

# Understanding Schadenfreude through Personality Factors and Relational Aggression

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## Abstract

The purpose of this study was to explain the mediator role of relational aggression between schadenfreude and personality traits through the path model. Dark traits, agreeableness and hostility as personality factors are thought to be related to relational aggression according to General Aggression Model. Thus, the model was proposed by the author which included direct and indirect effects of personality factors on relational aggression and schadenfreude. 306 adults completed an online survey comprising dark triad, Proactive/Reactive Relational Aggression, agreeableness, and hostility scales and author-generated measure of expressed schadenfreude. Path analysis revealed that schadenfreude was predicted by only reactive but not with proactive relational aggression. Moreover, schadenfreude was predicted by the dark triad indirectly through reactive relational aggression. The dark triad was also predicted by agreeableness and hostility. Although reactive and proactive relational aggression were predicted by agreeableness and hostility, only reactive aggression had a mediator role between personality traits (agreeableness, dark triad, hostility) and schadenfreude. Findings and implications for the future research were discussed. Limitations of the current study were also mentioned.

**Keywords:** Dark triad; Relational aggression; Proactive aggression; Reactive aggression; Schadenfreude.

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## Zararına Sevinmenin Kişilik Faktörleri ve İlişkisel Saldırganlık Bakımından İncelenmesi

### Öz

Bu çalışmanın amacı, yol modeli aracılığıyla zararına sevinme ve kişilik özellikleri arasındaki ilişkide, ilişkisel saldırganlığın aracı rolünü açıklamaktır. Genel Saldırganlık Modeli'nden hareketle, bu çalışmada kişilik faktörleri olarak ele alınan karanlık üçlü, uyumluluk ve düşmanlığın ilişkisel saldırganlıkla ilişkili olduğu düşünülmektedir. Buradan yola çıkarak, kişilik faktörlerinin ve ilişkisel saldırganlığın zararına sevinme üzerindeki doğrudan ve dolaylı etkilerini içeren bir model önerilmiştir. 306 yetişkin; karanlık üçlü, Proaktif/Reaktif İlişkisel Saldırganlık Ölçeği, uyumluluk ve düşmanlık ölçeklerini ve araştırmacı tarafından oluşturulan zararına sevinme duygusunu ölçen senaryo ve ona ilişkin soruları çevrimiçi olarak tamamlamıştır. Yol analizi, yalnızca tepkisel ilişkisel saldırganlığın, zararına sevinmeyi doğrudan yordadığını ortaya koymuştur. Bunun yanında, karanlık üçlü, reaktif ilişkisel saldırganlık yoluyla dolaylı olarak zararına sevinme duygusunu açıklamıştır. Uyumluluk ve düşmanlık, karanlık üçlüyü doğrudan açıklarken, tepkisel ve amaca yönelik ilişkisel saldırganlığı karanlık üçlü yoluyla dolaylı olarak açıklamıştır. Tepkisel ve amaca yönelik ilişkisel saldırganlık, uyumluluk ve düşmanlık kişilik özellikleri bakımından anlamlı düzeyde yordandırken, kişilik özellikleri (uyumluluk, karanlık üçlü, düşmanlık) ve zararına sevinme arasında yalnızca tepkisel ilişkisel saldırganlığın aracı rolü bulunmuştur. Çalışmanın bulguları ve uygulama açısından görüşler, gelecekteki araştırmalar için paylaşılmıştır. Bunun yanında çalışmanın sınırlılıkları da belirtilmiştir.

**Anahtar Kelimeler:** Karanlık üçlü; İlişkisel saldırganlık; Tepkisel saldırganlık; Amaca yönelik saldırganlık; Zararına sevinme.

### Introduction

In his “Essays” Montaigne (2006) states that sometimes human beings feel joyful towards the misfortune of the other. In his own words “*We feel a kind of bittersweet pricking of malicious delight in contemplating the misfortunes of others*” (p.34). This malicious joy is expressed as “schadenfreude” (Feather, Wenzel and McKee, 2013). “Schadenfreude” is a German word that cannot be expressed in a single word in most languages, including Turkish and English. German “schaden” means pain, “freude” means pleasure. (Van Dijk and Ouwerkerk, 2014). The combination of these two words is translated as “rejoicing at someone else’s failure or even enjoying their pain”.

