, t = 9.22, p < 0.001, CI [0.568, 1.04]$). Also, the multiple regression analysis was used to analyze the effects of both cognitive flexibility (M) (b) and conscientiousness personality trait (X) (c') on the psychological help-seeking attitude (Y, outcome variable). As shown in Table 3, cognitive flexibility significantly predicts psychological help-seeking attitude (path b; $\beta = 0.11, SE = 0.03, t = 3.44, p < 0.001, CI [0.05, 0.18]$).

In a model where the mediator variable (M) is not present, the effect of the conscientiousness personality trait (X) on the psychological help-seeking attitude (Y) (path c) is called the total effect. Accordingly, in the absence of cognitive flexibility, conscientiousness personality trait significantly predicts on help seeking (c path; $\beta = 0.22, SE = 0.05, t = 4.93, p < 0.001, CI [0.13, 0.30]$).

On the other hand, when conscientiousness personality trait (X, indicator variable) and cognitive flexibility (M, mediator variable) were taken simultaneously to the equation, the direct effect between the conscientiousness personality trait and psychological help-seeking attitudes was found not significantly (c' path; $\beta = 0.12, SE = 0.05,$

$t = 2.27, p < 0.001, CI [0.01, 0.22]$). This finding reveals that cognitive flexibility, the mediating variable added to the equation, mediates the relationship between conscientiousness personality trait and psychological help-seeking attitude.

According to findings, it was concluded that the indirect effect of the study on conscientiousness (X, indicator variable) and cognitive flexibility (M, mediator variable) psychological help-seeking attitude (Y) (c- c') was significant. It means the indirect effect of conscientiousness personality trait on psychological help seeking attitude was significant; thus, cognitive flexibility mediates the relationship between conscientiousness personality trait and psychological help-seeking attitude (c- c') point prediction = 0.10, $SE = 0.04, BCa CI [0.03, 0.18]$).

Besides, when Table 3 is examined, it is seen that the whole model is significant ($F(2, 186) = 18.75, p < 0.001, R^2 = 0.17$) and explains 17% of the total variance.

As seen in Table 4, according to the results of multiple regression analysis, the extraversion personality trait (X; indicator variable) significantly predicts the cognitive flexibility (M; mediator variable) (a path; $\beta = 0.72, SE = 0.10, t = 7.44, p < 0.001, CI [0.53, 0.92]$).

Also, multiple regression analysis was used to analyze the effects of both cognitive flexibility (M) (b) and extraversion personality trait (X) (c') on the psychological help-seeking attitude (Y, outcome variable). As shown in Table 4, cognitive flexibility significantly predicts

Table 5. The results of the serial multiple mediator model for the investigating mediator role of cognitive flexibility in the effect of agreeableness personality trait on psychological help-seeking attitude.

Outcome variable	M (Cognitive flexibility)			Y (Psychological help-seeking attitude)		
	β	SE	p	β	SE	p
Agreeableness (X)	0.40	0.13	0.002	0.19	0.05	0.000
Cognitive flexibility (M)	-	-	-	0.13	0.03	0.000
C (Consant)	37.30	4.40	0.000	16.45	1.96	0.000
	$R^2 = 0.05$			$R^2 = 0.21$		
	F(1,187) = 9.79			F(2,186) = 24.55		
	p = 0.002			p = 0.000		

psychological help-seeking attitude (path b; $\beta = 0.13$, SE = 0.03, $t = 4.12$, $p < 0.001$, CI [0.07, 0.19]).

In a model where the mediator variable (M) is not present, the effect of the extraversion personality trait (X) the equation, mediates the relationship between extraversion personality trait and psychological help-seeking attitude.

According to findings, it was concluded that the indirect effect of the study on extraversion personality trait (X, indicator variable) and cognitive flexibility (M, mediator variable) psychological help-seeking attitude (Y) (c- c') was significant. It means the indirect effect of extraversion personality trait on psychological help seeking attitude was significant; thus, cognitive flexibility mediates the relationship between conscientiousness personality trait and psychological help-seeking attitude (c- c') point prediction = 0.09, SE = 0.03, BCa CI [0.03, 0.17]).

Besides, when Table 4 is examined, it is seen that the whole model is significant ($F(2, 186) = 15.55$, $p < 0.00$, $R^2 = 0.16$) and explains 16% of the total variance.

