The Relationship Between Basic Need Fulfillment and Prosocial Behavior: The Moderating Role of Culture

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Abstract

We explored the relationship between the satisfaction of basic psychological needs (autonomy, relatedness, and competence) and prosocial behavior. We also investigated how this relationship may differ between cultural groups. We administered an online survey to participants in the U.S. and India using Amazon Mechanical Turk. This survey included a measure of basic psychological need fulfillment (Van der Kaap-Deeder et al., 2020), self-construal as an individual-level marker for cultural differences (Singelis, 1994) and a four-item measure of prosocial intentions (Baumsteiger & Siegel, 2019). We hypothesized that satisfaction of the basic needs would predict increased prosocial intentions. Further, we expected culture to moderate this relationship such that autonomy would be more predictive of prosocial behavior in an American sample and relatedness would be more predictive of prosocial intentions in an Indian sample. Our findings indicated that, when put into a regression model with the other basic needs, relatedness satisfaction positively predicted prosocial intentions. Within the same model, autonomy satisfaction was not predictive of prosocial intentions. A cultural moderation was found, but, contrary to our predictions, relatedness satisfaction was more predictive of prosocial intentions in America than India. Interdependent self-construal mediated this relationship. Our findings support the domain-specific relevance of relatedness satisfaction to prosocial behavior. Further, relatedness satisfaction may play a more complex role in predicting prosocial behavior than we initially suggested.

Keywords: prosocial behavior, basic psychological needs, self-construal, culture.
The Relationship Between Basic Need Fulfillment and Prosocial Behavior: The Moderating Role of Culture

Self-determination theory (SDT) is a theory of motivation that has wide-ranging implications for outcomes such as wellness and academic achievement (Deci & Ryan, 2020). Basic needs theory (BNT) exists within the broader scope of SDT and argues for the existence of three psychological needs for human development: autonomy (feelings of ownership and initiative in one’s actions), competence (feelings of mastery and potential for growth), and relatedness (feelings of connection or belonging with others). Deci and Ryan (2020) suggest that the significance of these needs is their support of intrinsic motivation. Intrinsic motivation is a pivotal construct within SDT: it is commonly regarded as one’s drive to engage in an activity for the sake of personal interest, making it distinct from any outside motivations. The intrinsic motivation brought about by the need-fulfillment of autonomy in particular has been associated with higher academic achievement (Froiland & Worrel, 2016). The three needs more directly have been associated with benefits such as increases in subjective well-being and health behavior change (Liu et al., 2021; Sheeran et al., 2021; Yu et al., 2018).

The aforementioned outcomes regarding basic need fulfillment largely emphasize benefits to oneself. However, there are also benefits to those around us, which is seen in the connection drawn between need fulfillment and prosocial behavior. To begin with autonomy need-fulfillment, Gagne (2003) looked at the connection between autonomy and prosocial behavior. Specifically, they found that the degree to which one’s environment supports autonomy and one’s inherent tendency to engage in autonomous action both predicted interest in giving to charity and volunteer hours (Gagne, 2003). It is important to note that while both
concepts are likely related to autonomy need fulfillment, they do not directly test this construct. It is unclear if the results hold if need-fulfillment was directly measured.

One explanation for the link between autonomy and prosocial behavior may be related to evolutionary adaptive behaviors in humans. Humans have an inherent tendency towards helping behavior which would have increased the chances of survival in early humans (Donald et al., 2021; Ryan & Deci, 2000). The role of autonomy would be to facilitate that natural tendency towards helping others.

