



## Altruism and Popularity \*

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**Abstract:** Popularity, as a manifestation of social status, has been widely researched and determined by group members. Prosocial behaviors are actions with intention of benefiting others or society as whole with little or no personal gain and may include helping, cooperating, and other voluntary works. Altruism is a type of prosocial behavior that could affect individuals' popularity. Altruism has been studied in different disciplines with the general definition of cooperative behavior that has a cost to the actor with a benefit to the receiver. The common theme in all perspectives is that there is an inevitable cost for the actor with a benefit to the receiver. During the current research, surveys and vignettes were used to collect data. Participants were recruited through an online site, and were compensated for their time and participation via payment of money. As a result of the research, it was observed that helpful behaviors were highly related to the items of empathy, likeability, and popularity. Findings suggest that when gratefulness and helpful behaviors are present, individuals are rated higher in several positive qualities. The unique finding of the study is that both gratefulness and altruism are highly effective resources in interpersonal relations. Purpose of the current study is to examine the relationship between altruistic behaviors that are towards friends and popularity by the endorsement of aforementioned hypotheses and theories.

**Keywords:** *Altruism, popularity, evolutionary psychology, social psychology.*

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### Introduction

The paper will address the relation between altruism and popularity because previous literature has failed to study sufficiently this particular link. Even though Griskevicius, Tybur, and Van den Bergh (2010) investigated the link between reputation and altruistic behavior, a solid conclusion could not be made because of a few limitations, such as looking at behavior intentions instead of behavior itself. In addition, altruism will be studied from two different perspectives, Social Psychology and Evolutionary Psychology, so that a wide, but still detailed, understanding can be reached. The current research is truly important because it approaches the concepts of altruism and popularity with the control of situational factors. Therefore, it aims to eliminate few of the limitations that previous studies might have experienced. Also, it emphasizes the relation of altruism and popularity, which may not be unique, but still rarely studied.

Previous research, Griskevicius et al. (2010), studied a similar topic with the variables of altruism and reputation, in which the authors used vignettes to gather related data. Even before that particular research, altruism was studied and explained in various perspectives such as Social and Evolutionary Psychology. One perspective is that people help each other to be helpful, not because of the expected return, but because of another-oriented emotional response, empathy (Batson, 1988). Empathy-Altruism Theory explains that people help others and receive benefits as a byproduct, yet the ultimate goal of helping actions is reducing other people's stress. It was believed that empathetic emotions are the main motivation of helping behavior. Eventually, empathetic feelings, perspective taking, and altruistic behaviors promote individuals' reproductive potential, which makes them more likeable. Thus, popularity and altruistic behaviors are somewhat tied.

### Altruism

Altruism has been defined as a cooperative behavior by which the person who acts helpfully increases the other person's fitness with a cost of his/her own fitness (Le Galliard, Ferriere, & Dieckmann, 2003). The term fitness indicates

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one's survival chance from an evolutionary perspective rather than the common usage of sports or other athletics kind of fitness. Li, Kirkman, and Porter (2014) also explained altruistic behavior as a list of voluntary actions benefiting other people including self-sacrifice. This definition indicates that altruistic behavior involve acts that are not required by central authorities or formal sanctions but are done to increase other people's fitness (Hamilton, 1972) or gain higher social status and personal benefit later (Griskevicius et al., 2010).

Buss (2008) explains that the problem of altruism becomes even more complicated by the findings that altruistic behaviors are neither new nor unusual in human history. Additionally, Palmer and Palmer (2002) explained that altruistic behaviors are not species specific for humans. It was noted that other organisms also act altruistically towards members of the same species or other species. When the helping behavior is towards members of the same species, it is called altruism. Altruism can also be observed in every society in any time period even though it carries costs for the actors (Van Vugt & Van Lange, 2006). Members of some societies may show less altruistic behaviors compared to others, yet members of all known societies behave altruistically in some ways. Aligned with the previously discussed literature, Kitcher (2010) described altruism as a multidimensional concept.