As seen in Table 5, according to the results of multiple regression analysis, the agreeableness personality trait (X; indicator variable) significantly predicts the cognitive flexibility (M; mediator variable) (a path; $\beta = 0.40$, SE = 0.13, $t = 3.13$, $p < 0.001$, CI [0.15, 0.65]).

Also, the multiple regression analysis was used to analyze the effects of both cognitive flexibility (M) (b) and agreeableness personality trait (X) (c') on the psychological help-seeking attitude (Y, outcome variable). As shown in Table 5, cognitive flexibility significantly predicts psychological help-seeking attitude (path b; $\beta = 0.13$, SE = 0.03, $t = 4.82$, $p < 0.001$, CI [0.08, 0.19]).

In a model where the mediator variable (M) is not present, the effect of the agreeableness personality trait (X) on the psychological help-seeking attitude (Y) (path c) is called the total effect. Accordingly, in the absence of cognitive flexibility, agreeableness personality trait significantly predicts on help seeking (c path; $\beta = 0.22$, SE = 0.05, $t = 4.93$, $p < 0.001$, CI [0.13, 0.30]).

On the other hand, when agreeableness personality trait (X, indicator variable) and cognitive flexibility (M, mediator variable) were taken simultaneously to the

equation, the direct effect between the agreeableness personality trait and psychological help-seeking attitude decrease but it is still significant (c' path; $\beta = 0.19$, SE = 0.05, $t = 3.89$, $p < 0.000$, CI [0.09, 0.29]). These findings (the decreasing) suggested that mediator variable may show mediation effect between indicator variable and outcome variable.

Whether the indirect effect were statistically significant or not, it was seen that the indirect effect of the study on agreeableness (X, indicator variable) and cognitive flexibility (M, mediator variable) psychological help-seeking attitude (Y) (c- c') was significant (point prediction = 0.05, SE = 0.03, BCa CI [0.03, 0.12]). It means the indirect effect of agreeableness personality trait on psychological help seeking attitude was significant; thus, cognitive flexibility mediates the relationship between agreeableness personality trait and psychological help-seeking attitude.

Besides, when Table 5 is examined, it is seen that the whole model is significant ($F(2, 186) = 24.55$, $p < 0.001$, $R^2 = 0.21$) and explains 21% of the total variance.

As seen in Table 6, according to the results of multiple regression analysis, the neuroticism personality trait (X; indicator variable) significantly predicts the cognitive flexibility (M; mediator variable) (a path; $\beta = -0.78$, SE = 0.10, $t = -7.67$, $p < 0.001$, CI [-0.98, -0.58]).

Also, multiple regression analysis was used to analyze the effects of both cognitive flexibility (M) (b) and neuroticism personality trait (X) (c') on the psychological help-seeking attitude (Y, outcome variable). As shown in Table 6, cognitive flexibility significantly predicts psychological help-seeking attitude (path b; $\beta = 0.15$, SE = 0.03, $t = -4.68$, $p < 0.001$, CI [0.09, 0.21]).

In a model where the mediator variable (M) is not present, the effect of the neuroticism personality trait (X) on the psychological help-seeking attitude (Y) (path c) is called the total effect. Accordingly, in the absence of cognitive flexibility, neuroticism personality trait significantly predicts on help seeking (c path; $\beta = -0.14$, SE = 0.05, $t = -2.97$, $p < 0.001$, CI [-0.23, -0.04]).

On the other hand, when neuroticism personality trait (X, indicator variable) and cognitive flexibility (M, mediator variable) were taken simultaneously to the equation, the direct effect between the neuroticism

Table 6. The results of the serial multiple mediator model for investigating of mediator role of cognitive flexibility in the effect of neuroticism personality trait on psychological help-seeking attitude.

Outcome variable	M (Cognitive flexibility)			Y (Psychological help-seeking attitude)		
	β	SE	p	β	SE	p
Neuroticism (X)	-0.78	0.10	0.000	-0.02	0.05	0.657
Cognitive flexibility (M)	-	-	-	0.15	0.03	0.000
C (Consant)	69.69	2.51	.000	22.69	2.49	0.000
	$R^2 = 0.24$			$R^2 = 0.15$		
	$F(1,187) = 58.79$			$F(2,186) = 15.83$		
	$p = 0.000$			$p = 0.000$		

personality trait and psychological help-seeking attitudes was found not significantly (c' path; $\beta = -0.02$, $SE = 0.05$, $t = -0.44$, $p > 0.001$, $CI [-0.12, 0.07]$). This finding reveals that cognitive flexibility, the mediating variable added to the equation, mediates the relationship between neuroticism personality trait and psychological help-seeking attitude.

