

Section: Research and innovations in PPT

## EXAMINATION OF IMPULSIVITY IN POSITIVE PSYCHOTHERAPY STRUCTURES



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### Abstract

When the common features of the problems encountered in adolescence are examined, impulse control problems draw our attention. At this point, preventive and developmental studies are needed to help adolescents control impulses. It is important to examine the structures that can be used to explain impulsive behavior in order to transform impulsivity into a functional form. This study aims to examine whether primary and secondary capabilities, which are the basic concepts of positive psychotherapy, predict the impulsive behaviors of adolescents. The dependent variable in this research is impulsivity, its independent variables are primary and secondary capabilities. The participant group of the research is 225 male adolescent individuals between the ages of 14-19 who continue their secondary education. The Personal Information Form, the Barrat Impulsivity Scale (BIS-11), and the Wiesbaden Positive Psychotherapy and Family Therapy Inventory were used as data collection tools in the study. The data were analyzed by multiple regression analysis. As a result of the analysis, primary capabilities ( $R=0.376$ ;  $R^2=0.141$ ;  $F=4.305$ ;  $p<.01$ ) and secondary capabilities ( $R=0.488$ ;  $R^2=0.238$ ;  $F=5.841$ ;  $p<.01$ ) were found to significantly predict impulsivity. It was revealed that hope, from the primary capabilities, and orderliness, diligence, reliability and obedience, from the secondary capabilities, predict impulsivity.

**Keywords:** impulsivity, positive psychotherapy, adolescents

### Introduction

Adolescence, defined as the period of transition from childhood to adulthood, is a crucial stage in a person's development (Arnett, 2000). If this stage is not navigated successfully, it can lead to a multitude of problems. These problems can manifest in various ways, such as engaging in risky behavior, substance abuse, criminal activity, suicidal thoughts or actions,

and behavioral disorders (Adcock and Parkin, 2016). Upon closer examination of these issues, it becomes evident that impulse control problems are a common thread (Casey et al., 2011). Therefore, it is crucial to implement preventive and developmental measures aimed at helping adolescents gain better control over their impulses (Steinberg, 2010). Such efforts can significantly contribute to the healthy development of adolescents and reduce the

likelihood of long-term negative consequences (Biehl et al., 2019).

Although impulsivity is explained as the lack of ability to delay or postpone pleasure (Neto & True, 2011) and the tendency to act spontaneously without deliberation (Carver, 2005), there is no consensus on a clear definition of impulsivity in the literature (Winstanley, Eagle, & Robbins, 2006). However, there is agreement that impulsivity is a multidimensional and complex construct (Neto & True, 2011). Similarly, the definition of impulsivity is not clear in the DSM-V. According to the DSM-V, impulsivity includes tendencies to act without thinking, inability to concentrate, and a tendency to become easily distracted (APA, 2013). Although there is no general definition of impulsivity, some accepted elements of being impulsive include making quick decisions and responses, inability to cope with negative emotions, inability to delay gratification, and acting without thinking about the future (Neto & True, 2011). Thus, impulsivity is generally associated with pathological problems such as attention deficit and hyperactivity disorder, eating disorders, behavioral addictions (e.g., gambling, shopping), aggressive behavior, and borderline personality disorder (Morrell & Burton, 2014). Studies on impulsivity rely mainly on biological and genetic origins, where impulsivity is often explained by brain damage and low serotonin levels; however, the relationship between impulsivity and environmental factors and personality traits has been neglected in most of these studies (Neto & True, 2011; Royuela-Colomer et al., 2021).