Van Dijk and Ouwerkerk (2014) stated that the word *schadenfreude* may have been derived from the Greek word “*epikhairekakia*”. In his book *Ethics to Nicomachus* (1108b/1-10), Aristotle explains “indignation” as a feeling that stands in the middle of jealousy and envy. He defined indignation as feeling pain in the face of those who are unjustly in good condition, jealousy, feeling pain in the face of everyone who is in good condition, and envy as being happy for someone else's pain. In the *Nicomachean Ethics* book, the word “*epikhairekakia*” was translated into Turkish as “envy” (Aristoteles, 2009). But envy is thought to be not able to fully comprise the feelings of *schadenfreude*, which is rejoicing at someone else's detriment; because envy may be one of the reasons for this feeling, and the experience of this feeling may not be due to envy. Schopenhauer (1841/2014) was also interested in this feeling and described *schadenfreude* as “*a treacherous pleasure from misfortunes that may happen to others*” (p.22). Besides philosophical works, this feeling also has been subject to psychological studies in recent years. A number of studies examined *schadenfreude* in terms of dark triad (DT) personality (Paulhus and Williams, 2002), antisocial behaviors (Kerig and Stellwagen, 2010; Lau, and Marsee, 2013), criminal activities (Jakobwitz and Egan, 2006). Although *schadenfreude* is somehow different from these harmful acts, it can be regarded as the consequence in terms of dark triad personality (Erzi, 2020b).

Dark triad personality includes machiavellianism, narcissism and psychopathy. This concept was first used by Paulhus and Williams (2002). The common sides of these three personality traits are selfishness, interest-oriented human relations, directing those around them in line with interests. Narcissism is characterized by an exaggeration of one's own qualities, the tendency to establish authority over others, the desire to gain power, and selfishness. Machiavellianism is defined by features such as maximizing personal interests, willingness to rule people. Psychopathy is characterized by characteristics such as a tendency to act immoral, not feeling guilty, not feeling responsible, acting impulsively, and acting aggressively and antisocial (Özsoy and Ardiç, 2017)

As mentioned before, it is thought that dark triad personality traits are related to *schadenfreude*, because these personality traits include orientation in interpersonal relationships, disharmony and self-promotion. In the face of someone else's misfortune, individuals can often feel empathy or sympathy,

but sometimes they do not. Findings show that the dark sides of the personality are also negatively related to empathy (Porter, Bhanwer, Woodworth and Black, 2014). Psychopathy and machiavellianism were found to be negatively related to empathy (Jonason and Kroll, 2015) and narcissism to empathy (Giammarco and Vernon, 2014). Dark triad personality traits are also related with relational aggression (Bacon and Regan, 2016; Knight, Dahlen, Bullock-Yowell and Madson, 2018). Relational aggression is generally examined as the consequences of personality factors, some of the studies found that RA mediates the relationship between personality factors and attachment (Eliason, 2017) and schadenfreude (Erzi, 2020a). Another study also found that the use of relational tactics is related to competition and social comparison (Abell and Brewer, 2014). In accordingly, relational aggression may be considered as not only the consequence of the dark triad but also it can be a facilitator for the emergence of schadenfreude.

Relational aggression is defined by Crick and Grotpeter (1995) as damaging social relations by exclusion or gossiping. In relational aggression, people tend to behave in aggressive ways by damaging social relationships, they can use passive tactics like gossiping, or more active tactics like excluding people from their belonging social group. Relational aggression can be also divided into two forms according to its function. According to Dodge et al. (1997), the function of relational aggression is divided into dimensions as proactive and reactive relational aggression. Reactive relational aggression generally comprises interpretation of the cues during the situation. According to Crick and Dodge (1996), reactive aggression is generally related to hostile attributional biases. Individuals who have the tendency to make hostile attributions, are likely to think that the action which affects them negatively is intentional rather than accidental. However, proactive relational aggression is somehow different from the reactive one. Proactive aggressors are satisfied with the consequences with their aggressive acts. Individuals who perform these kind of acts want to have control over their environment (Crick and Dodge, 1996; Dodge and Coie, 1987). According to Poulin and Boivin (2000a), reactive aggression can be considered as a hot form of aggression because it includes impulsivity, lack of control. People who behave in a reactive aggressive way tend to react to the situation quickly because they have the tendency to make hostile attributions as soon as the event occurs. On the other hand, proactive aggression can be defined as a calculated and cold function of aggression (Poulin and Boivin, 2000b). Individuals who

