Focus on Positive and Negative Information as the Mediator of the Relationship between Empathy Tendency Guilty and Psychological Well-Being in University Students

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Abstract
In this study, the mediator effects of focus on positive and negative information on the relationship between empathic tendency, and guilty and psychological well-being in university students were investigated. The participants were 314 students, between age range of 17-32 (M.20.93, SD:1.80) attending different departments Faculty of Education, at Pamukkale University in Turkey. The data were collected by using the scale of focus on positive and negative information, tendency of empathy, scale of guilty-shame, and the psychological well-being scale. Structural modeling analyses indicated that focus on positive information was mediated on the relationship between empathic tendency, guilty and psychological well-being. However, the focus on negative information was not the condition mediation.

Key Words
Psychological Well-being, Empathic Tendency, Guilty, Focus on Positive and Negative Information.

Behavioral Scientists have focused on positive aspects of people rather than their problem in recent years. One of the conceptualizations in this approach which is called positive psychology is psychological well-being (Seligman, 2002; Seligman & Csikszentmihalyi, 2000). Psychological well-being was explained with a model which was developed by Ryff (1989) and which consists of six sub-aspects including establishing positive relationships with others, self-acceptance, purpose of living, self-determination, environmental dominance and personal development. Psychological well-being is an important indication of life satisfaction and is synonymous to the concept of happiness (Andrews & McKennell, 1980). Furthermore, happiness and subjective well-being can frequently be defined as identical concepts (Diener & Lucas, 2000). Therefore, happiness, subjective well-being, life satisfaction and psychological well-being are focused on by the conceptual and theoretical discussions. Psychological well-being can be defined as a general feeling of happiness (Schmutte & Ryff, 1997). Psychological well-being is associated with many positive characteristics in the literature. For example; it was determined that optimist people are psychologically better in a study by Chang and Sanna (2001). Furthermore, it was found that the levels of self-respect, life satisfaction, happiness and environmental adaptation of the individuals who are in a psychologically good condition are high (Amato & Sobolewski, 2001; Reid, 2004), and are more self-determinant (Yeh & Yang, 2006) and the perceived success thereof is higher (Cenkseven & Akbas, 2007). On the other hand, it was found
that psychological well-being and negative characteristics such as being neurotic (Weinstein & Ryan, 2010) and being pessimist (Chang & Sanna, 2001; Daukantaite & Bergman, 2005) are inversely related. One of the most important factors ensuring psychological well-being is one's establishing good relationships with others. Furthermore, empathizing with others enable one to establish good relationships with others (Shanafelt et al., 2005; Thomas et al., 2007). Empathy can be defined as understanding others' emotional condition or status and as an emotional response given after understanding what others feel or may feel in a certain condition (Eisenberg et al., 1998). Davis (1983) explains empathy with a model consisting of four aspects. The four aspects of his model are as follows: taking opinions of others which constitutes the cognitive aspect of empathy, empathic concern which constitutes the emotional aspect of empathy, imaginary participation and personal stress.

It was found that empathy facilitates the relationship between people (Granello, 1999) as well as functioning as a buffer in decreasing aggression (Björkqvist, Österman, & Kaukiainen, 2000; Kaukiainen et al., 1999) and increasing social popularity (Vitaglione & Barnett, 2003). More importantly, it was found that the psychological well-being of the individuals with emphatic tendencies is higher (Shanafelt et al., 2005; Thomas et al., 2007).

Another factor which assists people in establishing positive relationships with others is the guilt feeling that lead individuals understand others and cause wrong behaviors of an individual to be removed. Since guiltiness, as a moral emotion, is an emotion which activates conscience of an individual, it has many significant social functions. Guiltiness might lead one towards positive social behaviors as well as ensuring one's adaptability to a great extent by way of avoiding anti-social behaviors (Hoffman, 2000). Guiltiness is at the same time considered as an adaptation-ensuring emotional condition (Beer & Keltner, 2004; Luyten, Fontaine, & Carvey, 2002; Tangney, 1991, 2003, p. 388) as it leads one to take others-oriented perspectives (Leith & Baumeister, 1998), contributes to the relationships between people (Covert, Tangney, Maddux, & Heleno, 2003) and enables anger management (Lutwak Panish, Ferrari, & Razzino, 2001) and results in the compensation of the damage given to others (Haidt, 2003; Keltner & Buswell, 1996, 1997; Taylor, 1985, p. 86). In addition, guiltiness motivates individuals for positive social relationships (Weinstein & Ryan, 2010) as it reveals the feelings of individuals such as helping other (Chapman, Zahn-Waxler, Cooperman, & Iannotti, 1987) and benevolence (Silfver, Helkama, Lönnqvist, & Verkasalo, 2008). Furthermore, it was found that those who feel guilty in their relationships with others contribute more to the well-being of others (Silfver et al., 2008). Two of the variables in the present study are focusing on positive and negative information. Focusing on positive and negative information was first defined by Noguchi, Gohm and Dalsky (2006). They discussed focusing on positive and negative information within the framework of the concept of valence. Some individuals pay attention to the positive aspects of the events around them while some pay attention to the negative aspects thereof. Those who pay attention to the positive aspects of the events around them are defined as positive information oriented, and those who pay attention to the negative aspects of the events around them are defined as negative information oriented. The aspect paid attention here is positive and negative cognitive information (Noguchi et al., 2006). In a cross-cultural study on focusing on positive and negative information, it was found that both Japanese and American people focus on positive information more than negative information (Noguchi, Gohm, Dalsky, & Sakamoto, 2007). In other words, individuals pay more attention to the positive events around them.