According to findings, it was concluded that the indirect effect of the study on neuroticism personality trait (X, indicator variable) and cognitive flexibility (M, mediator variable) psychological help-seeking attitude (Y) (c- c') was significant. It means the indirect effect of neuroticism personality trait on psychological help seeking attitude was significant; thus, cognitive flexibility mediates the relationship between neuroticism personality trait and psychological help-seeking attitude (c- c') point prediction = $SE = 0.04$, $BCa CI [-0.20, -0.05]$.

Besides, when Table 6 is examined, it is seen that the whole model is significant ($F(2, 186) = 15.83$, $p < 0.001$, $R^2 = 0.15$) and explains 15% of the total variance.

DISCUSSION

In this study, the relations between big five personality dimensions (openness, conscientiousness, extraversion, agreeableness, neuroticism) and attitudes toward seeking professional psychological help among counseling students along with the mediating role of cognitive flexibility was examined. According to the results, all personality traits dimensions have significantly indirect effects on help-seeking attitudes. In other words, it was said that cognitive flexibility has a mediating effects on the relationship between big five personality traits and psychological help-seeking attitude.

Thus, the model was found statistically significant as proposed. Besides, it was found that the total variance explanation ratios of the each indicator variables on the psychological help-seeking attitudes were statistically significant. These variables order in high to low shows that agreeableness personality trait explained 21% of the total variance, conscientiousness explained 17% of the total variance, extraversion explained 16% of the total variance and both openness and neuroticism explained

the total variance 15%.

In this study, the first finding showed that openness to experience has significantly indirect effects on help-seeking attitudes. According to big five personality model, openness to experience can be explained through the trait of creativity and curiosity. Corey (2009), suggested the qualification of the effective counselors. One of these qualifications is open to change, and thus this means that effective counselors are those who can make decisions about how they would like to change, and work toward becoming the person they want to become. McLeod (2003) described this qualification as "an openness to learning and inquiry" meaning that all counselors should open to new knowledge and using research to inform their practice.

The model proposed in this study, showed that cognitive flexibility was mediated between openness to experience personality trait and help seeking attitude. In this context, it was seen that Dreisbach and Goschke's (2004) study supported this finding. According to their research, the positive relationships between cognitive flexibility and adaptation to new situations was found. In another saying, cognitive flexibility facilitates the ability to adapt to new situations. When the literature is examined, it is emphasized that there are relations between flexibility and personality traits in the few studies that examined five factors personality traits with direct cognitive flexibility. Murdock et al. (2013) stated in their research that there was a positive and significant relationship between cognitive flexibility and openness to experience personality trait.

The second finding of this study showed that conscientiousness has a significantly indirect effect on help-seeking attitudes. Costa and McCrea (1992) indicated conscientiousness gives individuals have the sufficient required degree of self-discipline and gumption for organization. These people experience low levels of negative emotions and positive emotions at a higher level, and thus are more satisfied generally. Azjen's theory of planned behavior is a theory which states that help-seeking for mental health problems is governed by attitudes, subjective norms, and perceived control over behaviour. The theory states that these traits interact to influence intentions, and consequently, one's behavior.

Besides, Bilgin (2017) reported that cognitive flexibility is one of the variables that it predicted to significant responsibility (self-supervision) and emotional instability personality traits.

The third finding of this study showed that the trait of extraversion personality trait has significant indirect effect on help-seeking attitudes. Knowdell and Chapman (1993) claimed that being successful counselor actively has some relation to personality. Thus, they stated that the counselors should like people, desire to help and have a warm personality, positive attitude, nonthreatening demeanor and be good listener. All seem to agree that a good counselor ought to be "an extrovert" with strong external relations. McLeod (2003) introduced a composite model around counselors' qualifications. In this model, there are seven key areas of competence outlined. One of these pertains to "interpersonal skills" including good listening skills, communication skills and empathy. Furthermore, Tjihuis et al. (1990), claimed that a strong social network is an important variable affecting the professional help seeking attitude. However, in terms of social support network, people with close friendship and family relations are less likely to seek professional help. In the event that a social network is established with mental health professionals, people are more likely to seek professional psychological help if they are trusted by mental health workers. In this research, the proposed model showed that cognitive flexibility has a mediator role between extraversion personality trait and help seeking attitude. In this context, Gamez et al. (2011) and Gloster et al. (2011) supported this finding and they claimed the extraversion personality showed significant relationship with psychological flexibility.