The relationship between autonomy and prosocial behavior seems to suggest a source for prosocial behavior that is more focused on how prosocial behavior is brought about by our own personal interest in the behavior: a source that still appears to be largely focused on oneself. Relatedness, on the other hand, may indicate a connection to prosocial behavior that is based more on our feelings towards others. In examining an observed relationship between gratitude and prosocial behavior, Shiraki and Igarashi (2018) posit that relatedness need fulfillment may be a relevant mediating variable. They first point out a set of findings which suggest that feelings of gratitude lead to prosocial behavior not simply for the person one feels gratitude towards, but also towards strangers (Bartlett & DeSteno, 2006). The prosocial behavior also extending towards strangers rules out an explanation of reciprocal altruism as that should be directed towards the person one feels gratitude towards. Relatedness fulfillment is a mediating variable in that gratitude fulfills one’s need for relatedness, leading one to further seek out fulfillment of that need through prosocial behavior. In research on relatedness need fulfillment, those who were seen to have more relatedness in their lives also pulled more affective value associated with relatedness from other encounters (Moller et al., 2010). Feelings of gratitude, then, could be an example of said greater affective value. To test this idea, Shiraki and Igarashi (2018) looked at
the relationship between feelings of gratitude and the amount of money donated to charity, finding evidence suggesting that relatedness fulfillment does, in fact, play a role as a mediating variable.

Given the evidence for both autonomy and relatedness being predictive of prosocial behavior, it becomes important to consider the exact forms these needs should take in order to be predictive. In attempting to establish a causal connection between the three psychological needs and prosocial behavior, only relatedness was found to cause more prosocial outcomes (Pavey et al., 2011). In order to manipulate the three needs, a word scramble task was used where different sets of words were vetted to implicitly prime each of the psychological needs. Included here was also a neutral set of words to compare as a baseline. Only those given the relatedness sets of words had statistically higher prosocial intentions than those given the neutral set, suggesting that relatedness may be particularly important for prosocial intentions. This finding seems to be inconsistent with Gagne (2003) which suggested that autonomy was predictive of prosocial behavior. However, it is necessary to consider that the findings of Pavey et al., (2011) concerned priming the psychological needs as opposed to need satisfaction. Psychological need priming and psychological need fulfillment may have different relationships with prosocial behavior. For example, it is unclear how long the effect of priming relatedness lasts. Autonomy orientation and support are measured instead of manipulated, suggesting that the predictive power of these constructs is not momentary. In attempting to find lasting connections with prosocial behavior, we are ultimately more concerned with need-fulfillment as a predictor.

To our knowledge, there has not been research connecting competence need-fulfillment with prosocial behavior. However, competence has been jointly predictive with the other psychological needs on outcomes such as health behavior change and intrinsic motivation (Ryan
& Deci, 2020; Sheeran et al., 2021). It would then seem important to measure competence need-fulfillment along with the other psychological needs and compare their predictive power of prosocial behavior.

When considering the predictive power of each need in BNT, one consideration may be that certain kinds of cultures value one need more than the others. Of note here is the individualism-collectivism dynamic that is frequently discussed in cross-cultural research (Taras et al., 2014). While there are several definitions of individualism and collectivism, Markus and Kitayama (1991) approach characterizing the dynamic through the way of viewing the self. In America, a typically individualistic culture, the self is typically viewed as separate from groups. In India, a typically collectivistic culture, the self is typically viewed as being a part of groups. These two types of self-construal may have some conceptual relation to the needs found in BNT. An independent self-construal may be connected to autonomy due to their shared focus on the self. An interdependent self-construal may be connected to relatedness due to their shared focus on others. Given these potential connections, it could be the case that individuals in each culture favor certain needs over others: individualist cultures may favor autonomy need satisfaction and collectivist cultures may favor relatedness need satisfaction. For example, research by Iyengar and Lepper (1999) found that European Americans feel more motivation when given a choice when compared to Asian Americans. Then, each culture’s favored need fulfillment may be more predictive of prosocial behavior than the other needs.

Based on the previous connections drawn between BNT and prosocial behavior, we predict that both autonomy and relatedness will independently and jointly predict prosocial behavior in both cultures. Given the potential influence of culture on specific needs, we predict that culture will moderate the relationship between BNT and prosocial behavior such that
autonomy will be more predictive of prosocial behavior in America than in India. Inversely, we predict that relatedness will be more predictive of prosocial behavior in India than in America. Also, we predict that measures of interdependent-independent self-construal will mediate this moderation. Due to the lack of previous research connecting competence and prosocial behavior, we do not have any predictions regarding competence.