The concept of impulsivity has been a fundamental concept in child, adolescent, and adult psychopathology for many years. Particularly, impulsive behaviors during adolescence have been the subject of numerous studies. Adolescence is a critical developmental period in terms of cognitive problems and difficulties (Polanczyk et al., 2015). Physiological, psychological, and social changes during adolescence are considered as risk factors for adolescents to experience anxiety, depression, and stress, as well as to develop psychopathology (Romeo, 2013). Impulsivity can be seen as a dimension of normal personality and a characteristic of adolescence (Eysenck & Eysenck, 1977; Winstanley, Eagle & Robbins, 2006). However, impulsive behaviors during adolescence have been associated with

undesirable situations and behaviors, such as adolescent psychopathology (Vitacco & Rogers, 2001), substance addiction (Soloff et al., 2000), attention deficit hyperactivity disorder (Schachar, Tannock & Logan, 1993), aggressive behaviors (Hollander, Posner & Cherkasky, 2002), and internet addiction (Luijten et al., 2015). These types of behaviors are also known to occur frequently during adolescence (Moffitt, 1993). In addition, impulsivity is related to depression, anxiety, stress (Moustafa et al., 2017), emotion regulation (Cheung & Ng, 2019), and rumination (Hasegawa et al., 2018). It is also found that males exhibit more impulsive behavior than females during adolescence (Regan et al., 2019). Considering that both cognitive and psychological health problems encountered during adolescence are related to problems which present in adulthood, attention to situations that predict, increase or decrease problems that arise during adolescence is seen as socially important (Johnson et al., 2018).

In general, there are two categories of treatment for impulsivity: pharmacological treatment and psychotherapy. One of these approaches is positive psychotherapy, which is an approach that emphasizes the importance of individuals' capabilities in their lives and their functional use (Peseschkian, 2002). Within this approach, capabilities are described in two main groups as primary and secondary capabilities (Peseschkian & Walker, 1987; Sari, 2015). Primary capabilities express the emotional aspect and the individual's capacity for love, while secondary capabilities cover the behavioral aspect and the capacity for knowledge. Primary capabilities include patience, time, hope, contact, trust, faith/sense, sexuality/tenderness, and love, while secondary capabilities include orderliness, cleanliness, punctuality, politeness, openness, diligence, reliability, thriftiness, obedience, justice, and faithfulness (Sari, 2015).

According to the positive psychotherapy approach, all individuals have innate abilities to love and know from birth (Eryilmaz, 2017, 2019). However, both groups of capabilities are shaped and developed over time and by the environment. The shaped and developed capabilities form the character structures of individuals in adulthood. Adolescence is also a critical period during which capabilities develop and character structure begins to form. Problems that arise during this period due to

undeveloped or excessively developed capabilities can contribute to some adolescent problems and psychopathological patterns. Underdeveloped capabilities can prevent individuals from fully demonstrating their capacities, while excessively developed capabilities can cause them to use their energy in imbalanced and excessive ways (Peseschkian, 2000; Sari, 2015). Therefore, examining the development and use of capabilities is critically important to assist adolescents to lead balanced and healthy lives (Peseschkian, 2002). Thus, for adolescents, examining the relationships between their structures in terms of these capabilities and impulsivity through positive psychotherapy can provide support for their positive development. As a result, positive psychotherapy can serve as a means for adolescents to have more hope (Eryilmaz, 2012), high levels of motivation (Eryilmaz & Aypay, 2011), increased attendance in classes (Eryilmaz, 2014), can assist them to become more peaceful (Eryilmaz, 2009), and overall more happy.

Impulsivity can be approached in two dimensions, functional and dysfunctional, according to Eysenck (1993), who describes impulsivity as extraverted and psychotic (excessive) impulsivity. Extraverted impulsivity refers to a decision-making process that takes into account outcomes and risks, while psychotic (excessive) impulsivity means not considering the risks of a decision. Similarly, Dickson (cited in Coles, 1997) describes impulsivity under the concepts of functional and dysfunctional impulsivity. From this explanation, it can be seen that both types of impulsivity mean "acting without thinking or being influenced," with the difference being that functional impulsivity refers to the action being beneficial or optimal, whereas dysfunctional impulsivity means the action causes problems or harm to oneself or others. Eryilmaz (2019) states that primary and secondary skills, which are addressed in positive psychotherapy, are important indicators in explaining individuals' personality patterns. At this point, impulsivity is explained in a direction that reflects positive and negative meanings.