Researchers often have diverse focus on the key components of altruism, which include the forces that lead altruistic actions like benefits, intentions, and costs. These differences have sparked a debate about whether altruism truly exists at all, in addition to already existing various definitions of altruism (Li et al., 2014). On one side of the debate, it is suggested that true altruism cannot be observed because there is always expected returns for helping behaviors. The other side of the debate believes that no matter the intention or reward, if helping behaviors are present at any cost, then true altruism exists.

Durrant and Ward (2013) suggested that altruistic behavior is a prosocial norm. People without altruistic behavior are acknowledged as dysfunctional and destructive in social groups. A failure to exhibit altruistic behavior may lead to social isolation, confusion, and possibly the infliction of formal or informal sanctions by the community. The negative feedback from society in the absence of altruism is considered negative reinforcement that aims to increase the number of altruistic actions.

Several studies indicate that altruism does not truly exist because it can be observed only with sociocultural feedback. These studies suggest that the presence of personal gain as motive for helping behavior discredits the definition of altruism (Durrant & Ward, 2013; Flynn & Black, 2011). This perspective of debate focuses on the internal drives. If it were possible to observe altruistic acts without personal gain and social influences, only then these helpful behaviors would be true altruism.

In contrast, numerous other studies showed that altruism truly exists. In the research by Flynn and Black (2011) the argument about existence of altruism was explained in both sides. The motive behind the altruistic behavior may never be truly known, and therefore, what is important is identifying mechanisms that can lead to altruism. Those mechanisms can be internal or external drives. External drives may include sociocultural feedbacks and social rewards. Also, internal drives may include personal gains and intentions. Then, in some ways, the intentions do not matter: it is the behavior itself that counts (Li et al., 2014). Some previous studies indicated that altruism truly exists (Clarcken, 2011; Li et al., 2014; Swank et al., 2013), and this perspective will be assumed throughout the current study. After the assumption of existence of altruism, the research goes more in depth with the question of when people help others.

Everyday situations arise where people help others. For instance, a friend may have flat tire, or a neighbor might be locked out of his/her house. On the other hand, it is also not uncommon to spot situations when actors choose not to help others. Some cultural stereotypes teach individuals to be altruistic towards certain people based on characteristics like age or gender. Helping females every time that they need is one possible example that can be learned through cultural stereotypes (Blau, 1964). Also, Darley and Batson (1973) suggested that helping one in need depends on not only one but also several situations. The situations that were studied include gender of the actor and the receivers, daily rush, the number of bystanders, and etc.

Two different viewpoints provide an explanation of why people help others: Social Psychology and Evolutionary Psychology. Evolutionary Psychology studies helping behaviors with two hypotheses, Kin Selection and Reciprocal Altruism. On the other hand, Social Psychology aims to justify the reasons people help each other by Social-Exchange Theory.

#### *Social-Exchange Theory*

The Social Exchange Theory mainly focuses on interpersonal relations and social interactions (Blau, 1964). Social exchange can be detected anywhere in daily life. Exchange is an activity, concrete or abstract, between at least two individuals. Friends, acquaintances, colleagues, and even neighbors constantly engage in social exchange. The theory explains that two or more individuals interact with each other and exchange tangible or intangible resources. Tangible resources or tangible assets are generally concrete or financial such as cash, bonds, and land. On the other hand, intangible resources or intangible assets are abstract or nonphysical such as copyright, knowledge, and time.

The theory of Social-Exchange approaches interpersonal relations in the perspective of given services and received gratitude with service when needed (Blau, 1964). The key concepts of the Social Exchange Theory are giving service, receiving gratitude, and receiving service back. Showing gratitude is as critical as the other concepts maintaining the interpersonal relation. People who do not show gratitude might be labeled as ungrateful and undeserving of help.

Social-Exchange Theory explains that reciprocated help with the support of gratitude creates social bonds or strengthens the present ones (Blau, 1964). Not reciprocating received help or not showing gratitude may dissolve relationships amongst people if differentiation of power does not occur.