The fourth finding of this study showed that the trait of agreeableness has significant indirect effect on help-seeking attitudes. Agreeableness is a personality trait that refers to friendliness and trust. In the broadest sense, agreeableness implies a certain degree of obedience, and so therefore it follows that this could lead to negative effect in this context. Of course, certain cultures emphasize subordination as a positive personal trait, and others do not. This is related to the degree of individualism and collectivism in a culture, the latter being generally prevalent in Eastern societies. Because of their collectivist character of Eastern societies, subordination can be considered an honorable characteristic (McCrae and Costa, 2003). According to help-seeking literature, it was described as avoidance factor in the help-seeking process, social stigma (Komiya et al., 2000), treatment fears (Deane and Todd, 1996), fear of emotion (Komiya et al., 2000), anticipated utility and risks and self-disclosure (Vogel and Wester, 2003).

As a consequence, these factors are thought to be the means of high cognitive flexibility between individuals' attitudes towards psychological help seeking and agreeableness personality traits as a serious threat to mental health and increased interest in holistic healthy

living.

The fifth finding of this study showed that neuroticism has significantly indirect effects on help-seeking attitudes. According to big five personality model, neuroticism can be explained as the experience of negative effect. Gulliver et al. (2012) indicated that depression, anxiety, and general psychological distress can be effective in increasing help-seeking attitudes. Also, the health belief model also backs this study's findings. This model, is built on the premise that behavior is dependent on an individual's appraisal of the perceived threat of illness and its severity, and the perceived barriers and benefits of the behavior itself (Henshaw et al., 2009). The related literature examine showed the relationship between personality traits and stress and coping. For example, there is a positive correlation between neuroticism or emotional instability and stress levels (Garbarino et al., 2014). It has been shown by conducted research (Altunkol, 2011; Stah and Pry, 2005) that individuals with high cognitive flexibility can cope with effectively unexpected and difficult situations, and create alternative solutions and coping methods. As a consequence, cognitive flexibility have an deeply and positive impact on the individuals' coping capacity towards to internal and external sources of stress. Also, it has a positive effect on the psychological well-being of adults (Koesten et al., 2009).

Finally, it is concluded that cognitive flexibility plays a mediator role in the relationship between big five personality traits and psychological help-seeking attitude. When it is examined, the total variance explanation rations about each of the indicator variables that the highest ratio belong to agreeableness personality trait. According to this finding, it can be said that cognitive flexibility has more mediating effect on the relationship between agreeableness personality trait and psychological help compared to other indicator variables. After the agreeableness personality trait's explanation ratio, it has the total variance explanation rate from conscientiousness and extraversion, respectively, from high to low. Besides, openness and neuroticism are equal to total variance explanation rates.

RECOMMENDATION FOR FUTURE RESEARCHES

In future studies, the model may be tested by equating the number of female and male participants. Maybe there is a need to examine psychological help-seeking attitude using diverse ages groups. A comparative study can be conducted regarding the mediator role of cognitive flexibility between personality traits and psychological help seeking attitudes among professionals such as social workers, psychologists and psychiatrists in psychological care professions.

According to this study's findings, cognitive flexibility affected an indirect effect in the relationship between

personality traits and psychological help-seeking attitudes. There is also many factors that affect the relationships between big five personality traits and psychological help-seeking attitude. This research examined whether cognitive flexibility is a mediator role or not. To understand the role of the other factors which affect psychological help-seeking attitude, there is need for new researches.

To develop intervention or education programs for mental health, professionals probably reduce the barriers of the help-seeking. For this purpose, in order to remove the obstacles to the attitude towards seeking psychological help in future researches, preparation and implementation of intervention programs may be included.

CONFLICT OF INTERESTS

The author has not declared any conflict of interests.