The Present Study

Empathy and guiltiness are two of the emotions which assist individuals in establishing positive relationships with others (Lewis & Sullivan, 2005, p. 186). Developing empathy and the guilt feelings are necessary for both relationships between people and moral development (Eisenberg, 2000). In other words, when a person thinks that he acts morally insufficient, he might feel himself guilty (Lazarus, 1991, p. 240; Niedenthal, Gruber, & Ric, 2006, p. 98). The individuals, who are psychologically in a good condition, experience more positive feelings (Diener & Larsen, 1993). Therefore, those who have experiences of positive emotional condition might be psychologically better in a long term (Fredrickson, 2001; Ryff and Keyes, 1995). In addition, the level of psychological well-being of the individuals whose empathic tendencies are high is high as well (Shanafelt et al., 2005; Thomas et al., 2007). Accordingly, a positive relationship is expected to exist between empathic tendency and psychological well-being. In addition, individuals might feel themselves guilty in case of a negative
condition they caused or when they could not sufficiently assist others. A certain amount of guilt feeling might lead individuals to assist others. This situation might enable one to be psychologically well. In some studies, a positive relationship was found between guilt feeling and positive characteristics (Covert et al., 2003; Leith and Baumeister, 1998). Therefore, a positive relationship is expected to exist between psychological well-being and guiltiness. In addition, it was found that the life satisfaction of the individuals whose level of psychological well-being is high is high as well (Andrews and McKen nell, 1980). In a study by Noguchi et al. (2006), a positive relationship was found between life satisfaction and focusing on positive information while a negative relationship was found between life satisfaction and focusing on negative information. Therefore, a good relationship is expected to exist between focusing on positive information and psychological well-being while a negative relationship is expected to exist between focusing on negative information and psychological well-being. Focusing on positive and negative information is related to the personal characteristics of optimism and pessimism. While pessimist individuals focus on the negative aspects of an event, optimist individuals focus on positive aspects. In other words, the level of paying attention to positive and negative information is related to many psychological processes like improving state of mind as the mediator of personality and other psychological variables (Noguchi et al., 2006).

In light of the explanations above, (a) the empathic tendencies and guilt feelings of university students would have a direct role on their psychological well-being; (b) university students’ focusing on positive and negative information would have an indirect (mediator) role on their psychological well-being. To this end, it will be tested if the equation in Figure 1 could be confirmed or not.

Method

Participants
A total of 314 undergraduate students was comprised of 70% women, 30% men participated in this study. Participants ranged in age from 17 to 32 ($M = 20.93, SD = 1.80$). Approximately 18% of participants were freshmen, 17% were sophomores, 32% were juniors, and 33% were seniors.

Psychological Well-Being Scale: The Psychological Well-Being Scale developed by Ryff (1989a) comprises 84 statements. PWBS has good psychometric features. It was adapted and translated into Turkish by Cenkseven (2004) and Akın (2008). The Alpha coefficient of the scale was calculated as .93 in this study. The statements in the scale have this type of structure “I determine the direction and purpose of my life.”

Emphatic Tendency Scale: The emphatic tendency scale developed by Dökmen (1988) comprises 20 statements. The scale ranges from 1, I completely disagree to 5, I completely agree. The Cronbach alpha of the scale was calculated as 88, and the test-retest reliability was found to be $r=.82$ at the intervals of three weeks. The scale has good psychometric features. The alpha coefficient was calculated as .75 in this study. The statements in the scale have this type of structure. “My eyes water”; “There are tears in my eyes when I watch a sad film”.

