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Research Article

The Relationship of Autonomous Motivation to Prosocial Behavior: Mediator Role of Prosocial Friends and Friendship Quality among Turkish Adolescents*

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Abstract

The aim of this study was to investigate the roles of friends and friendship quality as two possible mediators to elucidate the underlying processes that link the autonomous motivation and prosocial behaviors among adolescents in Turkey. Participants were 419 adolescents who were in 9th grade students (Mage = 14.37 years, SD = .35) and selected from different high schools located central regions of the city. Adolescents completed questionnaires regarding their prosocial self-regulation, prosocial friends, friendship quality and other-oriented prosocial behaviors. The results of the study demonstrated that autonomous motivation in prosocial behavior was related to increasing in other-oriented prosocial behaviors by having more prosocial friends and more positive friendship quality for boys and by having more positive friendship quality for girls.

Key Words

Autonomous motivation, Prosocial behavior, Prosocial friends, Friendship quality

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Several studies demonstrated that neither rewarding adolescents for prosocial behaviors nor forcing them to behave prosocially had proven an effective strategy for maintaining and promoting prosocial behavior. By contrast, it was commonly observed that such strategies decreased rather than increased the frequency of prosocial behaviors (Fabes, Fultz, Eisenberg, May-Plumlee, & Christopher, 1989; Frey & Jegen, 2001; Kunda & Schwartz; 1983). The researchers suggested that these somewhat unexpected results related to the characteristics of reward and coercion, which might diminish the pleasure and the value of doing a prosocial act.

A group of researchers emphasized the role of motivation in the incidence of prosocial behaviors (Finkelstein, Penner, & Brannick, 2005; Grube & Piliavin, 2000; Reykowski & Smolenska, 1980), and some of them investigated the importance of autonomous motivation within the scope of Self Determination Theory (SDT). According to the self-determination theorists, autonomous motivation is a powerful force to activate behaviors. Thus, these behaviors give more pleasure than the externally motivated ones (Deci & Ryan, 2000; Ryan & Deci, 2000). Therefore, individuals who have autonomous motivation do not come into action to earn a reward or avoid a punishment. In contrast, the reason for their actions is the belief that it is the right thing to do, and it is valuable. Research findings from different cultures supported this idea indicating that individuals who have autonomous motivation in the prosocial behavior domain exhibit more genuine prosocial behaviors (Kındap, 2011; Kındap-Tepe & Aktaş, 2019; Ryan & Connell 1989; Weinstein & Ryan, 2010).

Although it is well established that autonomous motivation and prosocial behaviors are in relation (Ryan & Connell 1989; Ryan & Deci 2000; Weinstein & Ryan, 2010), the possible processes which mediate this relation have not been investigated extensively. In the context of SDT, there are some studies that examine the mediating role of autonomous motivation in the relationship between supportive parenting and adolescents' prosocial behaviors, but researches are frequently conducted in university sample (Gagne, 2003; Roth, 2008). Furthermore, it has been found that how other socializing agents contribute to adolescent prosocial behavior has not been studied. Although this is somewhat understandable given the importance of mothers in the socialization of children and young adolescents, future research must examine the role of fathers, extended family members, peers, and the broader social context in which the youth live (Knight & Carlo 2012). The present study aims to contribute to fill this gap in the literature by investigating the role of prosocial friends and friendship quality as possible explanatory mechanisms for the relationship between adolescents' autonomous motivation and their prosocial behaviors. The present research especially focuses on this type of prosocial behaviors since the characteristics of altruistic behaviors were found to be related more likely to the autonomous motivation. For example, selfish or self-oriented prosocial behaviors are enacted for the sake of others' approval and appreciation, while altruistic or other-oriented prosocial behaviors are performed to meet other's needs and inclinations. Some research findings also have revealed that external motivation predicts self-oriented and autonomous motivation predicts other-oriented helping behaviors (Kındap, 2011; Roth, 2008).