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Full Length Research Paper

Forgiveness and cyberbullying in Turkish adolescents

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The quickest and easiest way to maintain the relationships is through the use of technology; however, this puts adolescents at risk of experiencing cyberbullying. The aim of this study was to investigate whether forgiveness is related to cyberbullying in high school students. This study included 348 adolescents in Turkey. The results of this study indicated a negative directional relationship between forgiveness and cyberbullying. This study focused on the protective role of forgiveness in preventing aggressive behavior. The findings suggest that forgiveness may be an effective coping mechanism that helps adolescents redirect negative emotions caused by cyberbullying using other positive emotions.

Key words: Forgiveness, cyberbullying, adolescents.

INTRODUCTION

Although the shared experience of adolescence largely transcends regional differences, cultural factors, such as historical, economic, political and religious differences, play a role in social development (Adams, 2005; Apaydin, 2016). Adolescence is a period of biological, psychological, mental, and social development and maturation and affects children on both a physical and spiritual level (O'Donohue et al., 2013; Yavuzer, 2012).

Due to rapidly advancing technology, cyberbullying is becoming more common in adolescents (Ang and Goh, 2010; Smith et al., 2006). Studies have shown that forgiveness can increase life satisfaction, hope, and well-being and decrease anxiety and depression (Freedman and Enright, 1996; Snyder and McCullough, 2000). Therefore, forgiveness may be effective strategy to combat the negative effects of cyberbullying in adolescents (Safaria et al., 2016; Quintana-Orts and Rey, 2018).

Forgiveness

Forgiveness is defined as follows, "to change the feelings of hatred and resentment toward the person who did harm, to propose a compromise" (Murphy and Hampton, 1988: 42). It can also be described as: "being away from the feelings of resentment and anger towards a person who has caused a moral injury" (Murphy, 1982: 504). Forgiving someone reduces the intensity of negative feelings and requires abandoning these feelings completely (Richards, 1988). The forgiveness process may be an antidote to negative experiences, such as excessive rage (Baskin and Enright, 2004). To forgive, one must give up hatred and instead accept compassion, benevolence, and love, as forgiveness indicates mercy (North, 1987; Lewis, 1980; Gingell, 1974). A harmed person's forgiveness is associated with conscience; the person who harmed is spared from hatred and vengeance

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(Emmons and Paloutzian, 2003; Enright and Fitzgibbons, 2000). Forgiveness has a quality of discretion, which belongs to the person harmed (Novitz, 1998; Hughes, 1975). Forgiveness is a force in the hand of the victim and is gift-like or unconditional for some people; those who are to be forgiven do not need to do anything to be forgiven (Minow, 1998; Scobie and Scobie, 1998).

Enright's developmental psychology group conducted a study on forgiveness using Enright's theory, which was modeled after the theory of moral judgment of Kohlberg (Enright and The Human Development Study Group, 1991; Kohlberg, 1976). Each stage in Kohlberg's model corresponds to a stage in Enright's model. The model proposes that true forgiveness attitude will not be morally condemned even in cases where it is logically inappropriate because the forgiving person is always morally approved (Downie, 1965). The person who has harmed is ready to accept the mistake of what they did and approaches the harmed who must apologize and ask for forgiveness. If the harmed one perceives the guilty expression of remorse as genuine and sincere, they may be ready to forgive them to overcome feelings of hatred and resentment; however, the harmed one does not forget what occurred but also does not view them as a crook (Govier, 1999).

The concept of forgiveness has three dimensions that are self forgiveness, others forgiveness and situational forgiveness (Thompson et al., 2005). Self forgiveness is defined as the person that increasing self-resentment and anger, reducing positive self-feelings oneself (Hall and Fincham, 2005). Forgiving others requires a highly complex process, which involves a series of steps or stages as follows: revelation (that is, anger), decision (that is, the desire to forgive), working (that is, acceptance of pain), and deepening (finding the meaning of suffering from pain) (Enright et al., 1998). There are also three factors in forgiveness as follows: suspension or overcoming hostile emotions against the person who has harmed; reconciliation and reestablishment of relationships; forgiveness (cleansing the harm) (Garrard and McNaughton, 2003).

