Examining the Relationship among Internet Parental Style, Personality, and Cyberbullying/Victimization

Mehmet Ali Padır iD
Bayburt University, Turkey

Tuncay Ayas iD
Sakarya University, Turkey

Mehmet Barış Horzum iD
Sakarya University, Turkey

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Mehmet Ali Padır, Tuncay Ayas, Mehmet Barış Horzum

Article Info	Abstract
	The aim of this study is to examine the effect of internet parental style on cyberbullying and cyber victimization of high school students and the relationship between big five personality traits, cyber bullying and cyber victimization. In accordance with this aim, 467 students studying in various high schools in Sakarya in autumn semester of 2014-2015 education year were selected as sample. 244 (52.1%) of the students are males, 223 (47.8%) of them are females. Cyber Bully/Victim Questionnaire, Internet Parental Style Scale and Big Five Personality Inventory were used as data collecting instruments in the research. In the research cyber bullying and cyber victimization were selected as dependent variables, big five personality traits (extraversion, agreeableness, conscientiousness, neuroticism and openness), internet parental style (parental control and parental warmth), gender and age variables were considered as predictive variables. To examining these relationships regression analysis was conducted. As a result of regression analysis agreeableness, parental control and gender were found as the predictors of cyber bullying. Second result of regression analysis showed that, gender and parental control were found as predictors of cyber victimization. The findings were discussed in the light of related literature.

Introduction

Information and communication technology which makes it easier to access to information, eliminates the obligation to communicate face-to-face in expressing emotions and thoughts, relieves the communication of being in the same place, influences almost all areas of the life and makes life easier, therefore, becoming an indispensable part of life and have been developing rapidly. In addition to the benefits it brings in this development process, there are undoubtedly some negativities. One of these negativities is cyberbullying which emerges as a result of transfer of peer bullying in schools to the cyber world in parallel to the technological developments (Erdur-Baker and Kavşut, 2007). With the widespread use of internet, it is seen that traditional bullying has been carried to the virtual realm and its harm has reached more serious levels (Türkoğlu, 2013).

The cyberbullying that emerged as a result of negative experiences with the use of technological tools to harm others, has begun to attract the attention of many local and foreign researchers, as it has become more and more

common among adolescents and many definitions of it has been made. For example, Belsey (2006) defines cyberbullying as "intentional, repetitive hostile behaviors done by a person or a group using information and communication technology with the aim to hurt others". Patchin and Hinduja (2006) defines cyberbullying as using electronic devices to hurt others in an intentional and repetitive way. Arıcak (2011) defines cyberbullying "as all the technical and relational harming behaviors against an individual or a group, a private person or a legal entity using information and communication technologies". Although there is no standard definition of cyberbullying which becomes more and more popular especially among adolescents, when definitions are examined, it stands out that these are definitions which consists of constituents that cyberbullying behavior exhibited via information and communication technologies is intentional and that it hurts the victim exposed to such behavior.

It can be stated that one of the most important factors in occurrence of cyberbullying is the attitudes of parents for the usage internet and other technological devices. One dimension of these attitudes is parental control dimension which ranging between over-controlling the use of internet and other technological devices and other behaviors of their children to establishing almost no rules for their behaviors, in other words behaving permissively and indifferently. The other dimension is parental warmth dimension which ranging between a sensitive and supportive attitude for the behaviors and needs of their children to an insensitive and rejecting attitude for the behaviors and needs of their children.

Parental control is a rating for directing the behaviors of their children which ranges between controlling children's behaviors in all aspects to establishing a few rules and making few demands for children's behaviors. Parental warmth expresses a level of parents' accepting the behaviors of their children and a rating between being sensitive to being insensitive and rejecting for children's behaviors. When combined in various ways, these two aspects of parental behaviors give 4 main parental styles (Kopko, 2007). These are;

> *Authoritative parents.* In this parental style, there is high warmth as well as high control condition to the child. The parents adopting this parental style encourage their children to control their own actions and determine their own boundaries (Kopko, 2007).
>
> *Permissive Parents.* In this parental style, there is high warmth as well as low control condition to the child. The parents adopting permissive parental style try to behave in a non-punitive, accepting and positive way for the impulses, desires and actions of their children (Baumring, 1971; Kopko, 2007).
>
> *Authoritarian Parents.* In this parental style, there is low warmth as well as high control condition to the child. In authoritarian parental style, parents exhibit a strict attitude; no explanation is made to the children (Kopko, 2007; Yıldız, 2004).
>
> *Uninvolved Parents.* In this parental style, there are low warmth and low control. Uninvolved parents behave indifferently to the needs, whereabouts and the experiences of their children in school and with their friends (Kopko, 2007).

