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The relation of service activity to change in empathy

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The Relation of Service Activity to Change in Empathy

An Honors Program Project Presented to
the Faculty of the Undergraduate
College of Health and Behavioral Studies
James Madison University

in Partial Fulfillment of the Requirements
for the Degree of Bachelor of Arts

by Nancy Lee Costa Windsor

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Accepted by the faculty of the Department of Psychology, James Madison University, in partial fulfillment of the requirements for the Degree of Bachelor of Arts.

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Table of Contents

Dedication.....	3
Acknowledgements.....	4
Abstract.....	5
Literature Review.....	6
Methods.....	16
Results.....	18
Discussion.....	23
References.....	31
Appendix A.....	35
Appendix B.....	38
Appendix C.....	39
Appendix D.....	40

Dedication

This research is dedicated to those who dedicate their lives to serving others.

To my father, Steven Costa, who was an amazing example of someone who endlessly placed the needs of others before his own wants and needs. You always made people feel special while doing whatever was in your power to alleviate their stress. You left a legacy of service to your faith, your family, your country, and your community; for me to live a life of service is to live a life that will always be a remembrance of you.

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Abstract

The purpose of this study was to explore the relationship between empathy, service, and other variables that have been seen in the past to be possible predictors of empathy and service.

Undergraduate and graduate students took a survey measuring their emotional empathy, strength of religious faith, intent to engage in civic action, other predictor variables, and the amount of service each participant engaged in. Pearson's correlations and independent t tests were run to analyze the relationships between the variables. The intent to engage in civic action measure was highly correlated with both the emotional empathy scale and strength of religious faith scale. In addition, two groups of majors (group one included social sciences, biology, and education; group two included all other majors) were found to be different in their levels of empathy and their intent to engage in service. To test whether an increase in service was related to a change in empathy, some participants took the survey twice. However, differences at pretest and posttest were not found to be significant.

Keywords: empathy, service, volunteerism, faith, civic action, major

The Relation of Service Activity on Change in Empathy

Empathy

Empathy can be defined as the ability to understand another person's experiences from that person's perspective or to have an emotional reaction to another person's experiences (Mehrabian & Epstein, 1972). As can be seen in its definition, it is a social skill that can increase connection between people. The presence of empathy has also been found to lead to more frequent prosocial helping activities (Mitani, 2013). It has an affective component that can be observed in the emotions that one feels that correspond to another person's feelings. However, it also has a cognitive component which is observed in the differing ability that physical, social, and emotional development can bring to the empathetic perspective-taking of others (Markstrom et. al., 2010).

Riggio, Tucker, and Coffaro (1989) argued that rather than being a specific construct or two, empathy is best understood and measured in terms of multiple social skills. This view can aid in understanding empathy. They define the social skills of interest to showing and feeling empathy as encoding/expressing, decoding/sensitivity, and regulation. They explain that for someone to be affectively empathetic, they must not only be able to decode another's feelings accurately but they must also be able to successfully encode to the other person that they understand and feel similarly. For someone to be cognitively empathetic, again, successful decoding is not sufficient; they must also be able to successfully regulate their own emotions and appropriately express their cognitive understanding.

Although empathy can be viewed as an interaction of the social skills listed above, measures still tend to test the experience of empathy based on only one of the two traditional constructs: affective and cognitive-perspective taking (Riggio, Tucker, & Coffaro, 1989). The Questionnaire Measure of Emotional Empathy is an example of a measure that defines empathy affectively (Mehrabian & Epstein, 1972). Although it focuses on the affective component of empathy, the Questionnaire Measure of Emotional Empathy has been found to be related to social concern (which is a cognitive action). This particular measure, with its affective roots, is also correlated with prosocial behaviors (Chlopan, McCain, Carbonell, & Hagen, 1985).

Volunteering and Factors Contributing to Volunteering

Prosocial behaviors and volunteering can have multiple positive impacts. Obviously, the people and organizations being helped experience positive gain. However, volunteering has been found to have many positive effects on those that put forth the prosocial action as well. Piliavin and Siegl (2007) confirmed previous research with their thirty year longitudinal study regarding the impact that volunteering can have on the health of the volunteer. Volunteering was found to have stronger correlations with psychological well-beings than the correlations that were found for people in other types of activities and organizations that were not volunteer-based. In addition, physical health was significantly affected by volunteering at a small level; increases were seen not only simply between people who volunteer more than others, but also with higher levels being correlated with people who volunteer in more than one type of organization. Even though partial correlations were small between volunteering and physical health in their study, Piliavin and Siegl (2007) cite many other studies that show physical health benefits to volunteering and list multiple limitations that most likely caused their small correlations. Lum and Lightfoot (2005) found that volunteering slowed depression rates and lowered mortality rates

in older adults. Additionally, volunteers have been found to have higher levels of self-confidence and greater leadership skills (Cruce & Moore, 2007). Volunteering is considered to be a leisure activity by some scholars because of its many benefits and the fact that people choose to engage in the activity (Gallant, Smale, & Arai, 2010).

Because volunteering includes working for common goals, like reducing the impacts of poverty or increasing the health of the environment in communities, many of its avenues can be considered civic engagement (Gallant, Smale, & Arai, 2010). The developers of the Civic Attitudes and Skills Questionnaire found that future plans of civic action are significantly related to current and past volunteer work (Moely, Mercer, Illustre, Miron, & McFarland, 2002). An additionally important aspect that has been found to be related to whether people act in a prosocial nature includes whether or not the group being helped is considered an “in-group” or “out-group” to the helper. A person is more likely to help another person or group of people if the people being helped are considered to be similar enough to the actor to be in their “in-group” (Aydinli, Bender, Chasiotis, Cemalcilar, Vijver, 2014).