Forgiveness is a basic social lubricant that helps support systems overcome interpersonal problems (Krause and Ingersoll-Dayton, 2001). While forgiveness involves reducing negative reactions, it may also increase positive reactions. Independent of the one who harmed, forgiveness is a voluntary, rational, intrapsychic process undertaken by the harmed one and requires emotional, behavioral, and cognitive components; it is a unique, motivational, and voluntary coping mechanism (Flanagan et al., 2012; Webb et al., 2012). In a study on forgiveness intervention in angry adolescents, Gambaro (2002) found that forgiveness is more effective in reducing various forms of anger and improving attitudes toward school and quality of interpersonal relations than a Rogerian-based support group (Gambaro, 2002). Forgiveness can help close old wounds and may increase psychological well-

being; forgiveness-based therapies are also effective in managing depression, anxiety, and anger (Pettigrove, 2004; Tangrey et al., 2005).

Cyberbullying

Cyberbullying increased significantly in the late 1990s and early 2000s, with increasing use of social media use, file sharing sites, and mobile devices (Netzley, 2014). Cyberbullying is a new phenomenon that has developed with advanced communication technologies, such as the Internet and smartphones, as the destructive impact of cyberbullying manifests in technological format (Potha et al., 2016).

Cyberbullying is considered a special type of implicit, non-physical bullying (Chadwick, 2014; Willard, 2004). To be classified as cyberbullying, the harm must occur through the use of technology, such as a computer, mobile phone, tablet, WiFi, digital camera, or other electronic equipment (Patchin and Hinduja, 2012; Vandebosch and Cleemput, 2008). Cyberbullying can occur via blogs (interactive web magazines), web sites, emails, chat rooms, instant text messages sent via mobile devices, and video messages (Li et al., 2012). This targeted behavior affects the victim psychologically, emotionally, and socially. Most cyberbullying involves the repetition of behaviors. Replication and distribution of harmful digital content can be easily implemented by forwarding harassing comments, posting shameful photos, or uploading and modifying videos to harm the victim repeatedly (Patchin and Hinduja, 2012; Patchin and Hinduja, 2014; Brighi et al., 2012). The most important elements, which include: "willful" (the behavior has to be intentional, not accidental); "repeated" (bullying reflects a pattern of behavior, not just one isolated incident); "harm" (the target must perceive that harm was inflicted); and "computers, cell phones, and other electronic devices" (this is what differentiates cyberbullying from traditional bullying) (Hinduja and Patchin, 2010) and in addition to these, cyberbullying can involve stalking and death threats and can be very serious (Li, 2006).

There are two types of cyberbullying: the first is electronic bullying, which includes more technical aspects of the event, and the other is electronic bullying, which includes more psychological aspects of the event. Electronic bullying involves technical phenomena such as getting people's passwords, hacking websites, sending spam or infectious emails. E-communication bullying involves relational attack behaviors such as cyberstalking, mocking people, naming people, spreading gossip, insulting people over the internet or publishing photos without the consent of the person using information and communication technologies. This directly affects emotions (Arıcak, 2012). Studies have indicated that one out of five teenagers between the ages

of 10-18 years is both a victim of cyberbullying and a cyberbully themselves (Parksa, 2013). Cyberbullying is associated with depression, low self-esteem, and suicidal thoughts, and cyberbullying can adversely affect school success and mental health (Parksa, 2013; Dokunağa, 2010; Klomek et al., 2008; Wigderson and Lynch, 2013). Other variables associated with cyberbullying in adolescents are school bullying (Williams and Guerra, 2007), spending more time on the Internet (Ybarra and Mitchell, 2004), empathic tendency (Steffgen et al., 2011) and perceived academic achievement (Peker et al., 2012).

The current study attempts to increase knowledge in the research field by examining the link between cyberbullying and forgiveness, which is considered as a protective factor, in a sample of Turkish adolescents. As in the whole world (Hinduja and Patchin, 2010; Li, 2006; Smith et al., 2008; Walrave and Heirman, 2011) in Turkey too (Akbaba and Eroğlu, 2013; Erdur-Baker and Kavşut, 2007; Şahin et al., 2010; Yaman and Peker, 2012) cyberbullying is an increasing problem among adolescents. According to Hinduja and Patchin (2008), one of the reasons why young people tend to cyberbullying revenge. When a person is offended, and injustice is experienced, a similar set of responses can motivate the victim to search for ways to cope with his or her negative experience. From this perspective, revenge and forgiveness can both be viewed as coping strategies for responding to perceived injustice (Bradfield and Aquino, 1999). And revenge is a disease and that forgiveness is its cure (McCullough, 2008, 8). Forgiveness is a process of overcoming attitudes of resentment and anger that may persist when one has been injured by wrongdoing (Govier, 2011).