behave in this kind of way tend to more patient and do not take action as soon as the event occur. Moreover, proactive aggressors actually may not need to give a reaction or they do not need an excuse, they just want to behave in an aggressive way.

As mentioned above, individuals who have the tendency to behave in reactive aggressive ways show both high frustration and a tendency to make hostile intentions while proactive aggressors do not make hostile attributions but they perform aggressive acts in a more cold-blood manner. In accordingly, different personality factors are related to these different functions of aggression. As mentioned before, dark triad personality includes machiavellianism, narcissism and psychopathy. In accordingly, some of the studies found significant relations between different forms of dark triad personality and different functions of aggression. For instance, some of the studies found that psychopathy and machiavellianism were related to both reactive and proactive aggression (Barlett, 2016; Cale and Lilienfeld, 2006; Jonason, Duineveld and Middleton, 2015). However, Bobadilla, Wampler and Taylor (2012) found that narcissism is related to only reactive aggression. Accordingly, it seems important to answer which function of relational aggression would be predominantly predicted by the dark triad.

General Aggression Model suggests that personality traits are directly and indirectly associated with aggressive behaviors. According to Barlett and Anderson (2012) individuals who are characterized by certain personality factors are likely to behave in aggressive ways because they are likely to make hostile attributions, and this kind of social information processing makes them do so. Consistent with the General Aggression Model, some of these personality characteristics such as impulsivity and hostility were found to be related to relational aggression. Relational aggression was found to be related to impulsivity and hostility (Murray-Close et al., 2010). Callous unemotional traits which can be associated with the lack of empathy were also found to be related to the relational aggression (Kokkinos, Voulgaridou and Markos, 2016; Marsee, Silverthorn and Frick 2005).

Besides lack of empathy, individuals who perform relational aggression acts are thought to be not able to cooperate with others. According to Ojanen, Findley and Fuller (2012) these individuals behave in uncooperative ways. Also, researchers found that antagonistic and low agreeable individuals were found to have the tendency to make more hostile attributions and

perform aggressive acts (Jones, Miller and Lynam, 2011; Miller, Zeichner and Wilson, 2012) In contrast, individuals who have high agreeable personality more likely to resolve conflicts by negotiating while low agreeable individuals are using aggressive tactics (Jensen-Campbell et al., 2002).

Agreeableness also includes some traits such as warmth, empathy, compassion, gentleness, kindness, sympathy towards others (Olver and Mooradian, 2003). Besides, individuals who are low in terms of agreeableness tend to be more aggressive and ruder. Agreeableness contains both negative traits such as anger, irritability alienation, antagonism, willfulness and positive traits such as prosocial tendencies (Caspi and Shiner, 2006). In terms of positive traits, prosocial tendencies show the individual's helpful behavior. In terms of negative traits, willfulness is characterized by asserting one's own will over others through domineering behavior. People who show a high degree of willfulness tend to be manipulative and bossy (Halverson et al., 2003). Agreeableness also shows different tendencies between people in maintaining harmonious relationships. As mentioned before, individuals who are high agreeable use more negotiation tactics during the conflicts because they feel more distressed. In contrast, low agreeable individuals are more likely to use manipulation and power assertion which can be categorized as destructive tactics when they come across the personal conflicts (Jensen-Campbell et al., 2003). In similar vein, dark triad traits were also found to be negatively related to agreeableness (Jonason and McCain, 2012; Lee and Ashton, 2014; Vernon, Villani, Vickers and Harris 2008; Veselka, Schermer and Vernon, 2012). Besides the dark triad, a number of studies also showed that low agreeable individuals demonstrate more hostility towards others more easily (Whiteman et al., 2001). Moreover, Sanz, Garcia-Vera and Magan (2010) showed that hostility was found to be mainly associated negatively with agreeableness among the other Big Five personality traits. Hostility is generally considered as a cognitive personality trait. This personality trait includes relatively stable patterns of beliefs and destructive attitudes towards the other. Hostility trait is also related to the emergence of hostile attribution biases because it includes mistrust and suspicion which is characterized by the expectation that others cause harm or damage intentionally. According to Miller et al. (1996), hostility includes the desire to see or harm others' damage. Therefore, hostility can be considered a predisposition factor or facilitator in terms of aggression. As mentioned before, dark triad is also thought to share common traits with low agreeableness in terms of lack of