Positive psychotherapy defines impulsivity as a result of individuals' skills (such as obedience, hope, and orderliness) not developing (Peseschkian 1996, 1997, 2002). Positive psychotherapy also explains impulsivity as using the body dimension more in coping with conflict (Peseschkian, 2002). Empirical studies have been

conducted on sample groups such as substance-dependent adolescents (Eryilmaz, 2014) and delinquent adolescents (Eryilmaz 2018) to confirm these theoretical explanations. However, there are no studies directly examining the relationships between impulsivity and positive psychotherapy structures. Positive psychotherapy has been found to be effective in treating many mental disorders (Eryilmaz, 2012, 2015; Peseschkian, 1996, 2000, 2009). Therefore, positive psychotherapy can be an important psychotherapeutic approach in explaining adolescents' impulsivity. In line with these explanations, it is thought that examining the structures that can be used to explain impulsive behavior is important for transforming impulsivity into functional forms of behavior. The purpose of this study is to investigate whether primary and secondary skills, which are fundamental concepts of positive psychotherapy, predict adolescents' impulsive behavior.

## Methodology

### 2.1. Model of the Research

This study used the relational scanning model, which is one of the general scanning models. The relational scanning model aims to determine whether there is a simultaneous change between two or more variables and/or the degree of change (Fraenkel and Norman, 2006). In this study, the relationship between impulsivity and positive psychotherapy structures was investigated. The dependent variable of the research was impulsivity, and the independent variables were the primary and secondary capabilities of positive psychotherapy structures. Multiple regression analysis was used to analyze the data.

The participants in the study are male adolescent individuals who are continuing their secondary education between the ages of 14-19. The exclusion criteria for the study were determined as the absence of a diagnosis of behavioral disorder in adolescents. Adolescents with a diagnosis of behavioral disorder were not included in the study. A total of 225 male individuals continuing their vocational and technical secondary education participated in the study. Of these, 83 individuals (36.9%) were 9th grade students, 62 individuals (27.6%) were 10th grade students, and 80 individuals (35.5%) were 11th grade students. Of the participants, 46 (20.4%) reported having a low socioeconomic

status, 159 (70.7%) reported having a moderate socioeconomic status, and 20 (8.9%) reported having a high socioeconomic status.

## 2.2. Data Collection Tools

In this study, researchers used a personal information form prepared by the researchers themselves, the short form of the Barratt Impulsiveness Scale (BIS-11), and the Wiesbaden Positive Psychotherapy and Family Therapy Inventory as data collection tools.

*Personal Information Form:* The personal information form was prepared by the researchers to determine demographic variables such as gender, age, class, socio-economic level, level of liking school, and frequency of school absenteeism among the participants.

*Barratt Impulsiveness Scale (BIS-11):* The Barratt Impulsiveness Scale, consisting of thirty items and developed by Barratt in 1959 to assess impulsiveness, has undergone many revisions over the years. The latest version, BIS-11, was developed in 1995 by Patton, Stanford, and Barratt. The Turkish adaptation and validity and reliability study of the scale were conducted by Güleç and colleagues in 2008, and it has been used in many studies with adolescents in Türkiye. The higher the total score obtained from the scale, the higher the person's impulsivity level. In this study, the 15-item short form developed by Tamam and colleagues to increase the widespread use of the scale was used. In the adaptation study of this form, the Cronbach's alpha internal consistency coefficient of the scale was found to be .82. In this research, the Cronbach's alpha internal consistency coefficient of the scale was found to be .77.