There is infrequency of research examining the relationships between cyberbullying and forgiveness (Quintana-Orts and Rey, 2018) and forgiveness can be a protective factor for cyberbullying, from here the objectives of the present study was to examine forgiveness as a predictor of cyberbullying in Turkish adolescents.

METHODOLOGY

Research model

The aim of this study is to present the relationship between cyberbullying and forgiveness of adolescents and to test the model. For this purpose, relational survey model was used in this study. Relational survey model is a research model that aims to determine the presence and degree of co-change between two or more variables (Fraenkel and Wallen, 2009).

Participants

The sample of the study consisted of individuals selected by simple random sampling method. This study included 348 adolescents in the Konya province of Turkey. There were 180 (51.7%) women and

men 168 (48.3%), and 55 were 13-14 years old (15.8%), 175 were 15-16 (50.3%) years old, and 118 were 17-18 (33.9%) years old.

Measurement tools

Developed by Thompson et al. (2005), the Heartland Forgiveness Scale measures self-expressions using a 6-piece Likert scale (Thompson et al., 2005). The scale consists of 18 true/false questions across three sub-dimensions related to forgiving the self, the others, and the situation. The reliability of the test-retest was 0.82 and the Cronbach alpha for the total scale score ranged from 0.84 to 0.87.

Bugay and Demir (2010) translated and adapted this scale for use in Turkey (Bugay and Demir, 2010). The Cronbach alpha internal consistency coefficient of the Turkish version of the scale was 0.64 for the self-forgiveness subscale, 0.79 for the forgiveness subscale, and 0.76 for the forgiveness subscale; the Cronbach Alpha for the entire scale was 0.81. Bugay et al. (2012) evaluated the psychometric properties of this scale in a larger sample and found that the suitability of the original 3-factor structure of the scale for Turkish sampling and the compliance values of the Confirmatory Factor Analysis were adequate (Bugay et al., 2012).

As the scale did not have an application for an adolescent sample, the Cronbach alpha value was calculated on the study group; the value was 0.75. The correlation between the lower dimensions of the scale varied between 0.29 and 0.61 ($p < 0.01$).

Developed by Arıcağ et al. (2012), the Cyberbullying Scale consists of 24 items and uses a 4 Likert-type (never, sometimes, often, always) scale (Arıcağ et al., 2012). The scale has a single factor that describes 50.58% of the total variance. The Cronbach alpha coefficient of the scale was 0.95 and the test-retest reliability coefficient was 0.70; according to these values, the scale is reliable. The lowest score is 24 and the highest score is 96, with higher scores indicating cyberbullying behavior. The Cronbach Alpha was 0.86.

Procedures

Participants were selected from various state high schools in Konya in the center of Turkey. The necessary official permissions were received from National Education Directorate and the school directorates. The response rate to the surveys was 87%. Data were collected face to face using paper and pencil forms in the classrooms where the volunteer students were present. Participants answered the questionnaire during a course in their high school.

Data analysis

In this study, structural equation modeling was performed to test the direct effects of forgiveness on cyberbullying. Structural equation modeling is a statistical approach that aims to test the theoretical model by estimating causal relations among observed and latent variables (Shumacker and Lomax, 2004).

RESULTS

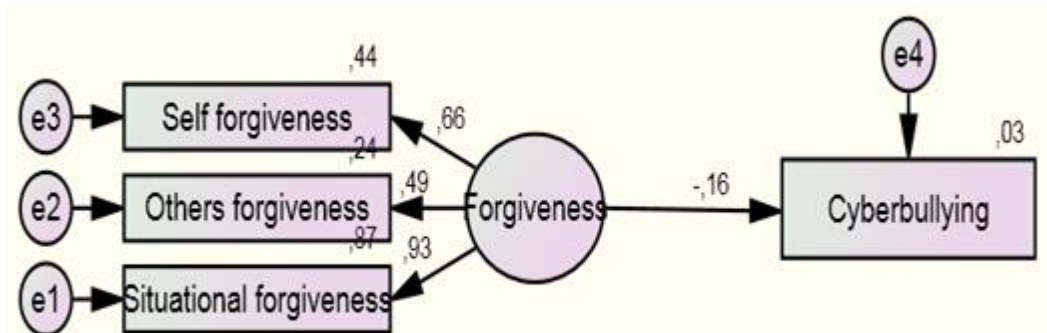
The adaptation values for the tested model are shown in Tables 1 and 2 and in Figure 1. The compliance values are as follows: $\chi^2/sd=4.19$, SRMR=0.03, IFI=0.97, NcFI=0.97, CFI=0.98, GFI=0.99, and TLI=0.93. The model had the desired level of compliance values (Figure 1). The forgiveness variable affected the cyberbullying