empathy, manipulation, willfulness (Jones and Figueredo, 2013). Therefore, it is expected that both agreeableness and hostility will predict the dark triad traits.

The purpose of the present study was to explain relationship between schadenfreude and reactive/proactive relational aggression with personality factors. Relational aggression may be considered as not only the consequence of the dark triad but also a predisposition factor for the emergence of schadenfreude feelings (Erzi, 2020a). This study also aimed to replicate the results of previous studies. Another aim of the current study is to understand whether different functions of reactive aggression (proactive and reactive) will differ in terms of schadenfreude. As mentioned before, dark triad traits are found to have a common ground with agreeableness in terms of antagonism (Furnham, Richards and Paulhus, 2013) Dinić and Wertag (2018) also showed that agreeableness was the most significant predictor of relational aggression. Moreover, Rauthmann and Kolar (2013) suggested that dark triad factors show unification in terms of being hostile and focusing on the self. Therefore, the main aim of the present study was to extend an understanding of these relations through the path model. More specifically, it is expected that agreeableness and hostility will be predictors of dark triad personality. Dark triad personality will also predict proactive and reactive relational aggression but only reactive relational aggression will predict schadenfreude, since reactive relational aggression includes more impulsivity, unplanned nature in comparison to proactive relational aggression (Poulin and Boivin, 2000a; Poulin and Boivin, 2000b). Proactive aggressors are thought to behave aggressively in a more cold-blood manner, but feelings of schadenfreude considered as a more impulsive and reactive. Therefore, it is expected that only reactive relational aggression will be a facilitator for the emergence of schadenfreude feelings while proactive aggression will be not. So, the hypotheses of the study as follows:

- H1. Dark triad personality traits will predict reactive and proactive relational aggression. As mentioned above, studies showed that dark triad personality traits are related to both functions of relational aggression (Bacon and Regan, 2016; Knight, et al. 2018).
- H2. Agreeableness and hostility will predict dark triad. As mentioned above, studies showed that these personality traits are related to dark triad (Jones and Figueredo, 2013; Miller et al., 1996).

- H3. Agreeableness and hostility will predict reactive and proactive relational aggression. As mentioned above, studies showed that these personality traits are related to relational aggression (Jones et al., 2011; Miller et al., 2012).
- H4. Dark triad personality traits will predict schadenfreude. As mentioned above, studies showed that the dark triad personality traits are related to schadenfreude (Abell and Brewer, 2014; James et al., 2014).
- H5. Reactive relational aggression will mediate the relationship between personality traits (the dark triad, agreeableness and hostility) and schadenfreude (Erzi, 2020a).