Parents can play a central role in changing the false behaviors of their children. Parent-child relationship, parent information and awareness for cyberbullying have an important role in occurring, maintaining and preventing cyberbullying. Because informed parents with high level of awareness can minimize the possibility of

cyberbullying (Strom and Strom, 2005). Ybarra and Mitchell (2004) determined that cyberbullies and cyber victims had lower emotional bonds with their families and lower parental control compared to those not involved in such behaviors. In a study conducted by Taiariol (2010), it was founded that parental monitoring was the predictor of cyberbullying and victimization. As a result, by the conducted studies it has been determined that parent internet styles were related to both cyberbullying and victimization (Makri-Botsari & Karagianni, 2014). Since it is thought that personality may have a psychological effect on the purpose of using information and communication technologies and how to interact with information and communication technologies, the relationship between five factors (big five) personality traits and cyberbullying is also examined. The five-factor personality model (the big five) is an assessment tool that most extensively describes personality, consisting of five dimensions (extraversion, agreeableness, conscientiousness, neuroticism and openness) (Goldberg, 1990; McCrae & Costa, 2008; Servidio, 2014).

In literature review, it determined that there are hardly any studies which address the relationship between cyberbullying and big five personality traits. In a study performed by Connolly and O'Moore (2003), it was determined that the scores in dimensions of psychoticism, neuroticism (emotional instability) and extroversion of cyberbully group were higher than those in non-cyberbully group. In a study conducted by Corcoran, Connollyb and O'Moore (2012) where participants were categorized traditionally and in terms of cyberbullying as bully, victim, bully-victim, and non-involved in any way, it was found that there was no statistically significant relationship between level of extroversion and all bullying categories. In a study performed by Çelik, Atak and Erguzen (2012), it was determined that the highest predictor of being a cybervictim was neuroticism and there was a positive relationship between being a cybervictim and neuroticism. Based on findings of his study, Eroğlu (2014) stated that extraversion was a risk factor for cyberbullying and openness experience protected the adolescents from cyberbullying.

When studies on cyberbullying are reviewed, it stands out that studies are mostly concentrated on prevalence, results and various variables (gender, age, grades, educational status of the family, etc.) of cyberbullying. However, literature review did not reveal any study directly addressing the relationship between personality traits and internet parental styles, and cyberbullying and cyber victimization. Therefore, this study aims to examine the effect of internet parental style on high school students' being cyberbully and cyber victims and the relationship between big five personality traits, cyberbullying and cyber victimization.

Method

Model

The current study was conducted based on correlational research design which provides opportunity to exploring relationships between two or more variables.

Participants

The study was conducted with 548 students studying in high schools in Sakarya in 2014-2015 autumn semester.

Convenience sampling method was used in the study. It was determined that 81 students participating in the study did not answer some questions and some gave extreme answers; therefore, they were excluded. For this reason, procedures of this study were performed over the data of 467 students. 244 (52.2%) of the students were males and 223 (47.8%) of them were females.

Data Collecting Tools

The data in the study were collected using Internet Parental Style Scale, Cyberbully/Cyber Victim Scale and Big Five Personality Inventory.

Internet Parental Style Scale

Internet parental style scale which is used in the study was developed by Rooij and van den Eijden and the original of the scale is Dutch. The scale was then adapted to English by Valcke, Bonte, De Wever and Rots (2010). This scale which was adapted to English was adapted to Turkish by Ayas and Horzum (2013). Internet Parental Style Scale consists of 5-Point Likert scale rating. The options are "I Completely Agree (5), I Agree (4), I am Indecisive (3), I Don't Agree (2) and I Completely Don't Agree (1)". The scale consists of 25 items under two factors. The first factor "Parental Control" has 11 items and second factor "Parental Warmth" has 14 items. As a result of confirmatory factor analysis by Horzum and Ayas (2013), $\chi2= 485.76$ (sd=253, p.= .00), $\chi2$ / sd= 1.92 RMSEA= 0.048, GFI= 0.91, AGFI= 0.89, CFI= 0.99, NFI=0.97 and NNFI= 0.98. Cronbach's Alpha internal consistency coefficient was found as .94 for the adapted 25-item scale. Cronbach's alpha internal consistency coefficient was found .86 for "Parental Control" factor and .92 for "Parental Warmth" factor (Ayas & Horzum, 2013).