Helping behavior is more compound than simply receiving and returning services or goods. The presence or the amount of helping behavior depends on exceptionally complex situational variables including the daily rush, gender, and presence of other people. Darley and Latane (1968) suggested that the presence of other people is a particularly important factor on helping. The authors explained the concepts of bystander intervention and diffusion of responsibility. The study has shown that as the number of bystanders increase, witnesses are less likely to help others.

The bystander intervention explains how the moral responsibility spreads out among bystanders, which is called diffusion of responsibility. Diffusion of responsibility is the idea of shared costs, which indicates as the number of bystanders increases, the cost of not helping to the person in need decreases. The effect of diffusion of responsibility as a result of bystander intervention is focused on the costs in the absence of altruistic actions in Social-Exchange Theory. Shared costs as a result of not helping people in need are less problematic for individuals according to the theory. Social-Exchange Theory emphasizes continuous exchange of altruistic actions rather than absence of helping others.

#### *Evolutionary Psychology Perspective of Altruism*

Evolutionary Psychology explains the presence of altruism with focus on benefits. From the Evolutionary Psychology perspective, there are two main hypotheses about understanding altruism: kin selection and reciprocal altruism. Kin selection and inclusive fitness hypotheses were developed by Hamilton (1964). Also, Trivers (1971) suggested that kin selection is not the only type of altruism and created the hypothesis of reciprocal altruism.

Since the cost of altruistic behavior decreases one's own fitness, people are expected to act in selfish ways. However, it is important to note that altruism is a balance or equation of benefits and costs. Le Galliard et al. (2003) explained that there are several costs of altruistic behavior, such as direct psychological cost or in direct genetic costs of competition for space. Also, it was found that more critical altruistic behavior have higher outcomes and more developed species reduce these costs and become less selfish over time.

Altruism is not all focused on costs rather there are always benefits as well. The benefits are basically investments including higher chances of passing similar genes to future generations, increasing social status, signaling health, and boosting reputation within the group (Buss, 2015). Hamilton (1964) suggested that genetic benefits, increasing the chances of passing similar genes to future generations, are the force of all altruistic behaviors.

Altruism is described as helping behavior that directly increases other people's fitness and decreases the actors'. Kin Selection and Reciprocity hypotheses were mainly discussed in Evolutionary Psychology, and Kin Selection suggested that people tend to help their kin to ensure that similar genes would pass to future generations. Moreover, reciprocity explains people help others as long as they are reciprocated. All those ideas acknowledge costs and benefits of altruistic behaviors. The costs are generally loss of resources, and benefits are various, such as increased social status or reproductive success.

#### *Kin Selection and Inclusive Fitness*

According to Hamilton (1964), altruistic behaviors could only be observed when the benefits of helping are multiplied by the relatedness between actors and receivers and when perceived benefits are higher than perceived costs. In addition to Hamilton (1964), another idea has explained that natural selection might favor the development of altruistic behavior that reduces actors' reproductive success provided that sufficient benefits accrue to the actors' kin (Wyatt, West, & Gardner, 2013). The indirect benefits to actors were considered in Kin Selection and Inclusive Fitness Hypothesis, which focuses on the sum of direct and indirect reproductive success of the actors.

#### *Reciprocity*

Kin selection mainly focuses on genetic relatedness of recipients to the actors; however, people also act altruistically in the absence of any genetic relation during daily life. Palmer and Palmer (2002) explained that altruism may occur in the absence of close genetic relatedness, which means that altruistic actions can involve individuals who are not direct kin. Buss (2008) also suggested that friends are not generally genetic relatives, yet people act altruistically to friends. Any cost, which is incurred as a result of altruistic behaviors for friends, ends up with a loss to actors and a gain to the friends. According to the concept of reciprocal altruism, non-relative recipients understand that they should reciprocate such altruistic help (Palmer & Palmer, 2002).

Trivers (1971) created the hypothesis of reciprocal altruism as a prediction that organisms can benefit by engaging in cooperative exchange. The cliché about reciprocal altruism is "You scratch my back, I'll scratch your back". Reciprocal

altruism is based on the exchange of helping behaviors with helping behaviors, social status, or any other concrete or abstract wants and needs. Gaining social status, money, or tutoring as a result of helping behavior would be a possible example of reciprocal altruism. The exchange of resources has no limit as long as both parties are fulfilled with their wants and needs. There are various motivations for reciprocal altruism, such as ensuring the reproductive success of actors, increasing social status, or gaining any desired outcome.