The SDT emphasizes the importance of not only motivation of behaviors but also the context, in which such motivation can be displayed. According to the theory, individuals are surrounded with factors that improve or impair their autonomous motivation. Relations with parents and peers, and neighborhood and school contexts are some examples of these factors. The SDT asserts that autonomous motivation should be considered together with these factors (Ryan & Deci, 2000). Some theorists argue that close relationships with family members are critical factors for the evolution of prosocial skills (Grusec & Goodnow, 1994; Hoffman, 1983) whereas others focus on

the effects of positive relationships with peers (Piaget, 1965; Sullivan, 1953). Indeed, numerous studies showed the role of friends as an important socialization agent in the prosocial behaviors (Barry & Wentzell, 2006, Wentzel, 2014), and in moral development (Azmitia & Montgomery, 1993; Nelson & Aboud, 1985). For example, in a longitudinal study, prosocial friends in the sixth grade predicted the prosocial behavior tendencies in the eighth grade (Wentzel, Barry, & Caldwell, 2004). Another study demonstrated that adolescents tend to act similarly to their prosocial friends when they have strong and positive bonds with those friends (Barry & Wentzel, 2006). Studies on volunteering behaviors also have suggested that adolescents are more likely to engage in prosocial behaviors if their friends value or demonstrate these same behaviors. Studies have reported concurrent associations between adolescents' perceptions of their own self-reported volunteering behaviors and their friends' volunteering behaviors (Choukas-Bradley, Giletta, Cohen, & Prinstein; 2015, Law, Shek, & Ma, 2013; van Goethem et al., 2014). The above mentioned results revealed that willingness to behave like friends and having qualitative relations with these friends are effective on the other-oriented prosocial behaviors.

Theoretical models which are suggested to explain the process of the influence of friend / friendship are scant (Hartup & Stevens, 1997). However, some researchers have adopted a social learning perspective to explain this process (e.g., Berndt, Hawkins, & Jiao 1999; Wentzel et al., 2004). For instance, adolescents might develop some interests or specific behavioral styles when these are considered to be desirable characteristics of close friends of adolescents (Bukowski & Hoza, 1989; Hartup & Stevens, 1997). Particularly, observational learning theory (Bandura, 1986) suggests that an adolescent is likely to behave like his / her friend eventually when a friend models certain types of behavior, because exposure to modeled behavior is frequent and affectively charged. Moreover, friendships are characterized by robust emotional bonds; hence it is plausible that friends might mimic each other's behavior especially during adolescence (Berndt & Perry, 1986). Therefore, the influences of friends most likely occur especially in two circumstances. Firstly, when the affective quality of a friendship is high, such that the friends provide an important source of nurturance to the adolescent, and secondly, the interaction frequency and friendship stability between the adolescent and his / her friends is high, such that they spend a significant amount of time together (Barry & Wentzel, 2006).

The Peer Influence Model (Elliot, 1994) also suggests that peers strongly influence adolescent to behave like others. But another theoretical model, The Individual Characteristic Model (Gottfredson & Hirschi, 1990), does not acknowledge the role peer influence on adolescent behaviors. On the contrary model assumes that adolescents befriend with others who are very similar to them. Although these models enhanced our understanding the delinquency, they can also be functional to understand the development of prosocial behavior.

In fact, by taking into account these models together, it is possible to say that autonomous motivated individuals could select prosocial friends and could have positive friendship quality (The Individual Characteristic Model) and on the other hand, individuals who select prosocial friends and who have positive friendship quality could more likely behave prosocially (The Peer Influence Model).

Consequently, the present research proposed that having prosocial friends and maintaining a qualified friendship are conducive to expected behaviors asserted by SDT. Indeed, it is expected that the adolescents who have autonomous motivation for prosocial behaviors will act more prosocial in appropriate context. Testing this hypothesis in a non-western culture is a unique aspect of the study.