Religion. There have been many characteristics attributed to acting in a helping manner. Mitani (2013) lists that church attendance has been highly correlated with volunteering. Other studies have found church attendance acted as a predictor to volunteering behavior (Piliavin & Siegl, 2007). Most religious organizations value and attempt to foster serving and caring for others (Markstrom et. al., 2010). These attempts to foster prosocial behavior along with the doctrine of different religions may even set up a feeling of expectation for members to act for the sake of others (Hill & Den Dulk, 2013). The Santa Clara Strength of Religious Faith questionnaire is a scale that has been found valid in many studies in measuring strength of beliefs across religious denominations. It is interesting to note that the measure has found that the

aspects of religious faith that it measures are not associated with social desirability; social desirability has been found to be another possible contributing factor when some individuals who practice religion decide to act for the good of others (Freiheit, Sonstegard, Schmitt, & Vye, 2006). Religious faith has been positively correlated with amount of time spent serving and amount of organizations that a person partners with (Penner, 2002).

Markstrom and colleagues (2010) looked deeper into the relationship among religion, volunteering, and empathy. They found that both attendance in religious organizations and religious beliefs were significantly related to volunteering, with attendance being slightly more important (having a higher beta value in their regression model). However, they found that participants that attended religious organizations more regularly compared to those who attended less frequently were not significantly different in experiencing the affective component of empathy. In addition, self-reported importance of beliefs was significantly linked with empathy; in males, importance of beliefs was more strongly linked with the cognitive/perspective-taking component of the experience of empathy whereas in females importance of beliefs was more significantly linked with the affective component of the experience. However, overall they found that the effects of religion (both attendance and importance of beliefs) on empathy could be rendered nonsignificant when their variables of volunteerism (whether or not the subject was currently volunteering) and care for others were included (Markstrom et. al., 2010). Therefore, there are mixed results in the current available literature as to the impact of religion on volunteering and empathy.

Education. Meanwhile, some researchers have noted education level as being the most positively correlated factor with volunteering. Bekkers (2005) names education as a resource to volunteers. Mitani (2013) summarized past research by stating that education's impact on

volunteering may be due to other factors. These additional factors include being able to understand community needs, being better organized, being better able to communicate, and being better able to empathize with others; all of which have the opportunity to grow in educational settings. However, it has been found that not just a higher educational level, but higher achievement within those education levels (as seen in achievement tests like the SAT) predicts higher rates of volunteering (Moore, Warta, & Erichsen, 2014). In addition, volunteering has been linked with better grades and critical thinking skills (Cruce & Moore, 2007). Experiencing volunteer opportunities in the high school setting has been found to increase the likelihood of being both a volunteer and more civically involved in adulthood (Hill & Den Dulk, 2013).

Interactional effects. Both religious and educational avenues have the ability to create a pattern of service opportunities in people's lives. This pattern has been found to generalize as adolescents grow and makes volunteering experiences seem to be a normal part of everyday life. An interaction between school-type and religion has been noted; students at religious-based schools tend to have a more positive view of volunteering and civic engagement. In addition, religious-based students tend to continue their volunteering into adulthood, especially in the Protestant setting (Hill & Den Dulk, 2013). The role identity theory predicts continuation of service by explaining that a person may begin in a volunteer role for an external reason (like school requirements) but after time has passed they continue to volunteer because they see volunteering as a portion of their identity (Finkelstein, Penner, & Brannick, 2005).

Satisfaction. While religion and/or education may lead people to begin service activities (Mitani, 2013), satisfaction in the prosocial actions and experiences is also vital to length of volunteering. Interestingly, in a study looking at long-term volunteer service found that empathy

was not significantly related to length of service or amount of time volunteering (Finkelstein, Penner, & Brannick, 2005). In a study on volunteers working with AIDS patients, length of service was influenced directly by satisfaction, motivation, and lower levels of social support for the volunteer. Length of service was only indirectly influenced by integration into the organization and helping personality (Omoto & Snyder, 1995). Studies have found that when people begin to volunteer regularly, many of them remain volunteering consistently for many years. A survey study found that volunteers with higher levels of empathy continued work with the same organization for a longer amount of time (length of service, months and years) and invested more time (hours) volunteering than did volunteers with lower levels of empathy (Penner, 2002).

Motivation and reasons for volunteering. Motivation includes both explicit and implicit factors. It has been found that planned actions tend to be governed mostly by explicit motivation while spontaneous actions are governed more by implicit factors (Aydinli et. al., 2014). Implicit motivations have been found to be able to have their roots in the actor's ego, the actor's altruistic nature, or in a mixture of social factors (Winniford, Carpenter, & Grider, 1997).

Egotistic motivations to volunteer or serve others include the basic human needs of achievement, relationship, and influence for the actor. Expectancy theory predicts that behavior is governed by the expectancy that those needs will be met (Winniford, Carpenter, & Grider, 1997). The ultimate goal of someone who is egotistically motivated is to better themselves (Batson & Shaw 1991). In a review of available empathy measures, the Questionnaire Measure of Emotional Empathy was found to be significantly related with a Personal Distress scale in the Davis Interpersonal Reactivity Index. The Personal Distress scale measures negative feelings like

anxiety in social settings (Riggio, Tucker, & Coffaro, 1989). Ridding oneself of these anxious feelings when one feels empathy is a possible egotistic motivator for volunteering.