In the scale, a score between 1 and 5 is obtained for the items in parental control and warmth dimensions for each participant. For these scores, those under 3 are evaluated as low and others as high. Therefore, there is a 2x2 structure consisting of low/high parental control and low/high parental warmth. High parental control and warmth comprise authoritative parental style for internet use; low parental control and high parental warmth comprise permissive parental style for internet use; high parental control and low parental warmth comprise authoritarian parental style for internet use and low parental control and warmth comprise uninvolved parental style for internet use.

Cyber Bully/Victim Questionnaire

"Cyber Bully/Victim Questionnaire" developed by Ayas and Horzum (2010) was used to individually determine the "bully" and the "victim" in the study. Since Cyber Bully/Victim Scale was developed for elementary school students, validity and reliability studies were re-performed for secondary school students by Horzum and Ayas (2014). It was determined that the both cyberbullying and cyber victim form of the scale which composed of 17 items and 3 sub-dimensions after excluding two items from the original scale under the study by Horzum and Ayas (2014) produced valid and reliable results in secondary school students. Padır, Eroğlu and Çalışkan (2015)

re-performed the validity and reliability analysis of Cyber Bully/Victim Scale in secondary school students to be used in their current research and for the future studies. Goodness of fit indexes obtained from two-level confirmatory factor analysis indicated that the structure consisting of 17 items and 3 sub-dimensions gave an acceptable level of fit for both cyberbullying ($\chi 2/sd=2.28$, RMSEA=.069, NNFI=.87, CFI=.91, GFI=.91, SRMR=.078) and cyber victim ($\chi 2/sd=2.34$, RMSEA=.070, NNFI=.95, CFI=.95, GFI=.90, SRMR=.064) forms. Internal consistency coefficients were found as .74 for cyberbullying form and .87 for cyber victim form. Cyber Bully/ Victim Scale is a 5-Point Likert scale. The lowest score which can be obtained is 17 and highest one is 85. As scores increase, the status of being a bully and a victim increases, too.

Big Five Personality Inventory

Short version of ten items of big five personality scale developed by Rammstedt and John (2007) and adapted into Turkish by Horzum, Ayas, and Padır (2017) which consists of five sub-dimensions (Extroversion, Agreeableness, Conscientiousness, Neuroticism (opposite of emotional stability) and Openness to experience) and which included two items for each sub-dimension was used to determine the personality traits. Results of confirmatory factor analysis indicated that the model gave good fit ($x^2= 278.43$, sd= 25, $x^2/sd=1,8$, RMSEA=.062, GFI=.96, AGFI=.91, CFI=.98, NFI=.97, RFI=.94 IFI= . 98, RMR= .035). Internal consistency reliability coefficients of the scale were found as .88 for extroversion subscale, .81 for agreeableness, .89 for conscientiousness, .85 for neuroticism (emotional stability) and .84 for openness. Internal consistency reliability values above .70 show that scale's reliability values are high; in other words, it produces consistent data.

The loading values of the items in the Turkish form of the scale varied between .71 and .95. Big five personality scale of ten items has 5-point Likert rating and items 1, 2, 3, 4, and 5 in the scale are reversely scored (reverse items). When scoring the scale, no total score is obtained but total score is calculated for each subscale. Considering the scores obtained in each subscale, personality trait of the subscale for which the individual has the highest score is accepted as the main personality trait of that individual.

Analysis of Data

Regression analysis was performed where cyberbullying and cyber victimization data are considered as dependent variables and big five personality traits (extroversion, agreeableness, conscientiousness, neuroticism and openness to experience), internet parental style (parental control and parental warmth), gender and age variables as predictive variables. The data were analyzed with SPSS 20.0, and the significance level was accepted as *.05*.

Findings

The results of regression analysis where cyberbullying and cyber victimization are dependent variables and five factor personality traits, internet parental style, gender and age variables are predictive variables are given in Table 1 and Table 2.