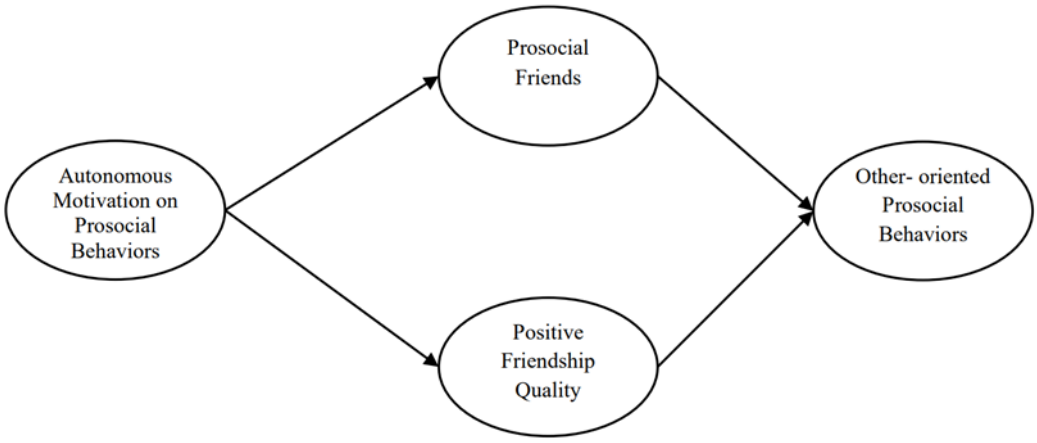
Based on individualism-collectivism understanding, it could be asserted that other oriented prosocial behaviors would emerge mostly as a result of autonomous motivation in individualistic societies, and it would emerge generally as a result of obedience or compliance in more collectivistic societies. However, it is also possible to assert from the SDT perspective that autonomous motivation is universal and breeds other oriented prosocial behaviors in both individualistic and collectivistic cultures (Deci & Ryan, 2000). Therefore, our main purpose is to understand whether autonomous motivation has a role in prosocial acts among adolescents and friendship context promotes these behaviors.

In conclusion, the aim of this study is to investigate the roles of friends and friendship quality as two possible mediators to elucidate the underlying processes that link autonomous motivation and prosocial behaviors among adolescents in Turkish culture. In accordance with this view, our specific hypothesis is that autonomous motivation in the prosocial behavior domain increases the frequency of the other oriented prosocial behaviors as a consequence of prosocial friends and friendship quality.

An extensive review of the related literature reveals gender differences in frequency of prosocial behaviors (Bayar & Uçanok, 2019; Carlo, Fabes, Laible, & Kupanoff, 1999; Fabes et al., 1989; Kındap; 2011; Kındap-Tepe & Aktaş, 2019; Kumru, Carlo, & Edwards, 2004), number of prosocial friends (Kındap, Sayıl, & Kumru, 2008; Kumru et al., 2004), and quality of positive friendship (Bayar & Uçanok, 2019; Soenens, Vansteenkiste, Goossens, Duriez, & Niemiec, 2008) in favor of girls. Therefore, in this study it was examined whether gender moderates the mediation model (see Figure 1).

Figure 1

Proposed Model



Method

Study Group

This study was a part of a research project (Sayıl & Kındap, 2009). The participants were 419 (201 boys and 218 girls) adolescents from urban families. They were selected randomly from among 9th graders in different schools in Ankara, the capital city of Turkey. The age range of adolescents was between 13.5 and 15.5 (mean age 14.35; SD = .30) for girls; 13.67 and 15.75 (M age 14.37; SD = .35) for boys. The education level of the participants' fathers (50.3 % high school, 13.7 % college, 10.6 % middle school) is higher than the mothers (38.3

% high school, 26.9 % middle school, 16.3 % primary school). The ages of the parents ranged from 31 to 58 (M = 41.44, SD = 4.54) for mothers and from 34 to 67 (M = 45.23, SD = 4.88) for fathers. Adolescents (67.2 %) perceived themselves as belonging to middle socioeconomic status.

Procedure

The research was conducted in accordance with the ethical standards of Hacettepe University Ethics Commission. Scales were administered to the students during class time. The students were informed about the study and instructed on how to fill out the questionnaires. They were informed that participating in the research was voluntary, and active informed consent was obtained from their parents. Moreover, the students were ensured for privacy.

Data Collection Tools

Prosocial Self-Regulation Questionnaire (SRQ-P; Ryan & Connell, 1989). The questionnaire contains 5 situations and 5 possible answers for each of these situations. For example, adolescents are asked why they would help someone in distress. Possible answers varied from external to identified regulation, e.g. "because I'd get in trouble if I did/did not" (external), "because I'd feel bad about myself if I did/did not" (introjected), and "because I think it is important to... "(identified). Participants were asked to rate their regulation on a 6-point Likert type scale from 1 (strongly disagree) to 6 (strongly agree). The scale was adapted to Turkish by Kındap-Tepe and Sayıl (2018). For this study, only the identified regulation subscale that represents the autonomous motivation was used and Cronbach's alpha reliability of the subscale was .87.