Gallant and colleagues (2010) noted that the continuation of serving others may hinge on the intrinsic nature of an individual's past experiences which could be impacted if the individual sees their motivation for volunteering as being for an external reason (i.e. as part of membership with an organization or as a course requirement). They made a distinction between mandated service, especially based on school and graduation requirements, and non-mandated service. They found that even mandated service when seen as high quality is related to positive changes in attitudes towards civic action, but is not necessarily related to increased action after the required service (Gallant, Smale, & Arai, 2010). In addition to high quality experiences, Winniford, Carpenter, & Grider, (1997) express that feeling in an internal locus of control for the situation and their overall lives is also important for those that volunteer.

Altruistic tendencies have also been found to motivate prosocial behavior. These motivations include wanting to improve another's life or situation without the expectation of personal reward or reciprocation. While some internal rewards may come, including feeling useful and fulfilled, the altruistic motivation is primarily other-oriented (Winniford, Carpenter, & Grider, 1997). The empathy-altruism hypothesis predicts that when someone feels empathy towards another, altruistic motivation will be aroused in that person and their behavior will be based upon a want to improve the other's life. The actor will still try to find the least costing behavioral plan to help, but their ultimate goal is based upon the person they feel empathy towards. The empathy-altruism hypothesis has been confirmed in its explanation of behavior in many experimental situations (Batson & Shaw, 1991).

Social factors may have implications on motivation as well. Social Exchange Theory posits that the prosocial behaviors are decided upon based upon the possibility and balance of costs and rewards to the actor. Volunteers may also feel the obligation to serve, both for the continuation of a social exchange relationship (they serve because they hope others would serve them if they were in a similar situation) and for feeling they are required because of personal gains they have experienced (being “well- off”). Social factors have been found to be the least influencing, after egoism (most influencing) and altruism (Winniford, Carpenter, & Grider, 1997).

Empathy as a factor of volunteering. Bekkers (2005) found empathy as the most prominent character trait in those who most commonly volunteer. Davis et al. (1999) lists empathy as a predictor to whether or not people will respond to direct requests for help. They also found that a person’s empathy can impact whether or not a person will choose to be in an environment that may induce contact with those who may be in greater need. Christopher Einolf’s (2008) research on empathy shows that empathy can be a predictor to some prosocial behaviors. He asked his participants who had previously rated themselves with an altruism scale how many times within the past year they had participated in specific helping behaviors. While empathy scores had some predictive correlations, like whether or not someone would give money to a homeless person; empathy scores did not predict many of the other helping behaviors he examined, like giving a seat to someone else on public transportation.

In his book, Dr. Mohammadreza Hojat (2007) explains that some techniques that people have used to increase empathy in themselves and others include things like perspective- taking exercises, simulation (among other imagination techniques), and communication about similarities and differences between groups of people (for example, those in need versus those

not in need as much). The technique of taking another's perspective has especially been seen to increase a person's wanting to engage in helping behaviors. Eisenberg, Hofer, Sulik, and Liew (2013) also discussed a link between cognitive perspective taking and prosocial behavior. Continued volunteering more often follows experiences that have been paired with post-volunteer reflection about the reasons the actor helped in the first place (Hill & Den Dulk, 2013).

However, a study done by Davis, et al. (2003), suggests that there may be a discrepancy between propensity of behaving in a helping manner (which includes feeling empathy) and actual volunteering in service activities. In their study, characteristics of volunteers before their volunteer experience (characteristics included empathy among others) did not predict continued engagement in volunteer activities to a significant level. The only pre-volunteer experience characteristic that was able to significantly predict if participants would continue their volunteering was the initial importance the participant saw in the volunteer act (Davis et al., 2003).

Present Study

While past research has found that empathy tends to be a characteristic of people who volunteer (Mitani, 2013; Bekkers, 2005), the present research was seeking to find if that characteristic can simply act as a pre-requisite to volunteering or if the more someone volunteers the more this characteristic tends to change (if there is any changing through the act of volunteering). Although researchers have found consistency in prosocial tendencies of up to twenty-seven years from the ages of 4-5 (Eisenberg et. al., 2013), the fact that increased education (Mitani, 2013) and perspective taking experiences contribute to increased volunteering and empathy (Eisenberg et. al., 2013) begs the question: Does the actual experience of volunteering itself (which brings people in contact with more information and education about

the circumstances and needs of others) grow the feeling of empathy? The purpose of the current study was to find if there is a significant relation between time spent in service activities, motive to participate in those activities, and empathy level (including changes in empathy level). The present research was seeking to better define the relation between time spent volunteering and empathy because past research has found somewhat contradictory results between participants' having empathy and their consistently acting in a helping/prosocial manner rather than simply having acted in prosocial manners in the past.

Hypotheses. Due to previous research findings that activities that allow people to practice perspective taking and learn the similarities and differences between themselves and others can impact empathy (Hojat, 2007), I hypothesize that there will be a significant correlation between the time an individual spends in volunteer/service and their empathy level; furthermore, I predict that there will be significant differences from pre- and post- service empathy levels in proportion to the additional amount of time a participant spent in service (H1).

Empathy has been identified as a predictor of volunteerism (Bekkers, 2005). Church involvement can also predict prosocial activity (Mitani, 2013). I believe that because both of these variables are related to civic action, there will be links between the two as well. Therefore, I also predict that there will be significant correlations between empathy and the other measures: strength of religious faith and intent to engage in civic action (H2).