## Method

### Participants and Procedure

Men (N=55) and women (N=251) were recruited via a research website (N=27) and convenient sampled from undergraduate students (N=279). Men (Mage=22.21, SD=5.21) and women (Mage=21.67, SD=4.72) were aged 18-40 and 18-40 years respectively. Participants completed questionnaires voluntarily via online. At the beginning of the survey, informed consent was given. The students got course credit for their participation. All the participants answered all the questions. This study was approved by University Ethics Committee (decision number: 2020/04–07). Scientific and ethical rules were followed throughout the study. The author is responsible for the commitment to comply with these rules. The minimum number of participants required was determined by an a priori power analysis (GPower, Faul and Erdfelder 1992), with an Alpha=0.05, power=0.80 and small effect size ( $f^2=0.02$ ), the projected sample size needed for “Linear Multiple Regression Fixed Model:  $R^2$  increase” is approximately 296 for this analysis. So, total number 306 participants were included in the data analysis. Post hoc power analysis was performed with Alpha=0.05, with a small effect size ( $f^2=0.02$ ) and sample size of 306, power was revealed as 0.85, so it can be considered as adequate power.

### Measures

#### Dark Triad

Dark triad (DT) was measured by Dark Triad Dirty Dozen, a 12 item self-report measure of the dark triad with 4 items for per scale (Jonason and Webster, 2010). Participants were asked to indicate their level of agreement

(1=strongly disagree; 7=strongly agree). Total scale showed ( $\alpha=0.83$ ). Higher scores indicate higher dark traits.

### **Schadenfreude**

In the present study a scenario was used. Since majority of the sample was consisted of young adults, this scenario was thought to be relevant with their daily life. Also this scenario was used in previous studies (Erzi, 2020a; Nagel, 2010). The participants were asked to rate (1=strongly disagree; 7=strongly agree) to extent to which they were amused, happy, satisfied and pleased for each scenario. Responses showed good internal consistency (Social:  $\alpha=0.89$ ,  $M=8.57$ ,  $SD=3.44$ ). So higher scores indicate higher schadenfreude. As a manipulation check, sympathy towards the target was measured with 1 item by asking participants to rate the extent to how much they felt sorry ( $M=4.18$ ,  $SD=2.01$ ). Deservingness towards the target were measured with 1 item by asking participants to rate the extent which they thought the target get what he/she deserved; ( $M=3.79$ ,  $SD=1.77$ ).

### **Reactive/Proactive Relational Aggression**

Relational aggression was measured by SRASBM (Self-Report of Aggression and Social Behavior) (Morales and Crick, 1998). In the present study only reactive and proactive relational subscales were used. The participants were asked to indicate their level of agreement (1=strongly disagree; 7=strongly agree). Proactive and Reactive subscales showed adequate internal consistency respectively ( $\alpha=0.80$ ;  $\alpha=0.73$ ).

### **Agreeableness**

Agreeableness was measured by using a subscale of Big Five Factor Personality (John, Donahue and Kentle, 1992). The agreeableness subscale includes 9 items. Participants were asked to indicate their level of agreement (1=strongly disagree; 7=strongly agree). Agreeableness subscale showed adequate consistency ( $\alpha=0.65$ ).

### **Hostility**

Hostility was measured by using subscale of Buss and Perry (1992) Aggression Scale. The hostility subscale includes 8 items. The participants were asked to indicate their level of agreement (1=strongly disagree; 7=strongly agree). The hostility subscale showed a good consistency ( $\alpha=0.81$ ).

## Results

### Analysis Plan

Statistical analyses were made by using SPSS version 20.0. Gender differences was not hypothesized but the effect sizes in terms of gender were expressed as Cohen's *d* and descriptive statistics were reported in Table 1. Preliminary analyses revealed that no problems associated with normality. For the path analysis AMOS 23.0 was used.

**Table 1.** Descriptive Statistics

	Total			Female			Male			<i>t</i> test (gender)	<i>d</i>
	N	M	SD	N	M	SD	N	M	SD		
Machiavellianism	306	8.05	3.83	255	7.76	3.58	55	9.36	4.62	2.83**	.39
Narcissism	306	12.28	4.35	255	12.44	4.34	55	11.54	4.37	-1.38	.21
Psychopathy	306	7.96	2.96	255	7.70	2.89	55	9.15	3.04	3.32**	.49
DT total	306	28.29	8.52	255	27.90	8.35	55	30.05	9.13	1.70	.25
Reactive RA	306	22.09	8.15	255	21.58	7.39	55	24.38	10.77	2.32*	.30
Proactive RA	306	2.30	.81	255	2.25	.84	55	2.52	0.88	1.87	.25
Schadenfreude	306	8.57	4.44	255	8.42	4.43	55	9.27	4.51	1.04	.19
Agreeableness	306	43.12	7.27	255	43.20	7.45	55	42.74	6.40	-.42	.07
Hostility	306	26.99	9.28	255	27.01	9.20	55	26.89	9.76	-.09	.01