Table 1. Statistical values of structural equality model compliance

Measurement	Good Compliance	Acceptable Compliance	Compliance Index Values of the Model
(X ² /sd)	≤ 3	≤ 4-5	4.19
SRMR	≤ 0.05	0.06-0.08	0.03
NFI	≥ 0.95	0.94-0.90	0.97
IFI	≥ 0.95	0.94-0.90	0.97
CFI	≥ 0.97	≥ 0.95	0.98
GFI	≥ 0.90	0.89-0.85	0.99
TLI	≥ 0.95	0.94-0.90	0.93

Table 2. Model related to Forgiveness and Cyberbullying predictor relations

Predictor Variable	Dependent Variable	Direct Impact	Direct Impact	Standard Error	P
Forgiveness	Cyberbullying	-0.16	0.06	-2.53	0.01

**Figure 1.** Model related to forgiveness and cyberbullying.

variable ($t=-2.53$, $p<0.01$; Figure 1; Table 2). The link coefficient value for this factor was $\beta=-0.17$. There was a negative directional relationship between forgiveness and cyberbullying. Therefore, cyberbullying decreases as the level of forgiveness increases.

DISCUSSION

Findings from this study suggest that forgiveness can reduce cyberbullying behavior in adolescents. Spirituality has received attention as a source of resilience for adolescents (Kim and Esquivel, 2011). A number of authors have related positive psychology constructs to attributes that contribute to a person's success and general sense of wellbeing (Akin-Little and Little, 2004). Previous studies have also found that cyber-victimized adolescents with high levels of forgiveness have lower levels of cyberbullying behavior (Quintana-Orts and Rey,

2018). A study also found a meaningful correlation between forgiveness level and cyberbullying response in high school students (Safaria et al., 2016). Both forgiveness and friendship mediate the debilitating psychological effects of bullying and forgiveness plays a role in the mediation between being a victim of bullying and psychopathology (Barcaccia et al., 2018; Rensburg and Raubenheimer, 2015). Cyberbullying is negatively related to victimization, forgiveness, and obedient behavior (Ogurlu and Sariçam, 2018).

Forgiveness might be an unexpected but powerful way to enhance school culture (Zakrzewski, 2014). Gambaro (2003) showed that a significant improvement in the forgiveness program participants compared with the control group on the following variables: attitude to school, attitude to teachers, self-reliance, relationships with parents, interpersonal relationships, trait anger, angry temperament, angry reaction, grades in school, school discipline, and forgiveness. It is important to describe

how forgiveness education can be used with adolescents in a school setting so that it can be applied more frequently. The recent increase in school violence by adolescents illustrates that there is a real need for education that could help students cope with their hurt and angry feelings.

Educators make a more conscious effort to draw attention to specific ethical values in school lessons, such as justice, civility, responsibility, tolerance, compassion and forgiveness (Rodden, 2004). It was observed that there was a decrease in the level of forgiveness and anger level in which the level of hope increased as a result of the forgiveness education program which was applied to 4th grade students (Taysi and Vural, 2016).

The forgiveness process may act as an effective coping mechanism that allows students to redirect negative feelings associated with bullying with other positive emotions (Egan and Todorov, 2009). Forgiveness can also help adolescents overcome adverse psychological effects caused by cyberbullying, as giving advice to the victims of bullying about forgiveness reduces anger (Barcaccia et al., 2017; Watson et al., 2015). Additionally, forgiveness contributes to the elimination of bullying in the workplace and helps aid in recovery (Mishra et al., 2018). Finally, pre-adolescents who participated in a forgiveness education group showed lower levels of bullying behavior (Gregory, 2016).

CONFLICT OF INTERESTS

The author has not declared any conflict of interests.

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