Even though this study will be done within the student setting, which has students of similar ages, those who have attended the university longer have had more time to grow the factors that Mitani (2013) found important to empathy, especially understanding the community needs. Therefore, I hypothesize that the year in school of the participant will affect their score on the empathy scale (H3).

Previous research has found significant relationships between certain majors and their propensity of volunteering, due to these findings I also hypothesize that the majors and areas of study the participants are pursuing will affect their empathy score (Cruce & Moore, 2007). I predict that those pursuing studies in social sciences, education, and biology will have significantly different scores than those pursuing other majors (H4). These majors have been identified based upon the findings of previous research (Cruce & Moore, 2007).

In accordance with the empathy-altruism hypothesis, when people feel empathy they are motivated to act in an altruistic manner, therefore it should follow that empathy would affect the amount of service a person is motivated to engage in (Batson & Shaw, 1991). The empathy-altruism hypothesis leads me to predict that there will be a correlation between level of empathy and the percentage the participants report that they would still have engaged in their volunteer activity if there were not external requirements for their service (H5).

An exploratory analysis was run studying if the motive a person has for engaging in service (primarily out of want, as part of a class requirement, or as a membership requirement in an organization) will have an impact on empathy level. Due to the finding that planned helping (which volunteering can be considered) is more affected by explicit motivation rather than implicit motivation (which empathy can be a predictor of) will make this particular finding interesting (Aydinli, et. al, 2014). While it seems that explicit motivation could have an impact on the amount or type of service a person may engage in, it will be interesting to see if their explicit motivation can impact the effect the service activity may possibly have.

A second exploratory analysis will run the data through a multiple regression to see which predictors are most powerful in the data set.

Method

Participants

A total of 522 university students participated in this study, including both undergraduate and graduate students. Of those students, 458 took the survey only once (either at the beginning or end of the semester) and 64 took the survey twice (and were used to study differences from pretest to posttest). Students majoring in biology, education, and the social sciences accounted for 51.5%, while 48.5% of students were studying other disciplines. Twenty percent of participants were males. In addition, the majority of participants were junior academic level or below (59.8%). Freshmen accounted for 23.3% of the participants, sophomores made up 14.6%, juniors represented 21.9%, seniors included 25.9%, fifth year and beyond seniors made up 6.5%, and graduate level students represented 7.9% of the sample. Participants were recruited via a bulk email. As an incentive for participation, participants had the option to enter into a drawing for three \$25 gift cards.

Materials

The study utilized a self-report survey using Qualtrics. It included three self-report scales and a demographic survey.

Questionnaire Measure of Emotional Empathy (Mehrabian & Epstein). A 33 question self-report scale that ranges from +4 (very strong agreement) to -4 (very strong disagreement). Questions include the following subscales: susceptibility to emotional contagion, appreciation of the feelings of unfamiliar and distant others, extreme emotional responsiveness, tendency to be moved by others positive emotional experiences, tendency to be moved by others negative emotional experiences, sympathetic tendency, and willingness to be in contact with

others who have problems. In the current study, at pretest it had a Cronbach alpha level of .849 and at posttest it had a Cronbach alpha level of .857, indicating high internal consistency. A participant's final score is computed by getting the arithmetic mean of the items. (See Appendix A for scale).

Civic Action subsection from the Civic Attitudes and Skills Questionnaire (Moely, Mercer, Ilustre, Miron, & McFarland). An 8 question self-report scale that ranges from 1 (strongly disagree) to 5 (strongly agree). It defines civic action as "intentions to become involved in the future in some community service or action." (Moely et. al., 2002). In the current study its Cronbach alpha levels were .904 (at pretest) and .906 (at posttest), meaning it has high internal consistency. A participant's total score on this scale is measured by computing the average of the items. (See Appendix B for scale).

Santa Clara Strength of Religious Faith Questionnaire (Plante & Boccaccini). A 10 question self-report scales that ranges from 1 (strongly disagree) to 4 (strongly agree). It asks questions about opinions of faith and religious actions that are valid no matter denomination. In the current study, Cronbach levels were .983 at both pretest and posttest, indicating extremely strong internal consistency. (See Appendix C for scale).

Demographic and Additional Information Survey. Questions included age, religious preference, gender, major, year in school, how many hours of service they have completed so far in the semester, and what type of volunteer work they mostly participate in (whether it is of their own choice, part of a class requirement, or whether it is part of membership requirements in a student organization). (See Appendix E for demographic and additional information survey).

Procedure

Five weeks after the beginning of the fall semester, a bulk email was sent to 21,069 eligible students. After consenting to the study, the participants entered a personalized identification code to be able to match pretest and posttest scores. The identification code was the first letter of their first name, the last two numbers of their university issued student number, and the two digit day of their birthdate. They then completed the measures and demographic questions. At the end of the same semester (the thirteenth week), eligible students were once again sent the bulk email, requesting for both new participants and for returning participants to complete the survey again. After pairing the scores, the data were analyzed in the pretest data set, the posttest data set, and the paired (for participants who participated at both the pretest and posttest) data set.

Results

Hypothesis 1

To test the relationship between the time an individual spent in service and their empathy level, first a Pearson's correlation between the total hours spent in service and their empathy score was run. This relationship was found to not be significant, $r(244) = -.030, p = .637$ (at pretest); $r(324) = .040, p = .467$ (at posttest) .