*Wiesbaden Positive Psychotherapy and Family Therapy Inventory:* The Wiesbaden Positive Psychotherapy and Family Therapy Inventory was created by Peseschkian and Deidenbach in 1988 to assess positive psychotherapy structures. It consists of 88 items and respondents use a four-point Likert scale to answer. In 2010, Sarı, Eryılmaz, and Varlıklı conducted a study to adapt the scale to Turkish and identified four important dimensions: primary skills, secondary skills, coping resources for conflict, and models. The reliability of the sub-scales was evaluated using the Cronbach's alpha technique, which showed that the secondary capabilities had a reliability of .77 and primary capabilities had a reliability of .75. In this

study, the Cronbach's alpha reliability for primary capabilities was found to be .83 and for secondary capabilities, it was .84.

## 2.3. Data Analysis

IBM SPSS 22 package program was used with a significance level of .05 in conducting data analysis. Multiple regression analysis was performed to examine the relationship between impulsivity and positive psychotherapy structures in line with the research objectives. Necessary inspections were conducted to prepare the data for multiple regression analysis. First, an outlier examination was conducted by checking the skewness and kurtosis values of the variables. Skewness and kurtosis values should be between +1 and -1 to ensure a normal distribution (Field, 2009). Accordingly, box plots were examined for each scale and subscale total score, and 3 data were excluded from the analysis to approach the distribution to normal. In addition, a normal Q-Q plot was examined, and it was determined that the points on the graph were on or close to the 45-degree line (Field, 2009), indicating that the data were normally distributed.

Multivariate outliers were examined with the Mahalanobis distance test for regression analysis where impulsivity was the dependent variable and primary capabilities, secondary capabilities, and coping resources of positive psychotherapy structures were the independent variables. In the chi-square analysis, 4 data points with a value less than .001 were excluded to meet the multivariate normality assumption. The presence of multicollinearity problems among the independent variables was examined by VIF and tolerance values in the regression analysis. The tolerance values being greater than .10 and VIF values being less than 10 indicate that there is no multicollinearity problem (Pallant, 2011). The analysis showed that the VIF and tolerance values met the desired conditions. Durbin-Watson test value for autocorrelation examination was found to be between 1.5 and 2.5, indicating no autocorrelation between the variables (Field, 2009). In addition, the correlation coefficient between the variables was between -.02 and .51. As the correlation coefficients were less than .90, it was observed that the variables were unrelated and there was no multicollinearity problem (Pallant, 2011). Based on all these results, it was assumed that the assumptions necessary for multiple

regression analysis were met, and multiple regression analysis was performed with 218 data.

## Results

To determine the relationship between impulsivity and primary capabilities, a Pearson product-moment correlation analysis was conducted and the analysis results are presented in Table 1.

**Table 1. Pearson correlation results for relations between primary abilities and impulsivity**

Variables	1	2	3	4	5	6	7	8	9
1. Impulsivity	1.00								
2. Patience	-.23**	1.00							
3. Time	-.24**	.39**	1.00						
4. Contact	-.08	.37**	.43**	1.00					
5. Trust	-.24**	.26**	.44**	.32**	1.00				
6. Hope	-.33**	.40**	.50**	.31**	.51**	1.00			
7. Sexuality/Tenderness	-.09	.29**	.34**	.34**	.38**	.37**	1.00		
8. Love	-.16*	.25**	.36**	.51**	.42**	.43**	.34*	1.00	
9. Faith/Sense	-.20**	.39**	.46**	.35**	.37**	.49**	.35**	.37**	1.00

\*\*p<.01, \*p<.05

When Table 1 is examined, relationships between primary capabilities and impulsivity are observed. According to the results of the analysis, there were significant, low-level, and negative correlations between impulsivity and hope ( $r=-.33$ ;  $p<.01$ ), trust ( $r=-.24$ ;  $p<.01$ ), time ( $r=-.24$ ;  $p<.01$ ), patience ( $r=-.23$ ;  $p<.01$ ), faith ( $r=-.20$ ;  $p<.01$ ), and love ( $r=-.16$ ;  $p<.05$ ).

Pearson product-moment correlation analysis was conducted to determine the relationship between impulsivity and secondary capabilities, and the analysis results are presented in Table 2.