Table 1. The Results of Regression Analysis for Cyberbullying

	B	S.H.	β	t	p	Dual r	Partial r
Constant	27.780	5.892		4.715	.000		
Parental Control	-.205	.050	-.209	-4.089	.000	-.189	-.188
Parental Warmth	.043	.030	.075	1.433	.152	-.068	.067
Extroversion	.189	.188	.047	1.001	.317	.043	.047
Agreeableness	-.671	.220	-.142	-3.046	.002	-.143	-.141
Conscientiousness	.134	.222	.030	.604	.546	.036	.028
Neuroticism	.148	.194	.036	.765	.445	-.022	.036
Openness	-.100	.193	-.024	-.516	.606	-.026	-.024
Gender	-3.245	.745	-.204	-4.357	.000	-.198	-.200
Age	.274	.300	.042	.914	.361	.064	.043

R=.318,   R²=.101,

$F_{9,457}$=5,697   p=.00

When Table 1 is examined, there is a negative and low relationship between cyberbullying and parental control (r=.-189), and after controlling the effect of other variables, the partial correlation between two variables is negative and low (r=.-188). It is determined that there is a negative and low relationship between cyberbullying and agreeableness personality trait (r=.-143), and after controlling the effect of other variables, the partial correlation between two variables is negative and low (r=.-141). There is a negative and low relationship between cyberbullying and gender (being male), and after controlling the effect of other variables, the partial correlation between two variables is calculated as negative and low (r= .-200).

When gender, age, parental control, parental warmth, extroversion, agreeableness, conscientiousness, neuroticism and openness variables are considered together, there is a positive and medium-level significant relationship with cyberbullying (R=.318, p<.001). The all variables together explain 10% of the variance in scores of cyberbullying. When the results of t-test regarding the significance of the regression coefficients are examined, it is seen that parental control, agreeableness and gender are significant predictors of cyberbullying.

The findings in Table 1 indicate that cyberbullying increases as agreeableness decreases. In other words, individuals with low scores in this personality trait dimension are more inclined to become a cyberbully and individuals with high scores in this dimension (more agreeable) are less inclined to become a cyberbully. The findings of current study also demonstrated that there is no significant relationship between cyberbullying and other personality traits.

Another finding indicates that as parental control decreases, cyberbullying increases. In other words, individuals with low scores in this dimension (less parental control) are more inclined to become a cyberbully; individuals with high scores (less parental control) are less inclined to become a cyberbully. It can be said that parental control acts as a protector against being a cyberbully. In terms of gender, negative relationship indicates that males become cyberbullies more than females.

Table 2. The Results of Regression Analysis for Cyber Victimization

	B	S.H.	β	t	p	Dual r	Partial r
Constant	23.234	5.132		4.527	.000		
Parental Control	-.104	.044	-.124	-2.384	.018	-.093	-.111
Parental Warmth	.045	.026	.091	1.701	.090	-.011	.079
Extroversion	.183	.164	.054	1.116	.265	.041	.052
Agreeableness	-.309	.192	-.077	-1.612	.108	-.082	-.075
Conscientiousness	.149	.194	.039	.772	.441	.046	.036
Neuroticism	.268	.169	.077	1.588	.113	.019	.074
Openness	-.220	.168	-.062	-1.310	.191	-.053	-.061
Gender	-2.726	.649	-.201	-4.203	.000	-.181	-.193
Age	.252	.261	.045	.963	.336	.049	.045

R=.254,   R²=.064,

$F_{9,457}=3,488$ p=.00

When Table 2 is examined, there is a negative and low relationship between cyber victimization and parental control (r= .-093), and after controlling the effect of other variables, the partial correlation level between two variables is calculated as negative and low (r= .-111). There is a negative and low relationship between cyber victimization and gender (being male) (r=.-181), and after controlling the effect of other variables, the partial correlation between two variables is calculated as negative and low (r=.-193).

When the effects of gender, age, parental control, parental warmth, extroversion, agreeableness, conscientiousness, neuroticism and openness variables are considered together, there is a positive and medium significant relationship with cyber victimization (R=.254, p<.001). The all variables together explain the .06% of the variance in cyber victimization. When the results of t-test on significance of regression coefficients are examined, it is seen that parental control and gender variables are significant predictors of cyber victimization.