However, to further understand the relationship between time in service and the impact it may have on empathy, participants' scores who took the survey twice were matched and their scores analyzed. A Pearson's correlation showed that these participants' change amount of service (number of hours) from their pretest scores to their posttest scores was not significantly correlated with any change on the empathy measure from pretest to posttest, $r(62) = -.057, p = .652$.

A paired-samples *t*-test was conducted to determine if the empathy scores at pretest were different from the empathy scores at posttest. The results indicated that there was not a significant difference between participants' empathy scores at pretest and posttest, $t(63) = -.897$, $p = .373$, $d = .11$

In fact, the empathy scores at pretest and posttest were highly correlated for each participant. A Pearson's correlation indicated that the strength of this relationship was strong, $r(62) = .911$, $p < .001$.

Hypothesis 2

Pearson's correlations were used to analyze the relationships between the three measures. The participants' scores on the empathy measure were found to be significantly correlated with their scores on the intent to engage in civic action measure at both pretest and posttest, $r(249) = .362$, $p < .001$ (at pretest); $r(333) = .388$, $p < .001$ (at posttest).

The empathy measure was found to not be significantly correlated with the strength of religious faith measure, $r(249) = .116$, $p = .066$ (at pretest); $r(333) = .101$, $p = .064$ (at posttest).

The strength of religious faith measure was found to be significantly correlated with the intent to engage in civic action measure, $r(249) = .199$, $p < .003$ (at pretest); $r(333) = .245$, $p < .001$ (at posttest).

Hypothesis 3

A Pearson's correlation was also run to determine the relationship between the participants' year in school and their empathy level. This relationship was not significant, $r(249) = -.068$, $p = .285$ (at pretest); $r(333) = .016$, $p = .766$ (at posttest).

Hypothesis 4

An independent-samples t test was conducted to evaluate the hypothesis that students who are pursuing majors in the social sciences, education, and biology will significantly differ in their likelihood to pursue volunteer and pursue civic action from students pursuing other majors. A significant difference was found at both pretest and posttest between the intent to engage in civic action measure between the different groups of majors, $t(248) = 2.036, p < .05, d = .26$ (at pretest); $t(333) = 2.351, p < .02, d = .26$ (at posttest). Those students with majors in the social sciences, education, and biology ($M = 4.11, SD = .63$ at pretest; $M = 4.15, SD = .58$ at posttest) had significantly higher scores than those pursuing other majors ($M = 3.94, SD = .70$ at pretest; $M = 3.98, SD = .73$ at posttest).

Additionally, an independent samples t test helped evaluate if students' majors were related to different levels of empathy. The test was significant at the posttest only, $t(331.6) = 3.916, p < .001, d = .43$. Students who were studying the social sciences, education, and biology ($M = 44.03, SD = 24.04$) had significantly higher levels of empathy than students studying other majors ($M = 33.22, SD = 26.42$). At pretest, it was found to not be significant, $t(248) = 1.743, p = .083, d = .22$.

Hypothesis 5

A Pearson's correlation was run to analyze whether a person's level of empathy is related to the amount of volunteer work they self-report that they would still complete if they were doing their volunteer work purely from self-motivation (not as a requirement from a class, organization, or otherwise). The correlation was not significant, $r(182) = .110, p = .136$ (at pretest); $r(274) = .028, p = .643$ (at posttest).

Exploratory Analyses

A one-way analysis of variance was conducted to test whether the main motive a person had for participating in service work (mostly by their own choice, mostly as part of a class requirement, or mostly as part of a membership experience with a student organization) reflected differences in their empathy level. The test was not significant, $p = .406$.

A stepwise multiple regression was run with the data to establish which of the variables studied are the best predictors of empathy level. The variables entered into the regression included the participants' civic action measure score, gender, age, strength of religious faith group (high or low), and major group (social sciences, education, or biology versus other majors). The stepwise regression found that three of the five variables are able to significantly predict empathy level. The variables that are able to predict empathy level are the civic action measure score, gender (1: male, 2: female), and major group (1: is a social sciences, education, or biology major; 2: is a different major). $R^2 = .218$, adjusted $R^2 = .211$, $F(3, 324) = 30.187$, $p < .001$. Approximately 21.1% of the variance in empathy level can be explained by a person's civic action score, gender, and major group. The relevant raw-score regression equation of the stepwise regression is: $Y' = 12.856 \text{ civic action score} + 14.348 \text{ gender} - 6.510 \text{ major group} - 29.638$.

After collecting data, I was interested in whether the participants in different major groups had different levels of strength of religious faith. An independent-samples t test was conducted and resulted in non-significant results.

In addition, the scores on the strength of religious faith were divided to create a low and high score groups. The low group consisted of the bottom third of possible scores (a total score

of 40 is available on the measure; scores of 1-13 were considered low in strength of religious faith); the high group consisted of the top third of possible scores (participants with scores of 27-40). These groups were run through independent samples *t* tests testing participants' strength of religious faith group with their empathy level and intent to engage in civic action level. There were no differences between the religious faith groups and their empathy level, $t(118.243) = -1.524, p = .130, d = .23$ (at pretest); $t(118.761) = -1.646, p = .102, d = .23$ (at posttest). The groups did differ in their intent to engage in civic action, $t(103.317) = -2.863, p = .005, d = .44$ (at pretest); $t(113.765) = -4.300, p < .001, d = .61$ (at posttest). Participants in the high level of strength of religious faith ($M = 4.19, SD = .52$ at pretest; $M = 4.24, SD = .55$ at posttest), were found to significantly intend to engage in civic action more than those in the low level of strength of religious faith ($M = 3.88, SD = .78$ at pretest; $M = 3.83, SD = .73$).