Alternatively, autonomy and relatedness may be similarly predictive of prosocial behaviors across cultures. Previous research (Miller & Das, 2011) has suggested that there may be an autonomous motivation in certain cultures for certain relatedness behaviors (i.e., role-expected helping). Therefore, autonomy and relatedness may be difficult to disentangle. However, this research looked at a subset of relatedness behaviors as while our research intends to look at relatedness in general and its connection to prosocial behavior.

Methods

Participants

A total of 91 participants were gathered for this study. Using Amazon Mechanical Turk, 44 participants were sampled from an American population (Male = 31, Female = 13; Mage = 37.61 SD = 10.58) and 47 were gathered from an Indian population (Male = 40, Female = 7; Mage = 31.23 SD = 3.24). Participants were proficient in English for both samples. An a priori power analysis (testing for a regression coefficient in a multiple regression model with five predictors) using G*Power (Faul et al., 2007) found that given $\alpha = 0.05$ and a 0.95 power, the sample size was sufficient to detect a medium effect ($f^2 = 0.15$).

Materials and Procedure
Relevant materials for this study included the Basic Psychological Need and Frustration Scale (BPNSFS) and a measure for self-construal (Singelis, 1994) as our main predictor variables. Intentions to engage in prosocial behaviors (Baumsteiger & Siegel, 2019) was our main outcome variable.

**Basic Psychology Need Satisfaction**

The BPNSFS (Van der Kaap-Deeder et al., 2020) measured autonomy, relatedness, and competence need satisfaction. There were 12 statements that participants rated how true they were in their lives on a scale of 1 (not true at all) and 5 (completely true). Four items each were associated with the basic needs and Cronbach’s alpha scores were calculated for each subscale. Both autonomy and relatedness subscales held scores of .80. Competence held a score of .77. Items were intended to be general statements about their lives rather than referring to specific domains. Examples of autonomy questions included “I feel that my decisions reflect what I really want” and “I feel a sense of choice and freedom in the things I undertake.” Examples of relatedness questions included “I feel the people I care about also care about me” and “I feel close and connected with people who are important to me.” Examples of competence questions included “I feel confident that I can do things well” and “I feel capable at what I do” (See Appendix A). Composite scores were calculated for each psychological need individually and for all of them together through averaging them.

Of note here is that the scale also included questions intended to measure need frustration. The authors of the scale did not refer to these items as simply reverse coded items and suggested that users of the scale use their own discretion regarding the inclusion of the items. We did not analyze data on basic need frustration as these needs appear to be conceptually different from a lack of satisfaction in any particular need.
**Self-Construal**

The self-construal measure we used is the Singelis Self-Construal Scale (Singelis, 1994). The scale included 30 items, with 15 measuring interdependent self-construal ($\alpha = .83$) and 15 measuring independent self-construal ($\alpha = .88$). All items were rated on a seven-point scale with one indicating strong disagreement and seven indicating strong agreement (See Appendix B).

**Prosocial Intentions**

The prosocial outcome variable was measured through a rating of prosocial intentions borrowed from Baumsteiger & Siegel (2018). Participants were asked to rate their intentions to engage in four prosocial actions concerning people they know and strangers (see Appendix C). Answers were rated on a scale of 1 (definitely will not do this) to 7 (definitely will do this). Cronbach’s alpha for this scale was .73.

**Results**

**Descriptive Statistics and Correlations**

See Table 1 for descriptive statistics for the study variables broken down by nationality. As expected, an independent samples t-test revealed that Indians were higher in interdependent self-construal than Americans ($M_{diff} = .471$), $t(1, 89) = 3.05$, $p = .003$. The two groups did not significantly differ in any other key variables. However, in terms of demographic variables, Indians were significantly younger than Americans ($M_{diff} = 6.38$), $t(1, 50.54) = 3.83$, $p < .001$ (equal variance is not assumed). The two groups did not differ in their self-reported SES groups ($M_{diff} = -.03$), $t(1, 89) = -.33$, $p < .37$.