### *Popularity*

Popularity is a manifestation of social status. During the 20<sup>th</sup> century, popularity has been defined by the people who are most liked. Thus, the term popularity is used as synonymously with social preference and peer acceptance (Marks, Cillessen, & Crick, 2012). Many of scientific assessments that are used to determine the most popular members of the group, in fact, indicate the most liked members of the group (Sabongui et al., 1998).

From another perspective, popularity is based on being influential and visible within groups (Caravita & Cillessen, 2012). This particular perspective indicates that being liked and being popular are not the same concepts. Instead, being influential and visible makes people popular or not. This aspect of popularity is generally determined with the questions like who makes the final decisions in groups, or who is the most visible member of groups. People who are rated as popular also rated highly on visibility and influence.

Popularity is more likely based on group agreement, and only group members can give people popularity or make them unpopular (Marks et al., 2012). In addition, becoming friends with popular people increase people's popularity indicating that popularity is contagious because being friends with popular members of groups increases the popularity of all people in the group. Interaction with popular people makes even unpopular people perceived differently, such as more likeable or more visible, which are, in fact, traits of popular individuals. Sabongui et al. (1998), similarly, suggested that by choosing to associate with popular friends, people increase the chance that they will also be popular. Not being a member of a group is highly related with adjustment problems, aggression, loneliness, and academic failure (Mayeux & Cillessen, 2008).

It is important to clarify the relationship between popularity and factors that affect popularity. The factors, such as prosociality, aggression, and fitting the group norms may make changes to members' popularity. However, being popular in a group does not make those members prosocial, aggressive, or a better fit the group norms. The relation between popularity and those factors is not bi-directional, but one directional. Marks et al. (2012) explained that most of the literature about popularity looked for the relationship of popularity with aggression or prosocial behavior, but a consistent direct link has not been reported yet.

Neither aggression nor prosociality are unique predictors of popularity. However, most of the popular individuals can be identified into two subgroups of popularity: aggressive popular and prosocial popular (Mayeux & Cillessen, 2008). Buss (2015) explained that aggression helps people to increase their status or strengthen it within existing social hierarchies. Popular but mean students in high schools, such as bullies, are common examples of aggressive popular people.

Another trait of popular people is being empathic (Marcus, 1980). More empathic people are rated higher in popularity. The link between popularity and empathy was found to be strong and positive, meaning that the more popular people were described as more emphatic. Most studied characteristics of popular people are likability (Sabongui et al., 1998), best fit to group norms (Sabongui et al., 1998), aggression (Mayeux & Cillessen, 2008), prosociality (Mayeux & Cillessen, 2008), and empathy (Marcus, 1980). Popular people generally reported high in those traits by their group members.

### *The Link between Altruism and Popularity*

Living in social groups has numerous benefits (Palmer & Palmer, 2002). Those benefits might be processed as reciprocal exchange of goods. Altruistic behaviors can be invested in social status instead of any material exchange. After all, the prosocial, altruistic member may then become popular and have higher social status. Furthermore, it was found that having a high hierarchical status enables the development of reciprocal altruism (Palmer & Palmer, 2002).

It was reported that popularity and prosocial behaviors can be observed together, yet the connection was not necessarily analyzed nor were any causal conclusions drawn about the relationship between the two concepts. Prosocial behavior is a wider concept than altruism, yet it still includes altruistic actions. Therefore, it is possible to expect that prosocial popular members might be altruistic popular as well (Mayeux & Cillessen, 2008).

In addition, as previously mentioned, popular people were rated more empathic (Marcus, 1980). Also, altruistic people were found to be more empathic (Batson, 1988). Empathy seems like the common component between those two variables. Moreover, the Empathy-Altruism Hypothesis might be used to explain the relation between popularity and altruism. The relation between popularity and empathy was tested in a number of studies (Caravita, Blasio, & Salmivalli, 2008; Marcus, 1980). Also, the relation between altruism and empathy has been explained via Empathy-Altruism Hypothesis (Batson, 1988).