The findings in Table 2 indicate that cyber victimization decreases as parental control increases. In other words, individuals with low scores in this dimension are more inclined to become a cyber-victim while those with high scores are less inclined to become a cyber-victim. Parental control acts as a protector against being a cyber-victim. In terms of gender, negative relationship indicates that males become cyber victims more than females. It is also among the findings of the study that there is a positive strong relationship between cyberbullying and cyber victimization, r=.62, p<.05. The relationship between cyberbullying and cyber victimization suggests that cyberbully individuals are highly likely to become a cyber-victim at the same time.

Discussion and Conclusion

In this study, it is indicated that parental control is a significant predictor for both cyberbullying and cyber victimization. This finding indicates that decreasing parental control increases both cyberbullying and cyber victimization. Based on this finding, it can be said that adolescents who are not monitored adequately by their

parents, have no monitoring software on their computers, or whose internet history is not controlled and who use technological devices in a free, unlimited and uncontrolled way may misuse such devices to hurt other people. In another word, adolescents who tend to see themselves in the center of the world in puberty may easily cyberbully others and be the victim of cyberbullying in a virtual world with no limitation as they get the opportunity due to low parental control.

There are supporting study findings for current study. In a study conducted by Ybarra and Mitchell (2004), they found that weak parent-child emotional attachment and low parent monitoring (low parental control) were related with the increase of cyberbullying. According to their findings, after controlling the effect of other demographic variables (age, race, financial income..., etc.), participants who are determined to have low emotional attachments with their parents are two times more inclined to be included in cyberbullying compared to those with strong emotional attachments with their parents.

In addition, individuals with low parental monitoring (parental control) are 54% more inclined to cyberbullying when compared to individuals with normal or high parental monitoring (Ybarra and Mitchell, 2004). Consistently with the findings of current study, Taiariol (2010) determined that parental monitoring (control) was the predictor of both cyberbullying and cyber victimization and also parental warmth was the predictor of cyberbullying. In Feldman's study (2011), it was determined that among individuals categorized as cyber bullies, cyber victims, cyberbullies/cybervictims who has low parental control and low authoritative parental applications are cyberbullies. In Georgiou and Stavrinides's (2013) study that children's being monitored (controlled) by their mother was negatively related with being a bully, but there was no significant relationship with being a victim contrary to the findings of this study. Based on these findings, parental control can be said to have important effects on being both a cyberbully and being a cybervictim. Based on findings of current study, it should be noted that parental control acts as a protector factor against being both a cyberbully and a cybervictim.

Personality trait also thought to be related cyberbullying, but findings of current study indicated that only agreeableness among other five factor personality traits is the predictor of being a cyberbully. According to this findings, as agreeableness decreases, cyberbullying increases. In the literature review, there are no study findings which suggest that agreeableness personality trait is a predictor of being a cyberbully. Considering the facts that agreeableness is a significant predictor of being a cyberbully and it has a negative relationship with cyberbullying, this finding can be the result from that less agreeable people's being less friendly, less sympathetic, less inclined to cooperation, and more controversial in human relations. Since less agreeable people who cannot get the satisfaction they desire in face-to-face human relationships can be more motivated to use communication and information technologies due to the fact that virtual environments offer them more comfortable environments, this situation may have affected the fact that they become cyberbullies to others.

Findings of the current study also demonstrated that personality traits were not predictors of being a cybervictim, and therefore, there was no significant relationship between personality traits and being a cybervictim. Consistent with the findings of this study, it was determined in a research using Eysenck

personality questionnaire that there was no significant relationship between being a cyberbully or a cybervictim and neuroticism and extroversion (Özden ve İçellioğlu, 2014). Different from the findings of this research, Çelik, Atak and Erguzen, (2012) found that being cyber victim was positively correlated to having neuroticism, agreeableness and extroversion personality traits and negatively correlated with conscientiousness.

It was also determined that the most powerful predictor of being a cybervictim was neuroticism and the weakest predictor was openness personality trait. The results show differences considering the findings of current study and other conducted the studies. The reason may be the fact that there are not adequate studies which address the relationship between cyberbullying and personality traits. In addition, these studies were conducted with different sample groups (etc. different developmental characteristics) may be effective in getting different results. As a results these different findings makes it difficult to come to general conclusions.