Prosocial Friends Scale (Tilton-Weaver & Galambos, 2003). This scale measures adolescents' affiliation with prosocial friends on a 4 point Likert type scale, where 1 denotes strongly disagree and 4 strongly agree. It contains 4 items (eg., My closest friends almost always show responsible behavior.). The Cronbach's alpha reliability of the adapted scale was .70 (Sayıl et al., 2012).

Aggressive and Prosocial Behavior Questionnaire (Boxer, Tisak, and Goldstein, 2004). The questionnaire assesses the levels of different subtypes of prosocial (e.g., helping) and aggressive (e.g., hitting) behaviors of respondents on a 6-point scale (ranging from1- definitely not like me to 6- definitely like me). In this study, only altruistic (eg., I often help people without being asked.) and reactive (eg., When someone puts me in a good mood, I will often help him or her if necessary) subscales were used and the Cronbach's alpha reliabilities of the adapted subscales were .75 and .78, respectively (Sayıl et al., 2012). These subtypes of prosocial acts were named as "other oriented prosocial behaviors" on the perspective of SDT (Kındap, 2011).

Friendship Quality Scale (Berndt & Perry, 1986; Bukowski, Hoza, & Boivin, 1994). This scale was administered to assess the adolescents' views of the quality of their friendships. It contains 23 items with a 5-point response scale (ranging from 1-Not at all true to 5-really true) and five subscales (companionship, help / support, closeness, security, and conflict). However, it was then commonly used in the form of two subscales as positive (items of companionship, help / support, closeness and security) and negative (items of conflict) friendship qualities (Brendgen, Markiewicz, Doyle, & Bukowski, 2001). Only the "positive friendship quality" was used for this study (eg., If I have a problem at school or at home, I can talk to my friend about it.). The scale was adapted to Turkish by Sayıl et al. (2012), and the Cronbach's alpha reliability of this subscale was .93.

Findings

Preliminary Analyses and Gender Differences

In order to examine the effects of gender on study variables, a MANOVA test was conducted. The results suggested significant gender differences, Wikls' $\lambda = .80$, $F_{(4, 414)} = 20.44$, $p < .001$, $\eta^2 = .20$. Univariate tests revealed that girls had higher autonomous motivation than boys for prosocial behavior ($F_{(1, 417)} = 35.68$, $p < .001$, $\eta^2 = .08$). In addition, girls had higher positive friendship quality ($F_{(1, 417)} = 84.41$, $p < .001$, $\eta^2 = .17$), more prosocial friends ($F_{(1, 417)} = 28.66$, $p < .001$, $\eta^2 = .06$), and more other-oriented prosocial behaviors ($F_{(1, 417)} = 29.60$, $p < .001$, $\eta^2 = .07$).

The Pearson correlation coefficients, means and standard deviations of the study variables moderately correlated with each other (Table 1). Autonomous motivation in prosocial behavior was positively correlated with positive friendship quality, prosocial friends, and others oriented prosocial behaviors in both girls and boys.

Table 1

The Pearson correlation coefficients, means and standard deviations of the study variables

Variables	**1**	**2**	**3**	**4**	**Girls Mean (SD)**	**Boys Mean (SD)**
1. Autonomous motivation	-	.26***	.35***	.33***	5.35 (.66)	4.96 (.70)
2. Positive friendship quality	.27***	-	.22***	.42***	4.31 (.51)	3.78 (.64)
3. Prosocial friends	.49***	.22***	-	.47***	3.38 (.48)	3.12 (.51)
4. Others oriented prosocial behaviors	.38***	.47***	.32***	-	3.21 (.54)	2.93 (.51)