The link between altruism and popularity can be explained by the Empathy-Altruism Hypothesis (Batson, 1988). One of the most proposed sources of altruistic motivation is an other-oriented emotional response, which might be called as empathy. The main difference between the Empathy-Altruism Hypothesis and another theory to explain altruism is the inclusion of an explanation for the cause of the helping behavior. Empathy-Altruism Hypothesis suggests that humans feel stress when they witness someone who needs help; therefore, they help to others. Batson's (1988) study is not the one of a few that proposes a possible relation between empathy and prosocial behaviors. Eisenberg and Miller (1987) also provided quantitative findings of a positive correlation between the two variables.

From another aspect, previous studies suggested that empathetic people are rated more popular (Adams, 1981; Marcus, 1980). The sum of those research studies creates the picture that empathy leads to more prosocial and popular individuals. It is highly important to study the relation between popularity and altruism because there are several indirect indicators about the relation but not a direct one. Also, it may clarify the importance of peer acceptance and appreciation for individuals who are trying to improve their interpersonal skills.

Aforementioned, it was found that people exchange in helping behaviors when the receivers are both grateful and previously helpful (Blau, 1964). Therefore, with the manipulation of such variables, the accurate relation between altruism, popularity, empathy, likeability, and niceness can be observed. The manipulation of previous help and gratefulness results in four different conditions: Helpful and grateful, helpful and not grateful, not helpful and grateful, and not helpful and not grateful. Empathy is a common variable of altruism and popularity because altruistic and popular people are high in empathy. However, previous research did not directly assess the relationship between altruism and popularity. The current study examined this relationship using several vignettes.

The vignettes are all short scenarios about the participants' friends who need help. A gender-neutral friend is described in an environment isolated from other potential helpers. Based on previous research, gender, number of bystanders, and daily rush can have an effect on helping behaviors. The vignettes were created for this study to control for those extraneous variables to get a better idea of the relationship between altruism and popularity. The study is important because previous research has not investigated the relationship.

The current study only focuses on the outcomes of helping behavior, both the benefits and costs. Thus, the vignettes instructed participants to choose to help. Then, a manipulation check took place by asking the reason that they helped. After, the participants were asked to rate themselves in five different characteristics on a Likert scale. The characteristics were empathy, popularity, altruism, likability, and aggression. Then, they rated themselves on the Likert scale from one to seven, one being strongly disagree and seven being strongly agree.

### *Hypotheses*

*H1A:* It is hypothesized that participants presented with vignettes that include the presence of previous help will score higher on the popularity items of empathetic, altruistic, and likeable in comparison to vignettes with an absence of previous help (Blau, 1964).

*H1B:* It is hypothesized that participants presented with vignettes that include the presence of previous help will score lower on the popularity item of aggression in comparison to vignettes with an absence of previous help (Mayeux & Cillessen, 2008).

*H2A:* It is hypothesized that participants who are presented with vignettes that include the presence of gratitude will score higher on the popularity items of empathetic, altruistic, and likeable in comparison to vignettes with an absence of gratitude (Blau, 1964).

*H2B:* It is hypothesized that participants presented with vignettes that include the presence of gratitude will score lower on the popularity item of aggression in comparison to vignettes with an absence of gratitude.

*H3:* It is expected that there will be an interaction between the variables of gratitude and previous help, meaning that the effect of gratitude on participants' ratings on the popularity items of empathy, altruism, and likeability will depend on presence of previous help (Blau, 1964).

*H4:* Based on the previous research, the gender of the participant might have an influence on altruism (Darley & Batson, 1973). Therefore, it is expected that female participants, in comparison to male participants, will rate themselves higher on the altruistic item.