Past research has demonstrated that Indians and Americans differ in their views on helping known others compared to strangers (Miller et al., 1990). Therefore, given that the PBIS was split between items involving known others and strangers, we also assessed cross-national
differences in each of these types of helping intentions independently. However, we observed no cross-national differences in intentions to help strangers ($p = .187$) or known others ($p = .653$).

**Table 1**

*Descriptive Statistics Broken Down by Nationality*

<table>
<thead>
<tr>
<th></th>
<th>U.S.</th>
<th>India</th>
<th>$p$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Autonomy Satisfaction</td>
<td>3.87 (.81)</td>
<td>3.68 (.51)</td>
<td>.174</td>
</tr>
<tr>
<td>Relatedness Satisfaction</td>
<td>3.91 (.76)</td>
<td>3.68 (.53)</td>
<td>.096</td>
</tr>
<tr>
<td>Competence Satisfaction</td>
<td>3.84 (.79)</td>
<td>3.72 (.59)</td>
<td>.421</td>
</tr>
<tr>
<td>Prosocial Behavior</td>
<td>5.48 (1.03)</td>
<td>5.60 (.67)</td>
<td>.540</td>
</tr>
<tr>
<td>Independent Self-Construal</td>
<td>5.31 (.79)</td>
<td>5.60 (.65)</td>
<td>.062</td>
</tr>
<tr>
<td>Interdependent Self-Construal</td>
<td>5.13 (.79)</td>
<td>5.61 (.69)</td>
<td>.003</td>
</tr>
</tbody>
</table>

Correlations between variables are reported in Table 2. We observed positive relationships between types of need satisfaction. Specially, autonomy satisfaction was positively correlated with both relatedness satisfaction, $r(89) = .74$, $p < .001$, and competence satisfaction, $r(89) = .665$, $p < .001$. Relatedness satisfaction was also positively correlated with competence satisfaction, $r(89) = .57$, $p < .001$.

Autonomy satisfaction ($r(89) = .47$, $p < .001$), relatedness satisfaction($r(89) = .53$, $p < .001$), and competence satisfaction ($r(89) = .35$, $p < .01$) were all correlated with prosocial intentions. Unexpectedly, independent self-construal ($r(89) = .64$, $p < .001$) and interdependent self-construal ($r(89) = .60$, $p < .001$) were also strongly correlated with prosocial intentions.

**Table 2**

<table>
<thead>
<tr>
<th>Variable</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
</tbody>
</table>
Multiple Regression

We ran a multiple regression analysis to examine predictors of prosocial intentions with autonomy satisfaction, relatedness satisfaction, competence satisfaction, independent self-construal, and interdependent self-construal included in the model. Regression coefficients are presented in Table 3. As expected, relatedness satisfaction positively predicted prosocial intentions ($b = .372, p = .015$). Contrary to our expectations, autonomy satisfaction did not predict prosocial intentions when the other basic needs and self-construal were included in the model. Additionally, independent ($b = .33, p = .048$) and interdependent ($b = .36, p = .005$) self-construal both positively predicted prosocial intentions. The model explained 52% of the variance in prosocial behavior intentions, $R^2 = .52, F(6, 84) = 15.26, p < .001$.

**Table 3**

*Standardized Regression Coefficients of Basic Need Satisfaction on Prosocial Behavior Intention*

<table>
<thead>
<tr>
<th></th>
<th>$B$</th>
<th>$SE$</th>
<th>95% CI</th>
<th>$p$</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>$LL$</td>
<td>$UL$</td>
</tr>
<tr>
<td>Autonomy Satisfaction</td>
<td>.07</td>
<td>.16</td>
<td>-.171</td>
<td>.583</td>
</tr>
<tr>
<td>Relatedness Satisfaction</td>
<td>.29</td>
<td>.15</td>
<td>.169</td>
<td>.872</td>
</tr>
</tbody>
</table>