**Table 2.** Correlations

	2	3	4	5	6	7	8	9
Machiavellianism	.50**	.36**	.83**	.67**	.31**	.33**	-.30**	.40
Narcissism		.21**	.81**	.55**	.20**	.27**	-.12*	.44**
Psychopathy			.62**	.37**	.27**	.18**	-.37**	.26**
Dark triad total				.71**	.33**	.35**	-.33**	.50**
Reactive RA					.41**	.45**	-.34**	.55**
Proactive RA						.31**	-.22**	.26**
Schadenfreude							-.23**	.30**
Agreeableness								-.41**
Hostility								

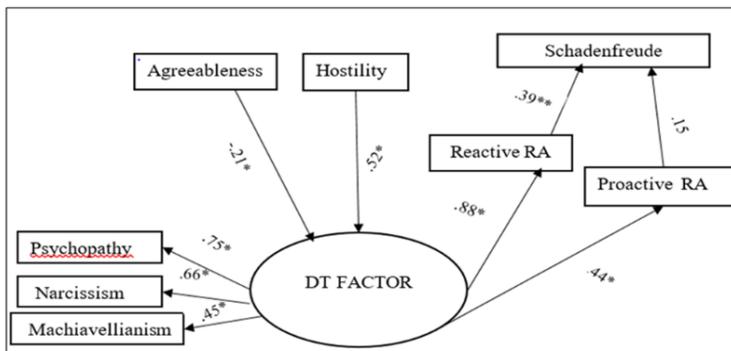
\* $p < .05$ ; \*\* $p < .01$

### Path Analysis

In order to investigate the structure of relations between variables, a path model with one latent variable the dark triad was tested that incorporated all the theoretically reasonable relations. That is, agreeableness and hostility had paths to the dark triad factor. Dark triad factor (latent variable) had paths to reactive and proactive relational aggression; proactive and reactive relational aggression had paths to schadenfreude.

Model was fully identified and therefore showed good fit;  $\chi^2=21.53$ ,  $df=16$ ,  $p=.003$ ; RMSEA=.06; CFI=.97; NFI=.95. According to the parameters recommended by Hu and Bentler (1999) for CFI (cut-off value of 0.95) and RMSEA (cut-off value of 0.08) to supplement chi-square tests, the proposed model fits the data well. Further, the  $\chi^2/df=2.19$  ratio is  $<3$ , suggesting a good fit (Karagöz, 2017). In terms of indirect effects, agreeableness was linked indirectly to reactive and proactive relational aggression through the dark triad factor ( $\gamma=-.18$ ,  $p<.05$ ;  $\gamma=-.09$ ,  $p<.05$ ). Hostility was linked indirectly to reactive and proactive RA through DT factor ( $\gamma=.46$ ,  $p<.05$ ;  $\gamma=.23$ ,  $p<.05$ ). Agreeableness and hostility was linked indirectly to schadenfreude through reactive aggression ( $\gamma=-.09$ ,  $p<.01$ ;  $\gamma=.21$ ,  $p<.01$ ). Dark triad factor was linked indirectly to schadenfreude through reactive aggression ( $\gamma=.41$ ,  $p<.05$ ). Agreeableness was linked indirectly to machiavellianism, narcissism and psychopathy through dark triad factor ( $\gamma=-.16$ ,  $p<.01$ ;  $\gamma=-.14$ ,  $p<.01$ ;  $\gamma=-.09$ ,  $p<.01$ ). Hostility was linked indirectly to machiavellianism, narcissism and psychopathy through dark triad factor ( $\gamma=.39$ ,  $p<.01$ ;  $\gamma=.34$ ,  $p<.01$ ;  $\gamma=.24$ ,  $p<.01$ ). The model explains 22% of the variance in Schadenfreude.