***$p < .001$. *Note:* Girls are above and boys are below the diagonal.

Structural Equation Modeling

To test the proposed models, structural equation modeling with latent variables was performed, using AMOS 22 and solutions were generated with maximum-likelihood estimation. The fit of the model was assessed with the statistics of χ^2 or χ^2/df, RMSEA and CFI. χ^2/df ratio of 3:1 or less indicates good fit, RMSEA values in close to .08 indicates acceptable fit and CFI values close to .95 indicate good fit. Measurement model was tested in order to determine the validity of the measurement tools before testing the structural equation modeling. The second step was to run multigroup structural equation modeling that included the testing of 4 nested hierarchical models. These models were configural invariance model, weak invariance model, strong invariance model, and strict invariance model. In the *configural invariance model*, it was investigated whether the groups had the same factorial structures. To test the model, numbers of factors and loading patterns were constrained across the groups. In the *weak variance model*, it was investigated whether the groups had the same factor loadings. To test the model, factor loadings were constrained across the groups in addition to numbers of factors and loading patterns. In the *strong invariance model*, it was investigated whether the groups had the same intercept values. To test the model, intercepts were constrained across the groups in addition to numbers of factors, loading patterns and factor loadings. In the *strict invariance model*, it was investigated whether the groups had the same error variances. To test the model, error variances were constrained across the groups in addition to numbers of factors, loading patterns, factor loadings and intercepts (Byrne & Stewart, 2006; Vandenberg & Lance, 2000).

As it has been recommended χ^2 difference test and differences in CFI was used in order to compare the models. Significant results for the χ^2 difference test indicate that the model with smaller χ^2 has a statistically better fit. Besides in the sequence of invariance tests, if two nested models show a decrease in the value of CFI greater than or equal to .01 in magnitude, the more restrictive model should be rejected (Cheung & Rensvold, 2002).

Measurement Models

In accordance with the recommendations of Anderson and Gerbing (1988), confirmatory factor analysis (CFA) was used to evaluate the measurement model before testing the overall structural model. Four latent constructs were modeled: Autonomous motivation in prosocial behaviors, positive friendship quality, prosocial friends, and other-oriented prosocial behaviors. Positive friendship quality construct was represented by four indicators (companionship, help, closeness and security) and other-oriented prosocial behaviors construct was represented by two indicators (reactive prosocial and altruistic prosocial behaviors). The other constructs were defined by indicator parcels. The latent constructs were allowed to freely inter-correlate. Estimation of the measurement model yielded a good fit with the data, χ^2 (76, N = 419) = 104.12, p < .05; CFI = .99, GFI = .96; AGFI = .92; NFI = .97; NFI = .95; RMSEA = .03. All factor loadings were significant (p < .001), ranging from .71 to .86 for girls and from .70 to .90 for boys. In sum, reliable measurement models were obtained.

Multigroup Structural Models

In the structural models, the direct effect of autonomous motivation on prosocial behavior was tested in the first step (Direct Effect Model). Later, prosocial friends and friendship quality were added to the model as mediator variables and the mediational effect model was tested (Mediational Effect Model).

The model fits and model comparisons of ***Direct Effect Model*** can be seen in Table 2. The configural invariance model, weak invariance model, strong invariance model, and strict invariance model provided good fits to the data. On the other hand, $\Delta\chi^2$ and ΔCFI obtained from the differences among models indicated that weak invariance model had better fits than strong invariance model, and strong invariance model had better fits than strict invariance model.

Table 2

Fit Indices for Multigroup Structural Equation Models and Model Comparations for Direct Effect Model

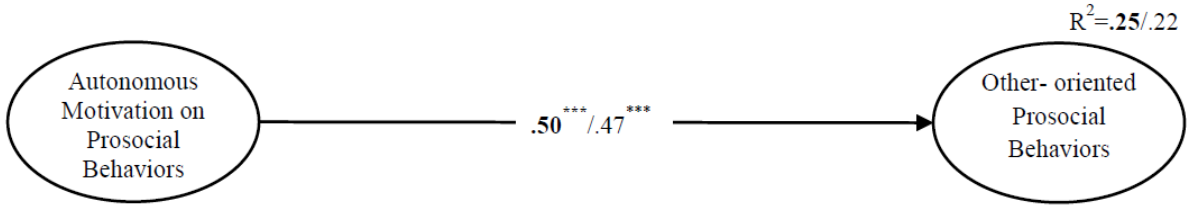
Models	**χ^2**	**df**	**RMSEA**	**CFI**	**Δdf**	**$\Delta\chi^2$**	**ΔCFI**
Configural Invariance Model	17.27	32	.05	.99	-	-	-
Weak Invariance Model	17.30	31	.05	.99	1	.03	-
Strong Invariance Model	66.67	26	.10	.93	5	49.38***	.06
Strict Invariance Model	79.14	21	.09	.92	5	12.46***	.01