*p < .05, **p < .01*
BASIC NEED FULFILLMENT AND PROSOCIAL BEHAVIOR

<table>
<thead>
<tr>
<th>Competence Satisfaction</th>
<th>-0.09</th>
<th>0.14</th>
<th>-0.280</th>
<th>0.323</th>
<th>0.410</th>
</tr>
</thead>
<tbody>
<tr>
<td>Independent Self-Construal</td>
<td>0.28</td>
<td>0.16</td>
<td>0.003</td>
<td>0.657</td>
<td>0.048</td>
</tr>
<tr>
<td>Interdependent self-construal</td>
<td>0.32</td>
<td>0.12</td>
<td>0.113</td>
<td>0.601</td>
<td>0.005</td>
</tr>
</tbody>
</table>

**Moderation**

A moderation analysis using SPSS Macro PROCESS (Hayes, 2013) was run to see if nationality (U. S. = 0, India = 1) moderated the relationship between basic need satisfaction and prosocial behavior. The analysis revealed that nationality did moderate the relationship between need satisfaction and prosocial behavior, $b = -0.537, p = 0.03$. Relatedness was more predictive of prosocial behavior in the U.S. ($b = 0.913, p < 0.001$) than in India ($b = 0.376, p = 0.059$). As there was a significant age difference between America and India, we also ran a moderation with age included as a covariate and found that the moderation remained significant ($b = -0.529, p = 0.032$).

**Mediated Moderation**

Finally, we ran a mediated moderation analysis to see if self-construal (independent-interdependent) mediated the nationality x relatedness need satisfaction interaction. Using SPSS Macro PROCESS (Hayes, 2013) with 5,000 bootstrapped iterations, we found an indirect effect of the nationality x relatedness need satisfaction interaction on prosocial behavior via interdependent self-construal ($b = 0.10, SE = 0.036, 95\% CI [0.038, 0.177]$). As zero was not in the 95% confidence interval, the indirect effect of culture x relatedness need satisfaction interaction via interdependent self-construal was significant. With interdependent self-construal in the model, the direct effect of nationality x relatedness on prosocial intentions was no longer significant, suggesting a full mediation ($p = 0.185$).
Discussion

Our initial prediction about autonomy fulfillment and relatedness fulfillment both predicting prosocial intentions was partially rejected. Across the sample, only relatedness was predictive of prosocial intentions when compared with the other basic needs. Relatedness being more predictive of prosocial intentions in America than in India was also a surprising result, as we initially expected relatedness fulfillment to be more impactful in a collectivist culture than in an individualistic culture. Finally, self-construal did play a role in that interdependent self-construal did mediate our observed cultural moderation. Independent self-construal was not revealed to be a mediator of this relationship.

Relatedness being the only predictor of prosocial intentions may be the result of a potential multicollinearity issue within the basic need measurements. As presented in Table 2, each of the basic needs were correlated with one another. Further, they were each predictive of prosocial intentions when we ran independent correlations. It could be the case that fulfillment in each basic need may be conceptually similar to one another. There may be circumstances where deficits in autonomy fulfillment may also entail some deficits in the other basic needs. Keeping this potential issue in mind, relatedness may have had the most relevance to the domain of prosocial intentions given that its statistical significance remained in the regression analysis.

Turning to the cultural moderation of relatedness satisfaction, this result could be explained by the nature of social roles between the two countries. Obligations regarding one’s role in society often fall under the concept of Dharma in India (Paranjpe, 2013). As role obligations often concern helping behaviors, India may have fairly potent prosocial norms. Due to the influence of these stronger norms, Indians may engage in prosocial behavior while being less concerned about any kind of need satisfaction. On the other hand, Americans, who do not
have an exact cultural equivalent to Dharma, may have less portent prosocial norms. Need satisfaction would then play a stronger role in motivating one to help others.