**Table 2. Pearson correlation results for relations between secondary abilities and impulsivity**

Değişkenler	1	2	3	4	5	6	7	8	9	10	11	12
1. Impulsivity	1.00											
2. Orderliness	-.29**	1.00										
3. Cleanliness	-.17**	.32**	1.00									
4. Punctuality	-.13	.31**	.30**	1.00								
5. Politeness	-.31**	.35**	.41**	.33**	1.00							
6. Openness	-.16*	.40**	.36**	.37**	.36**	1.00						
7. Diligence	-.03	.38**	.28**	.43**	.28**	.28**	1.00					
8. Reliability	-.34**	.38**	.30**	.24**	.40**	.43**	.30**	1.00				
9. Thriftiness	-.11	.29**	.31**	.28**	.30**	.17*	.20**	.16**	1.00			
10. Obedience	-.31**	.32**	.43**	.40**	.48**	.45**	.44**	.40**	.24**	1.00		
11. Justice	-.11	.34**	.34**	.24**	.32**	.33**	.33**	.31**	.29**	.38**	1.00	
12. Faithfulness	-.31**	.38**	.26*	.33**	.40**	.49**	.28**	.48**	.17*	.47**	.28**	1.00

\*\*p<.01, \*p<.05

When Table 2 is examined, relationships between secondary capabilities and impulsivity can be observed. According to the results of the analysis, there are low-level and negative significant relationships between impulsivity and

reliability ( $r=-.34$ ;  $p<.01$ ), obedience ( $r=-.31$ ;  $p<.01$ ), politeness ( $r=-.31$ ;  $p<.01$ ), faithfulness ( $r=-.31$ ;  $p<.01$ ), orderliness ( $r=-.29$ ;  $p<.01$ ), cleanliness ( $r=-.17$ ;  $p<.01$ ), and openness ( $r=-.16$ ;  $p<.05$ ).

Multiple linear regression analysis was conducted to determine the extent to which primary capabilities predicted impulsivity, and the results of the analysis are presented in Table 3.

**Table 3. Impulsivity of primary capabilities predict levels**

	B	Std. Error	$\beta$	t	p	Part r	Partial r
Constant	43.247	3.113		13.895	.000		
Patience	-.402	.252	-.120	-1.595	.112	-.110	-.226
Time	-.318	.282	-.093	-1.124	.262	-.078	-.243
Contact	.371	.286	.105	1.297	.196	.083	.089
Trust	-.368	.303	-.097	-1.216	.225	-.084	-.242
Hope*	-.842	.319	-.227	-2.640	.009	-.180	-.331
Sexuality/Tenderness	.288	.282	.076	1.020	.309	.070	-.093
Love	-.134	.323	-.034	-.413	.680	-.029	-.160
Faith/Sense	-.053	.309	-.014	-.173	.863	-.012	-.199

R=0.376; R<sup>2</sup>=0.141; F=4.305; p<.01

When Table 3 is examined, it is seen that primary capabilities significantly explain impulsivity in multiple regression analysis ( $R=.38$ ,  $R^2=.14$ ;  $F=4.305$ ;  $p<.01$ ). When the relationships of the variables with impulsivity are examined individually, it is concluded that the capability of hope predicts impulsivity. Primary capabilities account for 14% of the variance in impulsivity.

To determine how much secondary capabilities predict impulsivity, multiple linear regression analysis was conducted, and the results of the analysis are presented in Table 4.

As seen in Table 4, multiple regression analysis reveals that secondary capabilities significantly explain impulsivity ( $R=.49$ ,  $R^2=.24$ ;  $F=5.841$ ;  $p<.01$ ). When looking at the relationships between variables and impulsivity individually, it is found that the capabilities of orderliness, diligence, reliability, and obedience predict impulsivity. Secondary capabilities account for 24% of the variance in impulsivity. According to the standardized regression coefficients ( $\beta$ ), the relative importance of independent variables on impulsivity is as follows: obedience ( $-.22$ ), diligence ( $.22$ ), orderliness ( $-.21$ ), and reliability ( $-.20$ ).