**Figure 1.** Results of the Path Model



Standardized coefficients \* $p<.05$ ; \*\* $p<.01$

## Discussion

In the current study, results showed that personality factors namely dark triad (narcissism, psychopathy, machiavellianism), agreeableness and hostility were correlated with schadenfreude. Consistent with the relevant literature, dark triad factors were shown to be correlated with schadenfreude (James et al., 2014; Porter et. al., 2014). As mentioned earlier, dark triad traits include disharmony and self-promotion in terms of interpersonal rela-

tionships. Therefore, it is thought that enjoying someone else's misfortune may be related to those kinds of personality characteristics. Besides that, this study also made a new contribution by showing the relations between schadenfreude and the other personality factors namely agreeableness and hostility. As a personality factor, agreeableness is also found to be related negatively to schadenfreude. Agreeableness is characterized by warmth, empathy, compassion, sympathy towards others (Olver and Mooradian, 2003). Individuals who show high agreeableness tend to be more gentle, empathic whereas individuals who show low agreeableness tend to be more antagonistic, angry and hostile. Therefore, the negative relationship between schadenfreude and agreeableness is not surprising. People who feel more schadenfreude also tend to be lower in terms of agreeableness. A significant positive relationship was found between hostility and schadenfreude as expected. As a cognitive personality trait, hostility includes relatively stable patterns of beliefs and destructive attitudes towards the other. Hostility also includes a desire for damaging someone (Miller et al., 1996). Individual who show hostile attitudes towards others, may feel enjoyment or satisfaction when something bad happened to others.

As mentioned earlier, objective of this study was to show the relations between personality factors, relational aggression and schadenfreude by using the path model. By using this path model, direct and indirect relations between variables were able to be shown. In terms of direct effects, agreeableness and hostility were found to be directly related to the dark triad personality which includes psychopathy, narcissism and machiavellianism. Consistent with the current literature, studies also showed the relationships between dark triad and agreeableness (Jonason and McCain, 2012; Lee and Ashton, 2014; Vernon et al., 2008; Veselka et al., 2012). Moreover, hostility was also found to be directly related to the dark triad. As mentioned earlier, hostility is characterized by damaging other intentionally or expecting to see them as damaged. Therefore, this result is also expected because dark triad traits include manipulation, damaging social relationships, controlling others etc. Individuals who show more hostility towards others, may have a tendency to develop dark personality traits.

In terms of other direct effects, the dark triad factor was significantly predicted proactive and reactive relational aggression. Constructs of dark triad namely psychopathy, narcissism and machiavellianism were expected

to help in the understanding of relational aggression, based on their utility in terms associations with similar characteristics of behaviors such as manipulation, self-promotion at the expense of others. However, some of the studies found that while reactive relational aggression was related to all of the dark triad traits, proactive relational aggression was only predicted by psychopathy and narcissism (Knight et al., 2018). In a similar vein, the current study also revealed that dark triad has predicted reactive relational aggression stronger than proactive relational aggression.

In terms of indirect effects, hostility was also predicted reactive and proactive relational aggression indirectly through the dark triad. This result shows that individuals who have hostile personality characteristics tend to more aggressive and this relationship occurs with the help of dark personality traits. In other words, individuals who are hostile can be considered as more available to develop dark traits and this also resulted in aggressive behaviors. Moreover, in this study it is showed that hostility is indirectly related to both types of relational aggression (proactive and reactive). However, in terms of reactive relational aggression, some of the studies showed that hostile attributions are related to only reactive relational aggression (Kokkinos et al., 2016; Murray-Close et al., 2010). In terms of the types of aggression hostility was not found to be able to differentiate the types of relational aggression. Therefore, it is thought that contribution of the dark triad traits may be responsible for this kind of result, since the relationship between hostility and reactive relational aggression was stronger than the proactive one.