*** $p < .001$.

As can be seen in Figure 2 autonomous motivation in prosocial behaviors positively predicted other-oriented prosocial behaviors both for girls (β = .50, p <.001) and boys (β = .47, p <.001) positively. Autonomous motivation explained 25 % and 22 % of the variance in other oriented prosocial behaviors for girls and boys, respectively.

Figure 2

Direct Effect Model



***p < .001. Bold values refer to girls.

The model fits and model comparisons of *Mediational Effect Model* can be seen in Table 3. The configural invariance model, weak invariance model, strong invariance model, and strict invariance model provided good fits to the data. On the other hand, $\Delta\chi^2$ and ΔCFI obtained from the differences among models indicated that weak invariance model had better fits than strong invariance model, and strong invariance model had better fits than strict invariance model.

Table 3

Fit Indices for Multigroup Structural Equation Models and Model Comparations Mediational Effect Model

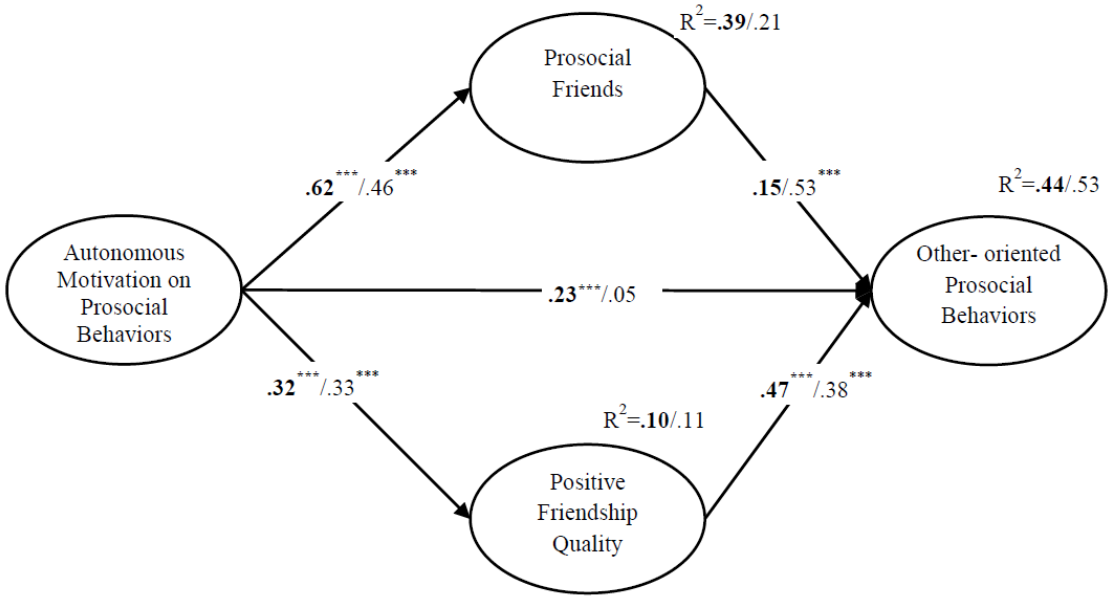
Models	**χ^2**	**df**	**RMSEA**	**CFI**	**Δdf**	**$\Delta\chi^2$**	**ΔCFI**
Configural Invariance Model	108.75	76	.03	.98	-	-	-
Weak Invariance Model	113.88	71	.03	.98	5	5.13	-
Strong Invariance Model	234.44	60	.06	.93	11	120.56***	.05
Strict Invariance Model	271.04	49	.06	.92	11	36.60***	.03

***p < .001.

As can be seen in Figure 3, both for girls and boys, autonomous motivation on prosocial behaviors positively predicted prosocial friends (β_{girls} = .62, p <.001; β_{boys} = .46, p <.001; respectively) and friendship quality (β_{girls} = .32, p <.001; β_{boys} = .33, p <.001 respectively); positive friendship quality positively predicted other-oriented prosocial behaviors (β_{girls} = .47, p <.001; β_{boys} = .38, p <.001; respectively). But prosocial friends positively predicted other-oriented prosocial behaviors for only boys (β_{boys} = .53, p <.001) and autonomous motivation positively predicted other-oriented prosocial behaviors for only girls (β_{girls} = .23, p <.05). The proposed model accounted for 44 % and 53 % of the variance in other oriented prosocial behaviors for girls and boys, respectively.