## **Method**

### *Participants*

Total of 120 (51 females, 69 males) participants were recruited for the study by using an online site called Mechanical TURK. Participants were restricted by location and must live in United States. The age of participants ranged between the ages of 18 and 65 ( $M=35.03$ ,  $SD=10.04$ ). Age of the participants was the other restriction to eliminate vulnerable populations. No additional exclusions were made based on gender or ethnicity. Participants were compensated for

their time and participation via payment of 25 cents. Time commitment for participants was approximately 10 minutes. Institutional Review Board (IRB) approval was obtained to ensure that all ethical guidelines are followed.

### *Measures*

#### *Demographics questionnaire*

The demographics of the participants were assessed by using a demographics questionnaire (see Appendix A). The questions inquired for the fundamental elements including age, gender, education level, and ethnicity. It was found that 15 (%12.5) of the participants completed high school, 32 (%26.67) college, 50 (%41.67) bachelors, 18 (%15) masters, and 5 (%4.17) doctorate/PhD. For ethnicity, there were 84 Caucasian, 15 Asian, 9 American Indian, 7 Hispanic, and 5 African American participants.

#### *Vignettes*

Participants were instructed to read four slightly different vignettes. The vignettes included a series of manipulations so that the researcher could observe the effects of independent variables. The manipulated variables were gratefulness and previous help. Vignettes were presented to participants with all of the four possible conditions of manipulation, which were grateful and previously helped, not grateful and previously helped, grateful and not previously helped, and not grateful and not previously helped.

Participants read through a scenario in which friends of the participants needed help because of a flat tire, and the participants helped with their friends. Those friends were purposefully chosen gender neutral so that the uncontrolled influences of the gender would be eliminated. Some other aspects of the vignette, such as control for daily rush and bystander effect, were chosen with respect to previous literature about the topic (Batson, 1988; Mayeux & Cillessen, 2008; Terry & Coie, 1991). Those aspects were controlled in the vignettes to remove their non-tested influences as confounding variables since they were found to affect the variables of empathy, altruism, likeability, aggression, and popularity.

#### *Manipulation check*

To measure the effectiveness of the vignettes, participants were asked to explain the reason that they helped the receiver. The question did not vary by vignette. The manipulation check was needed because the research was using a self-constructed measure, which had not been tested for the validity of the measure. This item used to assess the vignettes in construct validity aspect to determine whether or not the vignettes had the intended effect of promoting altruistic behavior (Cozby, 2009). It was assumed that when the participants read the vignettes, they could comprehend the information provided. However, the manipulation check item actually tested this assumption. Participants were expected to provide answers indicating that they had helped to their friends because they were noticing the difference in gratitude and reciprocity.

#### *Popularity assessment*

The Popularity Assessment aims to evaluate participants in the aspects of empathy (Marcus, 1980), altruism (Mayeux & Cillessen, 2008), likeability (Sabongui et al., 1998), aggression (Mayeux & Cillessen, 2008), and popularity (Griskevicius, Tybur, & Van den Bergh, 2010) (see Appendix B). The scale included only Likert scale type of items. The participants were expected to rate themselves on the items of empathy, altruism, likeability, aggression, and popularity on the Likert scale range, which were between "1" being strongly disagree, "4" neutral, and "7" being strongly agree.

The main reason of using vignettes instead of any other popularity and altruism scale was the focus of the study, which is perceived popularity. A previous study about perceived popularity had also used vignettes to test the hypotheses (Mayeux, 2011). Terry and Coie (1991) suggested that there is no best way of measuring social and psychological topics similar to the current study's concern. It is important to adjust present measurements and tools accordingly to the requirements of the research for the best fit. Therefore, some of the items in the vignette were picked from the sociometric research of Cillessen and Bukowski (2000), which had very similar interests such as assessing the popularity.

## **Results**

The study utilized a two-way within-subjects (2: Grateful and Not-Grateful X 2: Previously Helped and Not Previously Helped) Analysis of Variance (ANOVA) design to compare four conditions, which were grateful and previously helped, grateful and not previously helped, not grateful and previously helped, and not grateful and not previously helped. The dependent variable was self-assessed popularity and the two independent variables were being helpful and grateful. Aforementioned, the independent variables were manipulated in the vignettes, and the dependent variable was measured with the follow-up questions.