In a similar vein, agreeableness was indirectly predicted relational aggression through dark triad. In terms of agreeableness studies showed that it is related with reactive relational aggression (Barlett and Anderson, 2012; Jones et al., 2011; Miller et al., 2012) and proactive relational aggression (Knight et al., 2018; Kokkinos, Karagianni and Voulgaridou, 2017). In the previous studies, low agreeableness is found to be related with the use of destructive tactics and difficulty in maintaining harmonious relationships (Graziano, Jensen-Campbell and Hair 1996). Studies also showed that in terms of five factor personality traits agreeableness have the most significant relationship with all of the dark traits (Paulhus and Williams, 2002; Vernon et al., 2008; Veselka et al., 2012). Therefore, it is thought that individuals who are lower on agreeableness tend to more aggressive and this relationship

occurs with the help of dark personality traits. In other words, individuals who are less agreeable can be considered as more available to develop dark traits and this also resulted in performing aggressive behaviors.

As mentioned earlier, aim of this study is to reveal the relations between personality factors, relational aggression and schadenfreude through path analysis. Besides the direct effects between hostility, agreeableness and dark triad, in the path analysis, indirect relations between personality, relational aggression and schadenfreude were shown. More specifically, it was found that hostility and agreeableness were indirectly related to both types of relational aggression but only reactive relational aggression were found to predict schadenfreude through this path. In other words, only reactive relational aggression was shown to be mediated the relationship between dark triad and schadenfreude. In a similar vein, Erzi (2020a) reached a similar result, in their study relational aggression was shown to mediate the relationship between dark triad and schadenfreude. However, in the current study, it is showed that only reactive relational aggression mediated the relationship between dark triad and schadenfreude. Moreover, reactive relational aggression was found to be directly related with schadenfreude while proactive relational aggression was not. Therefore, it is thought that the unique contribution of this study was to be able to differentiate the functions of relational aggression which was shown through path analysis. As mentioned before, schadenfreude is defined as enjoying others' misfortune. While reactive relational aggression includes impulsivity and hostility, proactive one contains planned and goal directed behaviors. In similar vein, provocative relational context contributes the emergence of reactive relational aggression but not proactive relational aggression (Murray-Close et al., 2010). Thus, reactive relational aggression may be considered as a triggering factor in the emergence of schadenfreude while proactive relational aggression may not.

Besides contributions, this study has also some limitations. In this study, convenient sample were used and the majority of the sample were undergraduate students. Small number of male participants may be considered as another limitation of this study in terms of the generalizability of the results. Schadenfreude was measured by using scenarios. Although using scenarios were found to be preferable by the researchers, they are found to be limited in terms of their possibility to reflect individual's actual beliefs rather than what should happen. Therefore, future studies should consider

increasing external validity by controlling the social desirability. In order to increase external validity, individuals from different sociodemographic backgrounds may also be included in the future studies. Cross sectional designs are also considered to be limited in a way that they hinder inferences about causal relationships, so longitudinal designs especially for development of both functions of relational aggression can be considered in the future research. Moreover, proactive aggression was found to be related with the early onset of crime (Cima, Raine, Meesters and Popma, 2013) Using different samples to define and differentiate proactive and reactive RA is thought to be necessary for extending the knowledge on this subject.

As mentioned before, schadenfreude was predicted directly by reactive relational aggression. Moreover, agreeableness and hostility predicted schadenfreude indirectly through dark triad and reactive aggression. Unplanned and impulsive nature of reactive relational aggression, can make individuals more prone to feel schadenfreude towards others. Another unique contribution of this study is to show the indirect relations between personality factors namely agreeableness, hostility and schadenfreude. Although some of the studies showed associations between schadenfreude and hostility (Smith and Kim, 2007) and agreeableness (Greenier, 2018), to our knowledge, this is the first study showing the indirect relations of personality factors. According to Ashton, Lee, Goldberg, and Vries (2009) researchers have to be careful about making generalizations about inter-correlated traits. Therefore, it is thought that the results need further replication.

### Conclusion

In conclusion, the current study makes contributions to the understanding schadenfreude by showing indirect and direct effects of personality factors and relational aggression by integrating these variables into the one conceptual model by using path analysis. This study also provides a reasonable framework which may be helpful for future studies.

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