**Table 4. Impulsivity of secondary capabilities predict levels**

	B	Std. Error	$\beta$	t	p	Part r	Partial r
Constant	47.079	3.383		13.915	.000		
Orderliness*	-.798	.280	-.211	-2.846	.005	-.195	-.290
Cleanliness	.002	.270	.001	.008	.993	.001	-.175
Punctuality	-.024	.261	-.007	-.091	.928	-.006	-.130
Politeness	-.485	.280	-.132	-1.730	.085	-.120	-.308
Openness	.510	.300	.132	1.700	.091	.118	-.163
Diligence*	.830	.280	.219	2.970	.003	.203	-.031
Reliability*	-.878	.333	-.199	-2.635	.009	-.181	-.336
Thriftiness	.050	.249	.014	.202	.840	.014	-.111
Obedience*	-.789	.290	-.224	-2.719	.007	-.186	-.311
Justice	.218	.254	.061	.859	.391	.060	-.115
Faithfulness	-.447	.300	-.117	-1.489	.138	-.103	-.306

R=0.488; R<sup>2</sup>=0.238; F=5.841; p<.01

## Discussion

This study examined the relationship between primary and secondary capabilities of positive psychotherapy and impulsivity skills of male adolescents. The analysis results revealed that hope from primary capabilities and orderliness, diligence, reliability, and obedience from secondary capabilities were significant predictors of impulsivity. To the best of our knowledge, no study has been found in the literature that examines impulsivity skills in terms of positive psychotherapy structures. However, impulsivity is considered as an extension of personality, especially in adolescence (Eysenck and Eysenck, 1977; Winstanley, Eagle, and Robbins, 2006). At this point, the explanation based on the capabilities of positive psychotherapy structures is in line with the literature.

The results of the study indicated that the capability of hope was a significant predictor of impulsivity among male adolescents. This suggests that limited use of hope can be an important factor in explaining their impulsivity. Hope refers to the belief that there is always a way out of difficult situations, positive thinking about oneself and one's family, and having a good plan for the future (Peseschkian, 2002). The study findings suggest that increasing the use of hope can help to reduce the impulsivity levels of adolescents. The literature suggests that hope plays an active role in changing people's basic reactions and is functional in ensuring that individuals maintain a determined attitude to achieve their goals (De Ridder et al., 2012; Li et

al., 2021). Hope is thought to contribute to individuals' impulsivity by creating a control mechanism for the individual. However, hope may also contribute to making individuals goal-oriented by providing planning and motivation, which are lacking in impulsive individuals. Impulsive individuals experience a lack of both capability and motivation to plan for the future. They are more focused on the present moment than the future (Patton et al., 1995). Nevertheless, through hope, individuals can plan for the future and move away from the pleasures of the present moment (Snyder, 1994). Therefore, hope can support adolescents in planning for the future by shifting their focus from the present moment.

One characteristic of impulsive individuals is their impatience in reaching their goals and their preference for pursuing small pleasures and quickly achieving pleasure (Bechara and Damasio, 2002). Strengthening the capability of hope may encourage adolescents to set difficult and long-term goals and make efforts to achieve them (Snyder, 2002).

The research results revealed that the capabilities of orderliness, diligence, reliability, and obedience significantly predicted impulsivity. In other words, it can be said that the low level of openness, reliability, and obedience and the high level of diligence of male adolescents play an important role in explaining their impulsivity.