Figure 3

Mediational Effect Model



$^{***}p < .001$, $^{*}p < .05$. Bold values refer to girls.

Discussion

The results of the descriptive analysis indicated that girls had more prosocial characteristics than boys, they had more prosocial friends and their friendships had higher positive qualities. These findings seem to be consistent with the findings of the studies examining the gender differences on prosocial behaviors (Eisenberg, Carlo, Murphy, & Van Court, 1995; Kındap, 2011; Kındap-Tepe & Aktaş, 2019; Kumru et al., 2004), having prosocial friends (Bayar & Uçanok, 2019; Sayıl et al., 2012) and friendship quality (Bukowski et al., 1994; Brendgen, Vitaro, & Bukowski, 2000; Yaban, Sayıl, & Kındap-Tepe, 2013) and in the literature. As expected, girls were more likely than boys to take part in prosocial behaviors in an autonomously motivated way. This finding supported some studies (Steinberg & Silverberg, 1986), yet contradicted with others that were in favor of boys (Noom, Dekovic & Meeus, 2001). Numerous studies conducted in urban populations in Turkey have indicated that women are more autonomous in their attitudes and in their internalization of values, when their general socio-economic and education levels are high (Çileli, 2000; Göregenli, 1995; 1997; İmamoğlu & Karakitapoğlu-Aygün, 1999; Karakitapoğlu-Aygün & İmamoğu, 2002). This may indicate that urbanization and modernization lead girls to become more autonomous. In fact, it is shown in a recent study in Turkey that mothers with higher education levels and living in big cities encourage their children to become more autonomous (Yağmurlu, Çıtlak, Dost, & Leyendecker, 2009).

In addition to gender differences in study variables, the proposed models demonstrated both similarities and differences in terms of gender. The direct effect model had same patterns for both girls and boys. The results demonstrated that autonomous motivation was related to increase in other oriented prosocial behaviors. The findings seem to be consistent with the theory (Deci & Ryan, 2000) and the literature (e.g. Roth, 2008; Weinstein & Ryan, 2010). Based on SDT (Deci & Ryan, 2000), it could be suggested that autonomous

motivation would promote other oriented prosocial behavior because it is experienced as volitional and it is also based on personal endorsement of the underlying value of the behavior.

The mediational model had some differentiations in terms of gender: Autonomous motivation in the prosocial behavior was related to increase in the other oriented prosocial behaviors as a result of experiencing qualified friendship for girls and boys. However, autonomous motivation was related to increase in the other oriented prosocial behaviors by having more prosocial friends for boys. In other words, although friendship quality had a mediational role for both gender, prosocial friends had a mediational role for boys solely.

On the other hand, although prosocial friends didn't have a mediator role, the correlation coefficients indicated that prosocial friends and other oriented prosocial behaviors were significantly correlated for girls. In addition to this, prosocial friends and positive friendship quality had a full mediator role for boys and only positive friendship quality had a partial mediator role for girls in the model. These findings also support that autonomous motivation had still a direct role on prosocial behaviors even in the presence of prosocial friends and positive friendship quality for girls. Additionally, the full mediator role of prosocial friends and friendship quality for boys indicates that friendship had a more determinant role for their behaviors.

The findings of the study also confirmed the previous findings that adolescents, spending more time in peer groups as a mark of the development period, join groups the members of which are similar to themselves and continue to exhibit the similar behaviors, reinforcing each other (Baker, Milich, & Manolis, 1996; Curran, Stice, & Chassin, 1997). Two key findings need to be emphasized. First, adolescents who have higher autonomous motivation exhibited more prosocial behaviors confirming the universality of internal motivation asserted by Self-Determination Theorists, and second, this association was explained by friendship context consisting prosocial friends and quality friendships. The first one makes explicit that adolescents perform prosocial behaviors not to comply with others, but rather with autonomous motivation. The second one supports the facilitative context effect proposed by SDT and confirms the findings indicating that a close and supportive relationship pattern with peers was related to increase in prosocial behavior tendencies (Carlo et al., 1999).