Another possibility is that Indians may gain more need fulfillment out of prosocial behavior. Savani et al. (2010) found that, when comparing independent and interdependent behaviors (such as helping behavior), Americans felt an equal sense of choice between the two. On the other hand, Indians associated more choice with interdependent behaviors than independent behaviors. While limited to role-expected behaviors, a similar conclusion is found in Miller et al., (2011). Their results suggest that sense of choice is negatively correlated with role-expected behaviors for Americans. However, sense of choice and role-expected behaviors were positively correlated for Indians. This positive correlation could indicate that Indians gain some level of autonomy fulfillment from engaging in other-related behaviors such as prosocial behavior. In this case, Indians would gain more need fulfillment out of a prosocial act than Americans would. This possibility differs in a notable way from the aforementioned explanation about the strength of prosocial norms. Rather than basic need satisfaction being a prerequisite that influences prosocial behavior, need satisfaction would be the outcome that is achieved through prosocial behavior. Comparing these possibilities may be difficult to do with only a correlational analysis.

Interdependent self-construal mediating the cultural moderation lends some support for the individualist-collectivist dynamic. Individualism and collectivism are often coined by the way they consider the nature of the individual in relation to groups, with self-construal potentially being presentation of these ideas within oneself. Interdependent self-construal playing some role in a domain such as prosocial behavior does lend itself to the idea that individualism and collectivism can be useful in explaining some differences between cultures. That being said,
the exact way this dynamic explains cultural differences may be up for contention. For one, independent self-construal having nothing to do with the mediation, and not even being negatively correlated with interdependent self-construal, could be indicative of the orthogonal nature of self-construal. If this understanding is expanded back to the national level, a cultures collectivism may not be completely opposed to its levels of individualism and vice versa. Further, while self-construal was useful in explaining the cultural moderation, it did so in a way that was opposite to our original connection. Even if cultures were ultimately either individualist or collectivist, the way these values may come about in behavior might be counterintuitive and nuanced.

Interestingly, both kinds of self-construal were well correlated with prosocial intentions. This conclusion held true when compared with basic need fulfillment where the entire model explained more than half of the variance in prosocial intentions. It is unclear why self-construal was predictive of prosocial intentions when basic needs are accounted for. Further research may further delve into what components of self-construal are predictive of prosocial intentions on their own.

**Limitations**

One main limitation of our study is that instead of measuring observed prosocial behavior, we measured prosocial intentions. While the PBIS did show some correlation with observed prosocial behavior (Baumsteiger & Siegel, 2018), it is unclear if our results would hold if we were to directly measure behavior. A second limitation is that although the individualism-collectivism dynamic was a foundation of our cultural hypotheses, it is unclear if these results will hold if we compare other individualist and collectivist countries. It may be the case the relationships observed were present only when comparing America and India. Further, even if
the relationship holds in other comparisons, the strength of the relationships may change. A third limitation is that while we achieved the minimal sample size suggested through a G-Power analysis, a sample of only 91 participants prevented us from performing some analyses. For example, it would have been beneficial to examine the predictiveness of need fulfillment on prosocial intentions within each culture. If we were to do so, however, we would have sample sizes of only 44 and 47. These samples would be too small to adequately interpret analyses. A fourth limitation would be a lack of detailed demographics questions between the two countries. While we did include some questions such as age and SES, it is unclear if there may be other relevant difference between American and Indian participants that we did not initially consider. For example, it is unclear if the Americans and Indians who use Amazon Mechanical Turk do so for the same motivations. In turn, these motivations could have some bearing on the generalizability of our results to their wider populations. Additionally, when it comes to demographics such as SES, it is unclear if low, middle, and high SES groups have the same implications in both cultures. With a self-report measure including only these three options for SES, we may be missing some nuance regarding the way this demographic could have impacted our results.