Orderliness is explained in the context of positive psychotherapy as the individual's "always keeping and leaving their workplace/office/home organized," "going crazy if everything is in a mess", and "believing that a person always needs to look tidy" (Eryilmaz, 2020). The capability of orderliness is also evaluated as an extension of the personality trait of responsibility. At this point, the organized and disorganized aspects of people, both in terms of orderliness and responsibility are evaluated as a common point (Roberts et al., 2009). Characteristics such as being planned, organized, and prepared are also included in the capability of orderliness. On the other hand, unplannedness, chaos, and disorder are not seen in individuals who use their organizational skills at a high level (Roberts et al., 2014). As can be seen, the characteristics that emerge as a result of low use of the capability of orderliness also reflect the characteristics of impulsive individuals. When the literature is examined, it is

seen that the low level of orderliness is related to impulsivity (Simms, 2007; Widiger, 2005). At this point, improving the capability of orderliness may contribute to reducing adolescents' impulsivity. Conducting studies that involve self-control can be helpful in this regard (Eryilmaz, 2018).

It has been found in the study that adolescents with high levels of reliability have less impulsive behavior. It is believed that developing reliability can be effective in controlling adolescents' impulsive behavior. Reliability is explained as individuals thinking and behaving in the context of positive psychotherapy as: "reliability is very important in business and society", "a person whom you cannot fully trust can never be your friend", and "I always keep my promises" (Eryilmaz, 2020). At this point, reliability is thought to create a control system for individuals. Studies show that a low level of reliability is associated with lack of empathy, disrespectful behavior, selfishness, and impulsivity (Gordon and Platek, 2009). Increasing the use of reliability to reduce adolescents' impulsivity levels appears to be important. In this context, empathy, respect, selflessness, and self-control exercises are critical (Eryilmaz, 2020).

The study found that individuals with high levels of impulsivity tend to use their capability of obedience less frequently. This suggests that developing obedience could be an effective strategy for reducing impulsivity among adolescents. Obedience refers to changes in behavior or beliefs that occur as a result of real or imagined pressure from a group. It involves not only behaving like others, but also being influenced by their behavior (Eryilmaz, 2020). Low or high use of obedience can have negative effects on individuals' lives. However, the study results suggest that increasing compliant behavior can reduce impulsivity. An examination of the relevant literature clearly shows that there is a significant relationship between a low level of obedience and antisocial and impulsive behavior (Coid and Ullrich, 2010). Therefore, Eryilmaz (2020) suggests that individuals who are less obedient frequently tend to have active impulsive systems. It is important to activate the control system in individuals in order to increase the use of obedience. Goals should be set to increase individuals' use of obedience, standards should be established, and principles should be

created. These strategies can contribute to reducing impulsive behavior.

The latest finding from the research indicates that a high level of the capability of diligence (persistence) increases impulsive behavior. This finding is quite interesting. The reason for this finding may be that the teenagers in the study group who attend vocational high school, which does not require a relatively high level of success and comprehension, have a high level of success. Studies have shown that academically successful students have high levels of self-control (Hong et al., 2009; Souvignier and Mokhlesgerami, 2006). At this point, this finding of the study differs from the literature. This is because this research was conducted in a vocational high school where the majority of students have medium to low achievement levels. Therefore, successful students easily achieve success. Examination of the relevant literature shows that individuals may experience a feeling of boredom when dealing with tasks or activities that are below their skill level (Csikszentmihalyi, 1997). The increase in impulsivity of the teenagers participating in the study as their diligence increases can be evaluated in this direction.

In addition, diligence can have a negative impact on behavioral control mechanisms, especially for vocational high school students. It is also thought that as the diligence of teenagers studying in vocational high schools increase, they may exhibit a tendency towards impulsive behavior by feeling stronger. This situation may also be due to the school system. Since the number of successful students in vocational high schools is low, their negative behaviors are generally tolerated and often ignored. This situation may also increase the tendency towards impulsive behavior.

## Conclusions

Based on the findings obtained from this research, it is considered important to increase the abilities of hope, orderliness, reliability, and obedience to control impulsive behavior in male teenagers with high levels of impulsivity, while controlling their capability to achieve success through undesirable behaviors. In this regard, psychotherapists can support teenagers who exhibit impulsive behavior by activating their control system, organizing their learning experiences, setting goals, establishing standards, creating principles, and regulating

their emotions through self-control and self-regulation.

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