Guilt-Shame Scale: The scale developed by Şahin and Şahin (1992) comprises of 24 statements. 12 guilt statements were administered to the participants. The scale is scored according to the choices ranging from 1, I felt no discomfort to 5, I felt much discomfort. The Cronbach alpha of the scale was calculated as 81. The scale has good psychometric features. In this study, the alpha coefficient was found to be .84. The statements in the scale have this type of structure. “Failing to achieve the expectations your family has for you.”

Scale of the Focus on Positive and Negative Information: The scale developed by Noguchi et al. (2006) comprises 26 statements. It is a Likert type scale scored as 1, completely untrue for me 5, True for me. The scores on the scale ranges from 26 to 130. The alpha coefficient of the scale for the statements that focus on positive information was found to be 83, and alpha coefficient of the scale for of the statements that focus on negative information was calculated to be 70 by Kapıkıran (2009). The statements in the scale have this type of structure: “I pay attention to positive things that other people do. I generally feel that people are happy.”

Procedures and Data Analysis
The 314 volunteer participants of the study were students from various departments in Pamukkale University Faculty of Education taking psychology course at the time the research was carried out. A
series of explanation were given to the students before the application of the scale. A set made up of scale statements was given to the participants. Based completely on their own feelings and opinions the participants completed the questionnaire in approximately 40 minutes. The data obtained from the 314 students were analyzed using SPSS 14 software. LISREL 8.71 software (Jöreskog and Sörbom, 2004) was used to determine the fit value of the data obtained in the study.

Results

In study, (a) correlations between the study variables were investigated; (b) focus on positive information and negative information were tested as the mediators of the association between empathic tendency and psychological well-being, (c) focus on positive information and negative information were tested as the mediators of the association between guilty and psychological well-being. Descriptive statistics and bivariate correlations for the measured variables are presented in Table 1. Both skewness and kurtosis values were found to be within acceptable limits for a normal distribution. As indicated in Table 1, psychological well-being, focus on positive-negative information, empathic tendency, and guilty were correlated with one another psychological well-being was correlated positively with focus on positive information ($r = .40$, $p < .001$), but was correlated with negatively focus on negative information ($r = -.16$, $p < .001$). Moreover, guilty was correlated positively with focus on positive information ($r = .35$, $p < .001$), but was not correlated with focus on negative information ($r = .09$, $p > .05$). These correlations indicated that pre-conditions were met for testing the mediating roles of focus on positive information and focus on negative information in the link of empathic tendency and with psychological well-being. Guilty was met for testing the mediating roles focus on positive information the link of and with psychological well-being, but was not met focus on negative information (Baron and Kenny, 1986).

Focus of Positive and Negative Information as Mediators of the Link between Guilty and Empathic Tendency and on the Psychological Well-being

I used the LISREL 8.71 program with the maximum likelihood method and followed the three steps of Holmbeck (1997) to test the mediation effects for model (see Figure 1). Six indexes were used to assess the goodness of fit of the models. I used the suggests by Hu and Bentler (1999) to assess the goodness of fit of the models: the comparative fit index (CFI; .95 or greater), the incremental fit index (IFI; .95 or greater), the Normed Fit Index (NFI; .95), the Goodness Fit Index (GFI; .95) the standardized root-mean-square residual (SRMR; .08 or less), and the root-mean-square error of approximation (RMSEA; .06 or less).