When the role of gender examined, it was determined that males were more cyberbully than girls. This finding is consistent with findings of other studies in the literature (Agatston, Kowalski and Limber 2007; Arıcak et al., 2008; Arslan et al., 2012; Ayas and Horzum, 2012; Ayas and Horzum, 2011; Burnukara and Uçanok, 2012; Dehue et al., 2008; Dilmaç, 2009; Erdur-Baker and Kavşut, 2007; Feldman, 2011; Lapidot-Lefler and Dolev-Cohen, 2014; Makri-Botsari and Karagianni, 2014; Özbay, 2013; Özdemir and Akar, 2011; Peker, Eroğlu and Ada, 2012; Taıarıol, 2010). However, there are some study findings which suggest that females are more cyberbully than males (Kowalski et al., 2005; Smith et al., 2006; Topçu et al., 2008).

As a result of this study, it was also determined that males became more cybervictims compared to the females in terms of gender. This finding is consistent with the findings of conducted studies (Arıcak et al., 2008; Ayas and Horzum, 2012; Ayas and Horzum, 2011; Erdur-Baker and Kavşut, 2007; Makri-Botsari and Karagianni, 2014; Wolak, Mitchell and Finkelhor, 2002). However, there are studies which found out that girls became more cyber victims (Akbaba and Eroğlu, 2013; Ayas, 2014; Dehue et al., 2008; Dilmaç, 2009; Feldman, 2011; Kowalski et al., 2005; Lenhart, 2007b; Smith et al., 2006; Taıarıol, 2010; Ybarra and Mitchell, 2007). In addition to these findings, there are also some studies findings which suggest that cyberbullying and cyber victimization does not show difference in terms of gender (Çivilidağ and Cooper, 2013; DePaolis and Williford, 2014; Hinduja and Patchin, 2008; Juvonen and Gross, 2008; Li, 2006; Kapatzia and Sygkollitou, 2007; Slonje and Smith, 2008; Smith et al., 2008; Spears et al., 2015) and that only cyber victimization show difference in terms of gender (Burnukara and Uçanok, 2013; Özbay, 2013; Özdemir and Akar, 2011; Peker, Eroğlu and Ada, 2012).

Based on findings of current study and overwhelming other studies, Horzum (2011) stated that the reason why males become more cyberbully and cybervictim is that the internet connection at homes in developing countries such as Turkey is not so common and males connect internet from cafes and females cannot get this chance as much as males do; and therefore, males can be more cyberbullies and become cybervictims than the females do. Despite of internet's becoming more and more common at homes in time, it can be said that girls do not perform such negative behaviors such as cyberbullying, because girls use internet mostly at home and under the supervision of their families and parents have a protective attitude towards their daughters.

According to the findings of this study, cyberbullying and cyber victimization do not differ according to age. This finding is consistent with findings of some of other studies (Baren and Li, 2005; Çivilidağ and Cooper, 2013; Erdur-Baker and Kavşut, 2007; Feldman, 2011; Kapatzia and Sygkollitou, 2007; Özdemir and Akar, 2011; Slonje and Smith, 2008; Smith et al., 2006). Related to age Compell (2005) stated that the ability to use technological devices such as computer increases with age and this affects cyberbullying. However, students have already developed their ability to use technological devices and younger ages now are able to access to and own computer and other technological devices. Therefore, the reason why cyberbullying does not differ according to age as findings of the study showed is that almost all students have a mobile phone and almost all of them have internet connection at home and that the study was conducted on a more homogeneous group in terms of age and this age group showed similar developmental characteristics.

Recommendations

As a result of the study, it is found out that parental control and gender are significant variables for cyberbullying and cyber victimization. It should be noted that parents' monitoring technology uses of their children and their positive attitudes towards their children will have an important effect in minimizing the cyberbullying cases. In addition, it can be recommended for the further studies to inform the families about technology uses of their children and determine the changes which may be experienced in these behaviors. In the current study, the internet parental styles of the families are the ones that are perceived by their children. In the further studies, some studies can be conducted in which the families report their own styles and also the styles perceived by their children and reported by the families may be compared. Convenience sampling method was used in the selection of the participants in study. In the future studies, students can be selected by stratified sampling from school types and classes.

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Author Information

Mehmet Ali Padır

https://orcid.org/0000-0002-4192-4360

Bayburt University

Bayburt

Turkey

Contact e-mail: *mali.pad1r@gmail.com*

Tuncay Ayas

https://orcid.org/0000-0003-2613-5643

Sakarya University

Sakarya

Turkey

Mehmet Barış Horzum

https://orcid.org/0000-0003-3567-0779

Sakarya University

Sakarya

Turkey