Pearson's correlations were also ran between the variables of the scores on the measures, age, percentage of the volunteer work they would do without obligations, and the amount of hours of volunteering they would still complete.

The age of the participants was significantly correlated with the amount of hours of volunteering they completed, $r = -.199, p < .001$. The younger the participants were, the more hours they tended to volunteer.

The participants' score on the intent to engage in civic action measure was significantly related to the percentage of volunteer work they self-reported they would still complete without requirements, $r = -.240, p < .001$. A higher score on the civic action measure was related to a lower percentage the participants self-reported they would still complete.

The participants' score on the intent to engage in civic action measure was also significantly related to the amount of hours the participants had completed, $r = -.278, p < .001$. A higher score on the civic action scale was related to a lower amount of hours they had already completed.

The percentage the participants self-reported they would still volunteer without obligations was significantly related with the amount of hours they had already completed, $r = -.25, p < .001$. Lower amounts of hours a person had already completed were related with higher self-reports of participants still completing their volunteer works without obligations.

Discussion

Hypothesis 1

My primary hypothesis was not supported. There were no significant relationship found between the amount of time an individual spent in service and their empathy. Further, there were no significant differences in the empathy scores of those participants that took the survey both at the beginning and end of the semester. This means that there was no significant effect of any additional service experiences that the participants had during the weeks between the pretest and posttest.

This finding means that although increased education, which came as the semester progressed, could lead to increased levels of empathy (Mitani, 2013), it did not have that effect during the time of this study. Also, even though increased experiences in which a person is able to practice perspective taking has been found to lead to an increase in empathy (Eisenberg et. al, 2013), the volunteer experiences that the participants of the current study volunteered with did not have the same type of effect. A possible explanation for the current findings is that the

volunteer experiences that this study's participants had did not sufficiently allow the volunteers to take the perspective of those being helped. This could be for multiple reasons. The volunteers may not have been in a position that allowed them to understand the position of those who were being helped. Another possibility is that although some participants volunteered for a longer amount of time than other participants, it may not have been as high of quality experiences.

The pretest and posttest empathy scores were highly correlated. This finding reflects prior research that prosocial tendencies stay consistent throughout from ages 4 until about age 31 (Eisenberg et. al, 2013). Empathy could be considered a prosocial tendency, especially because it is a characteristic of volunteers (Mitani, 2013).

Only a small amount of the eligible participants actually completed the research, these students may have already had higher levels of empathy than the general population which may have led to less significant findings in regards to empathy levels. They may have already been too similar or too high to highlight any true differences or changes.

Hypothesis 2

My hypothesis that the three measures utilized in this study would be correlated was partially supported. The civic action measure was found to be correlated with both the strength of religious faith measure and the empathy measure. The correlation between the empathy measure and the civic action measure is consistent with prior research that empathy is the variable that is most found in those who volunteer (Bekkers, 2005). The correlation between the civic action measure and the strength of religious faith measure is consistent with the findings that church attendance is a highly predictive factor of volunteer work (Piliavin & Siegl, 2007; Mitani, 2013) even though church attendance is not directly reported on the strength of religious faith measure;

other aspects of belief which should accompany attendance are directly reported on the measure (Plante & Boccaccini, 1997).

The empathy measure and strength of religious faith measure were not significantly correlated. This was not expected, because past research has found that self-reported religious beliefs are linked with empathy (Markstrom et. al., 2010). It is a possibility that people with higher levels of empathy not only understand the feelings of others better, but also are more prone to wanting to present themselves in a desirable way. They may see self-reporting high levels of religious beliefs as a way to increase social desirability and social connection. In addition, prior research has found that importance of beliefs was linked to the two different components (cognitive and affective) differently based upon gender (Markstrom et. al., 2010). It may be that a measure would need to address both the cognitive and affective components of empathy to lead to significant relationships with the strength of religious faith measure. Another possibility is that to find significance with the empathy measure used in the current study (which was an emotional scale; Mehrabian & Epstein, 1972) there would have needed to be more female participants.

Hypothesis 3

My third hypothesis was also not supported. A participant's year in school was not correlated with their empathy level. Although education has been listed as a major correlated factor with volunteering (Bekkers, 2005) and has been found to bring resources that can increase one's ability to empathize with others, it was not found to have a direct impact on empathy in the current study. A major aspect of this is that the differences between the educational levels were quite small (within a few years of each other for most participants). The format of undergraduate

study may also contribute to decreasing differences between years in school- by allowing for students to take classes at different levels without a set sequence. This may mean that experiences that come with higher levels of education may be experienced by students in all four years of undergraduate study, equalizing the impact of these experiences with students of differing years. Although not all the participants in the study were undergraduate students, many were.

Hypothesis 4

My fourth hypothesis was supported. In accordance with prior research (Cruce & Moore, 2007), people pursuing majors in biology, education, and the social sciences were more likely to plan to engage in civic action (as expressed on the civic action scale). Also, students in those majors had higher levels of empathy than students in other majors. It would be useful for further research to try to understand if these higher chances of volunteering and levels of empathy are preexistent in those people who will pursue these majors, if the differences come during the college experience, or if it is a combination of these (some preexisting differences along with development within the college experience).