The First step, I mediated the effect of empathic tendency and guilty (predictor variable) on psychological well-being (dependent variable). The structural model used to test this hypothesis (see Figure 2) showed an excellent fit to the data, $X^2 = 14.63$ df = 3, $N = 314$, $p < .05$; CFI = .96, IFI = .96, NFI = .96, NNFI/TLI = .96, GFI = .98, SRMR = .041 and a relatively good RMSEA= 0.074 (Jöreskog and Sörbom, 1993), 90% Confidence Interval (CI) 0.019; 0.14 (empathic tendency -psychological well-being $\beta = .39$ df = 3, $t = 7.62$, $p < .05$ and guilty -psychological well-being $\beta = .13$, df = 3, $t = 2.47$, $p < .05$). The second step, partially mediated model indicated an excellent fit to the data, $X^2 = 2.21$, df = 2, $N = 314$, $p > .05$; CFI = 1.00, IFI = 1.00, NFI = 1.00, NNFI/TLI = 1.00, GFI = 1.00, SRMR = 0.0024, RMSEA= 0.019, 90% Confidence Interval (CI): 0.0 ; 0.12 also indicated an excellent fit to the data (empathic tendency and focus of positive information $\beta = .50$, $t = 10.78$, $p < .001$; empathic tendency and psychological well-being $\beta = .50$, $t = 10.78$, $p < .001$; focus of positive information and psychological well-being $\beta = .23$, $t = 3.61$, $p < .05$; empathy tendency and focus of negative information $\beta = -.27$, $t = -4.93$, $p < .05$; guilty and focus of positive information $\beta = .26$, $t = 5.74$, $p < .05$; guilty and focus of negative information $\beta = -.15$, $t = 2.45$ $p < .05$, see, figure 2). The third step is to test the fully mediated structural model (the indirect effect without the direct effect). The result of the fully mediated model, $X^2 = 2.22$, DF = 2, $N = 314$, $p > .05$, CFI = .98; IFI = .98; NNFI/TLI = 0.97; SRMR = 0.048; RMSEA = 0.019, 90% CI = 0.0 - 0.12 also indicated an excellent fit of the model to the data. The path relation dropped from .50 to b = .28 when focus of positive information was added into the equation relationship between empathy tendency and psychological well-being. However, the path relation dropped from .13 to .08 when focus of positive information was added into the equation relationship between guilty and psychological well-being. The model accounted for 36% of the variance in focus on positive information, 06% of the variance in focus on negative information, and 23% of the variance in psychological well-
being. Next, path model testing was tested direct, indirect, and mediated relations among variables of interest (Baron & Kenny, 1986; Frazier, Tix, & Baron, 2004). Thus, this model, with all direct and indirect links freely estimated, was used to test the significance of indirect relations using indirect effect procedure. There were significant direct and indirect links of -.12 ($\beta = .50 \times .23$), between empathy tendency, focus of positive information and with psychological well-being, and between guilty, focus of positive information and with psychological well-being (.06 ($\beta = .26 \times .23$). That is, focus of positive information partially mediated the link of empathy tendency with psychological well-being. The focus of positive information fully mediated the link of guilty with psychological well-being.

**Discussion**

The purpose is to test whether or not the focus on positive-negative information has a mediator impact on psychological well-being and empathic tendency whether it is a mediator between psychological well-being and guilty.

According to the results obtained, the proposed structural equation model achieved perfect suitability values. A positive significant relationship was found between psychological well-being and empathic tendency. In other words, people with empathic tendencies have higher levels of psychological well-being. This finding is consistent with the existing literature (Shanafelt et al., 2005; Thomas et al., 2007).

Additionally, there is a positive relationship between the focus on positive information and psychological well-being. This result is consistent with the results of the study conducted by Noguchi et al. (2006). In addition, other research examined the relationship between optimism (Chang & Sanna, 2001; Daukantaite & Bergman, 2005) and positive emotion (Vera et al., 2008) that are closely related with the focus on positive information and psychological well-being. Another significant relationship revealed as a result of the study is that between the focus on positive information and empathic tendency.

All these relationships prove that focus on positive information supports the impact of the mediator role on between empathic tendency and psychological well-being. According to Noguchi et al. (2006), the tendency to pay attention to positive information may mediate between extroversion and happiness since happy people are likely to pay attention to positive information. The focus of positive information partially mediated the link of empathy tendency with psychological well-being ($B = .39, p<.01$ to $\beta = .28, p<.05$). Guilty the second predictor in the equation, had a direct positive relationship with psychological well-being. The focus of positive information fully mediated the link of guilty with psychological well-being ($\beta = .13, p<.05$ to $\beta = .08, N.S$). It is possible to say that guilty may be a reason for an individual to feel psychologically well considering the fact that guilty leads people to positive behaviors in terms of its adaptive role (Beer & Keltner, 2004; Luyten et al., 2002). Empathic tendency and guilty leads moral behaviors of individual. Moral behaviors associate with the person values. There is an important function that values provide psychological well-being of individual (Joshanloo & Ghaedi, 2009).

Besides, there is a positive relationship between guilty and the focus on positive information while there is no significant statistical relationship with the focus on negative information ($\beta = .08, p>.05$). No results were found that supported or rejected these findings. As a result, the focus on positive information can be mediator on the interaction between empathic tendency and guilty (predictor variables) and psychological well-being.

There are some limitations in the current research. The first limitation is not equal to participants’ gender. The two limitation is that the present research is a cross sectional study. Longitudinal and experimental studies on this matter may determine the direction of the relationships better. Measurement tools make self-report measurements. This study also bears the limitations of self-report measurements, for example, accepting that the participant has given true information or that participant has given as much information as possible.

**References/Kaynakça**