In our culture, since autonomous and relatedness aspects of the self have been supported equally by the parents (Kağıtçıbaşı, 2010), the role of internal motivation in prosocial acts might have been observed and explained by friendship context characteristics. In addition, it was revealed that children who exhibit more prosocial behaviors also show tendencies to affiliate with prosocial peers and to avoid from deviant groups. (Carlo et al., 2014; Padilla-Walker, Carlo, & Nielson, 2015). Prosocial friends and friendship quality accounted for prosocial behaviors, and the effect sizes revealed that these relationships were more powerful in our research than in the studies conducted in individualistic cultures (Barry & Wentzel, 2006; Markiewicz, Doyle, & Brendgen, 2001; Wentzel et al., 2004). For example, in the study of Wentzell et al. (2004), it was demonstrated that friends' prosocial behaviors explained the 17 % of variance of prosocial behaviors. However, in our study, prosocial friends and friendship quality explained the 44 % and 53 % of variance of prosocial behaviors for girls and boys, respectively. Furthermore, the results of this study showed that, when choosing their friends, adolescents with higher autonomous motivation might also choose peers with a potential for exhibiting prosocial behaviors, and they establish more qualified friendships. These adolescents exhibit more prosocial behaviors, and this indicates the importance of autonomous motivation for the psycho-social adaptation of adolescents. All of these results may provide partial support to the argument that prosocial behaviors are more likely as a result of

obedience in a relational structure in Turkey (Kumru et al., 2004). However, to what extent adolescents who are externally motivated and who spend time with prosocial friends would exhibit other-oriented prosocial behaviors needs to be further investigation.

The limitations of the study should be taken into account in the interpretation and evaluation of the results. First of all, only self-report scales were used, and the scales were filled out only by adolescents; this possibly might cause an increase in the shared method variance in the study. Secondly, the direction of relationships was not certain because of the cross-sectional nature of the study. For example, it is possible to demonstrate in a longitudinal study that having autonomous motivation is an actual predictor of prosocial behavior or other oriented prosocial behaviors might feed the prosocial quality of friendship. Third, the sample of this study is recruited from urban families in middle socio-economic status. For this reason, it is not possible to generalize findings to other SES groups in the referred culture.

Despite its limitations, this study made important contributions to the literature. First, it strengthened the importance of autonomous motivation on other-oriented prosocial behavior even within a non-western culture. It is important that the studied prosocial behavior is "other-oriented". Indeed, it is claimed that this kind of autonomously motivated prosocial behaviors, which are not geared toward influencing others, are more likely to be exhibited in individualistic cultures (Hardy & Carlo, 2005), and that extrinsically motivated prosocial behaviors (like compliance and public) are more peculiar to collectivistic cultures (Kumru et al., 2004). Secondly, this research indicated the importance of the peers and the quality of the relationship with peers as a means of socialization in adolescents' prosocial behaviors with autonomous motivation. Thus, this study highlights that there should be two possible paths to exhibit other oriented prosocial behaviors among adolescents. One of them is autonomous motivation as a universal construct and the other one is peer context as a separate socialization agent.

In conclusion, this study revealed the prosocial characteristics of friendship context as an explanatory process in the link between autonomous motivation and other-oriented prosocial behavior among adolescents in Turkish culture. The results of the study emphasized that non-western adolescents might exhibit the prosocial behaviors just because they find it valuable and desirable, or as a result of the influence of their peer group.

Ethics Approval

We declare that the research was conducted in accordance with the ethical standards of the institutional and/or national research committee and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards. Informed consent was obtained from all individual participants included in the study. There is no conflict of interest in the research. The study approved by Hacettepe University Ethics Commission (04.03.2013, 433-871). This research was founded by The Scientific and Technological Research Council of Turkey (TÜBİTAK SOBAG-108K155).

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