Hypothesis 5

My final hypothesis was not supported. Level of empathy was not significantly related to the amount of volunteer work a participant stated they would still do without requirements. Although the empathy-altruism hypothesis states that if people feel empathy they are motivated to act in an altruistic manner (Batson & Shaw, 1991); it is possible that the volunteer activities the participants were involved in did not invoke empathy in particular. Therefore, any empathy

that the participants felt did not directly affect the volunteer activities they were involved with and did not lead them to feel altruistic toward those experiences.

Exploratory Analyses

The main reason people were engaged in service was not found to be significantly linked with participant's empathy level. This may be because people who are higher in empathy and value service activities more may seek out environments that hold service as requirements. These students may join organizations and tend to take classes that are known for their service component.

The stepwise regression revealed that a person's civic action score, gender, and major group (whether or not they are in the significant majors as discussed before) are valid ways to predict 21% of the variance in empathy level. Age and strength of religious faith group (high or low) were not significant predictors. Age may not be a significant predictor in this study for a couple of reasons. One reason is that the ages of a majority of the participants were extremely close in the present study. There may need to be a wider more representative range of ages to highlight any differences brought about by age. Another possible reason that age is not a predictor may be because in some of the prior research consistency was found for up to twenty-seven years in prosocial tendencies (Eisenberg et. al., 2013) which may generalize to empathy as well. The reasons why strength of religious faith may not be a usable predictor was discussed previously (see discussion section regarding hypothesis 2).

The finding that those in the high strength of religious faith group were found to have higher civic action scale scores, and therefore, be more likely to engage in civic action may be due to a couple of reasons. This may be because of the teachings of many religious practices

(Markstrom et. al., 2010); if people identify more with their religion (as seen in the strength of religious faith measure) they may be more likely to apply these to their lives because of being exposed more to those beliefs with more church attendance. In addition, social desirability may be at work with those who have higher strength of religious faith (Freiheit et. al., 2006).

Younger participants were found to participate in more hours of volunteer work. The most likely explanation of this is that students who are younger, and in an earlier year of their post-secondary studies tend to be in classes at lower levels of difficulty and may have more time to include volunteer work in their schedules. An additional possible reason is that the university from which participants came from began an initiative that some of the younger students were involved with that encourages civic action and engagement in the community. These younger students may have been inspired by this initiative which may have influenced their volunteer work. Further research is needed to define the relationship between age and volunteering.

Higher civic action scores were found to be related to participants reporting they would not complete a high percentage of the work they had already done if there were no requirements for them to do that work. A possible explanation of this finding is that people may be inspired to get further engaged in the community; however, they wish to find different avenues than they have already found to do so. High civic action scores were also correlated with a lower amount of hours that had already been completed. This may be because the participants who had already volunteered a number of hours did not feel as obligated to continue to volunteer, and those who had not volunteered as many hours were still planning on volunteering. Another possibility is that the order of the measures placed the civic action measure directly after the empathy measure. The empathy measure may have primed the participants to feel it is more socially desirable to indicate intent to engage in civic action, and therefore had higher scores on the civic

action measure. This priming affect may have worn off by the time that the participants reached the question regarding still doing the volunteer work without requirements, which may have brought truer answers.

Lastly, participants with lower amounts of volunteer hours were found to be more likely to say that they would do their volunteering without requirements. This may be because those participants without obligations or those participants who want to do their work for the good of volunteering have a harder time finding time to do so when they are not under an obligation to do so.

A major conclusion that I drew through this research was that although empathy is a trait found in people who volunteer (Bekkers, 2005) and may be a predictor to whether a person will act pro-socially (Davis, et. al., 1999), there are other factors at work in the volunteer experience. It is obvious that the development of empathy is a very dynamic process, and more than likely a process that takes much longer than the scope of this study allowed. In addition, I tried to make a direct connection between empathy and volunteering; I tried to see if aspects that were connected to volunteering could generalize and have a direct effect on empathy because of a strong connection with empathy and volunteering. Overall, I found that this generalizability was not possible, at least not within the scope of this study.

Limitations

There were multiple limitations to this study that could be improved upon for future research. One limitation is that the quality of volunteer experiences was not analyzed. The participants self-reported their volunteering hours without any minimum standards for what was considered volunteer work. This means that some people may have had lower-quality

experiences that did not allow for the volunteers to properly take the perspective of those they were helping. More precise results could have been found if the quality of the experiences was kept consistent and controlled, or at least measured and accounted for so that the amount of volunteering was what was being studied with more certainty. Similarly, some participants may have spent little time in many volunteer experiences while others spent all of their time in one or two experiences. This could also affect the perspective taking ability of the volunteers, therefore affecting the possibility of developing empathy.

Another possible limitation is the fact that the empathy measure utilized may not have been the best for the study. I decided to pick an emotional empathy measure; however, there is also the cognitive component to empathy. There is a possibility that the cognitive component to empathy is impacted by doing volunteer work and that significance could have been found by using a cognitive-empathy measure. Future studies should try to utilize either two measures (one that is emotionally-based and one that is cognitively-based) or try to create a measure that assesses both components. Studying both components would give a better picture of the concept of empathy and would allow for a deeper, more holistic study of the concept.

A major limitation of this study was the fact that it was not a true longitudinal study, and that the timeframe between data collections for those that did take both the pretest and posttest was quite short. A suggestion for future research wanting to see if increased volunteering can lead to differences in empathy would be to make it a longitudinal study with much more time between the original data collection and the posttest data collection. If the amount of time volunteering is a factor in the development of empathy, it may become more evident with a greater amount of time being studied.