**Future Directions**

Informed by our limitations, our future directions would involve obtaining a larger sample size, examining other cultural comparisons, measuring observed prosocial behavior, and having more detailed demographic items. In addition to these directions, we may also consider a potential behavioral manipulation. As our analyses were correlational, it is unclear if relatedness fulfillment or prosocial intentions cause an increase in the other or if there is some third variable we have not considered that explains the observed relationship. Need fulfillment itself may be
difficult to manipulate in a study as it is usually developed throughout life. It is also unclear if a manipulation over the course of an experiment will have persistent implications for prosocial behavior. A potential modification could be made to the work Pavel et al. (2011) where instead of using primes involving scrambles, prescribed behaviors may lead to momentary increases or decreases in need fulfillment.
References


Liu, W., Su, T., Tian, L., & Huebner, E. S. (2021). Prosocial behavior and subjective well-


Appendix A

BPNSFS Items

Below, we ask you about the kind of experiences you actually have in your life. Please read each of the following items carefully. You can choose from 1 to 5 to indicate the degree to which the statement is true for you at this point in your life.

1. I feel a sense of choice and freedom in the things I undertake.
2. I feel that the people I care about also care about me.
3. I feel confident that I can do things well.
4. I feel that my decisions reflect what I really want.
5. I feel connected with people who care for me, and for whom I care.
6. I feel capable at what I do.
7. I feel my choices express who I really am.
8. I feel close and connected with other people who are important to me.
9. I feel competent to achieve my goals.
10. I feel I have been doing what really interests me.
11. I experience a warm feeling with the people I spend time with.
12. I feel I can successfully complete difficult tasks.
Appendix B

Independent/Interdependent Self-Construal Scale

INSTRUCTIONS

This is a questionnaire that measures a variety of feelings and behaviors in various situations. Listed below are a number of statements. Read each one as if it referred to you. Beside each statement write the number that best matches your agreement or disagreement. Please respond to every statement. Thank you.

1=STRONGLY DISAGREE 4=DON’T AGREE OR 5=AGREE SOMEWHAT
2=DISAGREE DISAGREE 6=AGREE
3=SOMEWHAT DISAGREE
7=STRONGLY AGREE

____1. I enjoy being unique and different from others in many respect

____2. I can talk openly with a person who I meet for the first time, even when this person is much older than I am.

____3. Even when I strongly disagree with group members, I avoid an argument.

____4. I have respect for the authority figures with whom I interact.

____5. I do my own thing, regardless of what others think.

____6. I respect people who are modest about themselves.

____7. I feel it is important for me to act as an independent person.

____8. I will sacrifice my self interest for the benefit of the group I am in.

____9. I’d rather say "No" directly, than risk being misunderstood.

____10. Having a lively imagination is important to me.

____11. I should take into consideration my parents’ advice when making education/career plans.

____12. I feel my fate is intertwined with the fate of those around me.
13. I prefer to be direct and forthright when dealing with people I've just met.

14. I feel good when I cooperate with others.

15. I am comfortable with being singled out for praise or rewards.

16. If my brother or sister fails, I feel responsible.

17. I often have the feeling that my relationships with others are more important than my own accomplishments.

18. Speaking up during a class (or a meeting) is not a problem for me.

19. I would offer my seat in a bus to my professor (or my boss).

20. I act the same way no matter who I am with.

21. My happiness depends on the happiness of those around me.

22. I value being in good health above everything.

23. I will stay in a group if they need me, even when I am not happy with the group.

24. I try to do what is best for me, regardless of how that might affect others.

25. Being able to take care of myself is a primary concern for me.

26. It is important to me to respect decisions made by the group.

27. My personal identity, independent of others, is very important to me.

28. It is important for me to maintain harmony within my group.

29. I act the same way at home that I do at school (or work).

30. I usually go along with what others want to do, even when I would rather do something different.
Appendix C

Prosocial Behavioral Intentions Scale

Instructions: Imagine that you encounter the following opportunities to help others. Please indicate how willing you would be to perform each behavior from 1 (Definitely would not do this) to 7 (Definitely would do this). If you are more likely to complete one task (e.g., help a stranger find a key) than another (e.g., help a stranger find a missing pet), please respond to the task that you would be more likely to perform.

1. Comfort someone I know after they experience a hardship
2. Help a stranger find something they lost, like their key or a pet
3. Help care for a sick friend or relative
4. Assist a stranger with a small task (e.g., help carry groceries, watch their things while they use the restroom)