To be able to effectively interpret the results of within-subjects ANOVA, it was necessary to meet the assumptions of ANOVA. The first assumption was sphericity, which looks for variances of the differences between conditions are equal. Mauchly's test of sphericity was checked, yet the results were not interpretable because there were less than 3 levels of

repeated measures. Absence of enough number of measures leads only one set of difference scores, and there would be no comparison point for those difference scores against to indicate a violation of sphericity.

#### Hypothesis one

The results of the analyses was supported for  $H_{1A}$  for the items of empathy  $F(1,114)= 13.66, p<.001$ , partial  $\eta^2= .11$ , popularity  $F(1,114)= 6.66, p=.001$ , partial  $\eta^2= .06$  and likeability  $F(1,114)= 24.54, p<.001$ , partial  $\eta^2= .18$ , which suggests that presence or absence of previous help from a friend has statistically significant effects on participants' ratings on those listed items. However,  $H_{1A}$  also looks for the altruism item  $F(1,114)= 1.41, p=.238$ , partial  $\eta^2= .01$ , which is not found to be statistically significant.

$H_{1B}$  was not supported by the findings, which was looking for the aggression item  $F(1,114)= 1.91, p=.169$ , partial  $\eta^2= .02$  suggesting that the presence or absence of previous help does not have statistically significant effects on the aggression item.

#### Hypothesis two

The analyses showed significant main effect for previous help and gratefulness on the items of empathy, popularity, and likeable as listed in the Table 1. However, the results revealed main effects for only gratefulness not previous help on the items of altruism and aggression. These findings show that  $H_{2A}$  and  $H_{2B}$  are supported meaning that presence of gratitude has a statistically significant effect on participants' ratings on the items of empathy  $F(1,114)= 25.68, p<.001$ , partial  $\eta^2= .18$ , altruism  $F(1,114)= 9.89, p=.002$ , partial  $\eta^2= .08$ , popularity  $F(1,114)= 11.57, p=.001$ , partial  $\eta^2= .09$ , likeability  $F(1,114)= 38.96, p<.001$ , partial  $\eta^2= .26$ , and aggression  $F(1,114)= 16.38, p<.001$ , partial  $\eta^2= .13$ .

#### Hypothesis three

Interaction of previous help and gratefulness was not found to be significant in any of the items suggesting that the effects of helpfulness do not necessarily depend on the presence of gratefulness. These results revealed non-supporting findings for the  $H_3$ .

Table 1. Results of With-in ANOVA

DV	IV	F	p	Partial $\eta^2$
Empathy	Helpful	13.66	<.001 <sup>a</sup>	.11
	Grateful	25.68	<.001 <sup>a</sup>	.18
	Helpful*Grateful	.000	.959	.00
Popularity	Helpful	6.66	.011 <sup>a</sup>	.06
	Grateful	11.57	.001 <sup>a</sup>	.09
	Helpful*Grateful	.59	.445	.01
Altruism	Helpful	1.41	.238	.01
	Grateful	9.89	.002 <sup>a</sup>	.08
	Helpful*Grateful	.11	.745	.00
Likable	Helpful	24.54	<.001 <sup>a</sup>	.18
	Grateful	38.96	<.001 <sup>a</sup>	.26
	Helpful*Grateful	.639	.402	.01
Aggressive	Helpful	1.91	.169	.02
	Grateful	16.38	<.001 <sup>a</sup>	.13
	Helpful*Grateful	2.70	.103	.02

Note. df was found 114 for all of the variables.

<sup>a</sup> Statistically significant findings.

#### Hypothesis four

To test the hypothesis that female participants, in comparison to male participants, would rate themselves higher on the altruistic item, an independent samples t-test was run. The altruism item was tested in all four vignettes; thus the t-test was conducted by using the scores from all vignettes. The statistical results of the t-test in helpful and grateful condition  $t(111)= 0.47, p=.640$  suggested that female participants are not statistically different from male participants on the item of altruism. Similarly, results in the not helpful and not grateful condition  $t(111)= -0.49, p=.624$  did not suggest any statistically significant findings. Helpful and not grateful condition  $t(111)= 0.63, p=.533$  and not helpful but grateful condition  $t(111)= -0.11, p=.915$  also showed not statistically significant results. The findings of the independent samples t-test failed to reject null hypothesis so that the  $H_4$  was not supported.