Implications

The major implications of this study are two-fold. The first includes the inspiration and clarity for further research based upon the limitations of this study. The other is based upon the results found with the differences seen in the major of study that participants were pursuing. As stated above, further research should be done to try to determine the extent that those differences were preexistent and the extent that empathy and intent to act civically developed throughout time within the major (and possibly even during a career for those participants that decide to work within their field of study). If a much longer longitudinal study, designed to study these possible effects, found significance in these groups of majors after the beginning of post-secondary study; then the curriculums of biology, education, and social sciences should be studied to try to investigate what aspects of the curriculums may be able to lead to these differences. This may be able to highlight things to add to the curriculums of more areas of study to increase volunteering or empathy in those pursuing majors outside of the fields of biology, education, and social sciences.

Additionally, organizations may have higher success focusing on recruiting volunteers in the fields of biology, education, and social sciences. Knowing this, organizations can tailor their recruitment techniques to be able to maximize their efforts. This could help better allocate resources of organizations that need volunteers but do not have as much time and money to focus on finding those volunteers.

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Appendix A

Questionnaire Measure of Empathic Tendency (Mehrabian & Epstein, 1972)

*Indicates negatively scored items

From a +4 (very strong agreement) to -4 (very strong disagreement) scale

Instructions: Please select the answer that best reflects the degree to which you agree with the statement.

1. It makes me sad to see a lonely stranger in a group
- 2.* People make too much of the feelings and sensitivity of animals.
- 3.* I often find public displays of affection annoying
4. * I am annoyed by unhappy people who are just sorry for themselves.
5. I become nervous if others around me seem to be nervous.
6. *I find it silly for people to cry out of happiness
7. I tend to get emotionally involved with a friend's problems
8. Sometimes the words of a love song can move me deeply
9. I tend to lose control when I am bringing bad news to people
10. The people around me have a great influence on my moods.
- 11.* Most foreigners I have met seemed cool and unemotional
12. I would rather be a social worker than work in a job training center
13. *I don't get upset just because a friend is acting upset

14. I like to watch people open presents.
- 15.* Lonely people are probably unfriendly.
16. Seeing people cry upsets me
17. Some songs make me happy
18. I really get involved with the feelings of the characters in a novel
19. I get very angry when I see someone being ill-treated
- 20.* I am able to remain calm even though those around me worry.
- 21.* When a friend starts to talk about his problems, I try to steer the conversation to something else
- 22.* Another's laughter is not catching for me
- 23.* Sometimes at the movies I am amused by the amount of crying and sniffing around me
- 24.* I am able to make decisions without being influenced by people's feelings
25. I cannot continue to feel OK if people around me are depressed.
- 26.* It is hard for me to see how some things upset people so much
27. I am very upset when I see an animal in pain.
- 28.* Becoming involved in books or movies is a little silly
29. It upsets me to see helpless old people
- 30.* I become more irritated than sympathetic when I see someone's tears.
31. I become very involved when I watch a movie

32.* I often find that I can remain cool in spite of the excitement around me

33.* Little children sometimes cry for no apparent reason.

Appendix B

Civic Action subsection from the Civic Attitudes and Skills Questionnaire (Moely, Mercer, Ilustre, Miron, & McFarland, 2002)

Instructions: Please select the answer that best reflects the degree to which you agree with the statement.

1-Strongly disagree, 2- Disagree, 3- Neither agree nor disagree, 4- Agree, 5- Strongly agree

1. I plan to do some volunteer work.
2. I plan to become involved in my community.
3. I plan to participate in a community action program.
4. I plan to become an active member of my community.
5. In the future, I plan to participate in a community service organization.
6. I plan to help others who are in difficulty.
7. I am committed to making a positive difference.
8. I plan to become involved in programs to help clean up the environment.

Appendix C

Santa Clara Strength of Religious Faith Questionnaire (Plante and Boccaccini,1997)

Please select the answer that best reflects the degree to which you agree with the statement.

1= Strongly disagree 2= Disagree 3= Agree 4= Strongly agree

1. My religious faith is extremely important to me.
2. I pray daily.
3. I look to my faith as a source of inspiration.
4. I look to my faith as providing meaning and purpose in my life.
5. I consider myself active in my faith*
6. My faith is an important part of who I am as a person.
7. My relationship with God is extremely important to me.
8. I enjoy being around others who share my faith.
9. I look to my faith as a source of comfort.
10. My faith impacts many of my decisions.

*Number 5 was slightly changed from “I consider myself active in my faith and church” to decrease showing preference to any particular religion based on the word “church.”

Appendix D

Demographic and Additional Information Survey

Instructions: For the following items, please select the best answer choice. For questions that ask for specific answers, please respond as specifically as possible.

1. What is your gender?
2. What is your age?
3. What is your primary major or graduate program?
4. What year in school are you?
5. How would you identify your religious preference?: Agnosticism, Atheism, Buddhism, Christianity, Hinduism, Islam, Judaism, Other
6. How would you describe your service experience at JMU?: Mostly volunteer/by own choice, mostly as part of class requirements, mostly as part of membership experience with a student organization
7. Approximately how many hours have you spent in service related activities so far this semester?
8. If you had no requirements of service activity (i.e. class requirement, organization requirement, etc.), what percentage of the service you have participated in this semester would you still have participated in?