### Discussion

The current study analyzed four main hypotheses. With necessary statistical analyses, it was found that some of the hypotheses were supported, whereas some were not. The hypothesis that the scores for popularity items of empathetic, altruistic, and likable would be higher when participants read vignettes with previous help compared to no previous

help was only supported for the items of popularity, empathetic, and likable. However, the results were not supported for the item of altruism. This finding suggests that previous help does not affect if participants are altruistic or not, yet it does affect if participants are popular, likable, and empathic. For instance, participants rate themselves higher in the popularity items if their friend has previously helped them previously.

Aggression item, similar to altruism, was also not affected by the presence of previous help similarly to altruism. Results for the aggression item did not differ significantly to suggest that the participants scored higher in this item when their friends did not help them. Rather, participants rated themselves with similar scores in both conditions. These findings suggest that scores in aggression do not depend on the presence of previous help.

The hypothesis that the scores for popularity items of empathetic, altruism, and likable would be higher when participants read vignettes with positively stated gratitude compared to negatively stated gratitude was supported for the items of popularity, empathetic, and likable. These results suggest that being grateful is significantly important in relations, which was also reported in the previous literature on Social-Exchange Theory (Blau, 1964). The same results were found for aggression item meaning that participants rated significantly lower when their friends were grateful for their help compared to when the friends were not grateful. These findings are important for daily life relationships and can be used to improve social interactions.

Also, it was hypothesized that effects of gratitude on participants' ratings on the popularity items of empathetic, altruism, and likeability would depend on the presence of previous help. The hypothesis was not supported. The presence of previous help does not interact with gratitude scores.

The last hypothesis was that female participants, in comparison to male participants, would rate themselves higher on the altruistic item. The results of the statistical analyses did not show any difference based on the gender of the participant. The friend that was presented in the scenario had a gender-neutral name so that it was not tested if the participants would show a difference when the person in need was in a specific gender. This result suggests that the gender of the participant does not affect the scores that are expected to show similar results in real life as well.

### **Implications and Future Research**

The current study has shown very similar results for the items of aggression and altruism. For both of the items, previous help did not reflect significant effects, yet gratefulness had. Since the results are consistent for both of the items, findings support that being grateful towards a friend affects their perspectives on altruism and aggression. When gratefulness was positively stated in the vignettes, participants rated themselves higher in altruism and lower in aggression. These findings also support previous research in Social-Exchange Theory (Blau, 1964).

Additionally, participants reported higher scores in empathetic, popularity, and likable items whenever previous help or gratefulness was present. Those findings are also consistent with previous literature (Batson, 1988).

The main result that was found in the research was empathetic, popularity, and likable items comparison to altruism and aggression items were significant when previous help was positively stated. The presence of previous help affects empathetic, popularity, likable yet does not affect altruism and aggression. This finding contradicts with previous literature because Social-Exchange Theory suggested that presence of previous help would have an effect on altruism (Blau, 1964).

The research also investigated a possible statistical interaction between the variables of previous help and gratefulness, and significant results were not found. Previous literature did not have any findings on this aspect. Social-Exchange Theory (Blau, 1964) suggests that both previous help and gratefulness should be present for continuous helpful relations. However, there was no study that looked if the presence of one variable affects another. The current study analyzed the relation and found that the effects of previous help do not depend on the presence of gratefulness. This finding is the main contribution to the literature.

Future studies could focus on the limitations of the survey. Other kinds of popularity scale could be used such as sociometric techniques. In this case, the researcher would eliminate suspicions on the variability of the test as well as other disadvantages of self-rating scales.

Also, the participants were asked to imagine a scenario. The research is based on the assumption that responses to reading a vignette and experiencing the case would be similar. A future research could benefit using a real-life situation rather than a scenario.



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