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Compassion Predictors in Undergraduates: A Catholic College Example

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Abstract Compassion is sorely needed in contemporary society, including within faith-based colleges. Past research has examined the prevention of compassion fatigue in healthcare professions, but relatively little research exists on the predictors of compassion, particularly among student populations. This study examines the factors associated with higher compassion levels in graduating college seniors, revealing demographic, experiential, and belief-related factors contributing to compassion. Results suggest that the general profile of a highly compassionate graduating college senior is a student who is female, politically liberal, religious, studying the natural or social sciences, actively involved in community service or volunteering, and who has undergone workshops on racial/cultural awareness and sensitivity.

Keywords Compassion · College students · Catholic higher education

Compassion, defined as "being moved by another's suffering and wanting to help" (Lazarus 1991, p. 289), is considered a desirable human trait and has been advocated for in religious and spiritual development for centuries. Altruism, a value closely related to compassion (Smith 2009), is thought to have evolutionary roots because of its social desirability in groups and its strengthening of maternal instincts (Darwin 1871). Sober and Wilson (1998) found that groups with more altruists ultimately fair better than groups with fewer altruists.

Yet, what makes a person compassionate? Are there certain qualities or traits that inherently predispose a person to become compassionate? Are there activities or experiences that cultivate compassion? Compassion has been traditionally reserved for parental and religious education; however, a developing trend to include compassion-related curricula in the higher education system suggests compassion is an integral part of education in general (Campus

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Compact 2013). Interestingly, most research exploring compassion education concerns the training of nurses, physicians, and other healthcare professionals (Horsburg and Ross 2013; Shih et al. 2013), and 'compassion fatigue,' the burn-out of compassion, is a more commonly researched topic than its predictors (Stewart 2012; Thomas 2013). Research on the cultivation of compassion in undergraduate education is scarce.

The college years are transformative for human growth and development. Feldman and Newcomb (1969) demonstrated that higher education has a significant and lasting impact on a person's values, attitudes, and beliefs. Pascarella and Terenzini (1991) examined the long-term effects of higher education—the lasting attitudes, beliefs, and activities of students several years after graduating. In additional to impacting future earnings and employment, a college education affects a student's cognitive, moral, and psychosocial characteristics alongside attitude and value formation. College is, therefore, an ideal time to focus on nurturing compassion. According to Wey Smola and Sutton (2002), Generation Y is expected to be the first socially active generation since the 1960s, with compassion as its backbone.

Due to the increasing interest in the nature of one's moral education rather than solely academic development, many universities are experimenting with a 'service learning' component in their curriculum. Service learning, or community service learning (CSL), is broadly defined as allowing "students to gain a greater understanding of concepts while they contribute to their communities" (Billig 2000, p. 658). CSL can lead students to become engaged citizens, grow in compassion, develop greater sensitivity, increase their awareness and understanding of social problems, instill a commitment to making the world a better place, and, in some cases, demonstrate increased moral reasoning abilities (Bernacki and Jaeger 2008; Gorman et al. 1994). Although the evidence for a link between CSL and increase moral reasoning is mixed, CSL tends to force students to confront moral issues and is therefore an effective tool in moral development (Rest and Narvaez 1991).

There is also evidence that CSL increases participants' feelings of compassion and empathy. Bernacki and Jaeger (2008) reported that service learning participants found their combined coursework and service learning experience provided them with an enhanced ability to be more compassionate compared with those who did not participate in such a course. Jones and Hill (2001) and Jones and Abes (2004) have also documented the potential of CSL to increase empathy and compassion in participants. In 2009, Plante, Lackey, and Jeong Yeon found that students who participated in CSL showed an increase in compassion compared to students who did not participate, using the Compassion Love Scale (Sprecher and Fehr 2005). Hwang et al. (2008) developed an abbreviated version of this 21-question, 7-point Likert scale, which is used in this current study. CSL may offer a unique opportunity for people to bridge the gap between themselves and others, effectively re-categorizing people who seemed to be different from themselves as similar. An increase in perceived self-other similarity results in increased compassion, particularly when self-other similarity involves those who are weak or vulnerable (Oveis et al. 2010).

In a recent study exploring the link between spirituality, altruism, and compassion, Saslow et al. (2013) found that individuals who identify as 'spiritual' rather than 'religious' tend to be more altruistic and that compassion mediates this relationship. The Big Five personality traits of agreeableness, openness, and extroversion did not explain the relationship between spirituality and altruism, suggesting that compassion plays a unique mediating role. Historian Karen Armstrong (2010) has long argued that compassion and empathy are the foundations of the world's religions, and the implications of Saslow et al. (2013) suggest there is an important relationship between spirituality and compassion. What is more, religiosity

does not procure the same feelings of compassion as spirituality (Saslow et al. 2013). The feelings of compassion in religious individuals tend to be circumscribed to those in line with their personal values and not universally applied (Baston et al. 1999). The development of compassion has distinctly different outcomes in religious versus spiritual individuals, and this link is further discussed in the study at hand.

Individual and cultural differences influence compassion, and there are some factors that predispose individuals to become more compassionate than others. For example, people of lower socioeconomic status have a tendency to be more other-oriented and feel greater compassion, which leads them to act more altruistically than their higher socioeconomic counterparts (Piff et al. 2010). Additionally, individuals that are spiritual have similar tendencies to be other-oriented and feel compassion, which often leads to generosity even in situations where they do not personally benefit (Saslow et al. 2013). Although increasing people's feelings of compassion might inspire them to volunteer, people who already consider themselves compassionate are more likely to volunteer and act on their compassionate feelings (Omoto et al. 2009). Finally, there are some gender differences. In a study conducted at the University of San Diego, one researcher found that women are inherently more likely to increase in compassion than men; they are more predisposed to develop compassionate feelings, given the right circumstances (Lovette-Coyler 2013).

In summary, there is evidence that spirituality and CSL play key roles in predicting compassion. There are certain characteristics in people that can support or hinder compassion, such as their gender, level of spirituality, or lower socioeconomic status. It seems promising that the integration of CSL opportunities and the nurturing of spirituality in undergraduate education might be associated with more compassionate graduating seniors.

Research on compassion has explored the effects of burnout among nurses, psychologists, and other service-related professions; it has also explored the effects of volunteering and, to a minimal extent, CSL. However, limited research exists examining compassion in higher education and whether or not a link actually exists. The current study sought to further explore the possibility of a relationship between compassion and relevant demographic and college activities in an undergraduate Catholic college setting. Are there programs or experiences universities can offer to increase compassion levels in its students? This study explores factors associated with high compassion scores in graduating college seniors. We hypothesized, based on previous research findings, that gender, CSL and volunteer activities, spirituality and religious engagement, multicultural awareness, and more other-directed attitudes would be associated with higher levels of assessed compassion among college seniors.

Method

Participants

Data were collected anonymously from graduating college seniors ($N = 1706$, with 608 male and 1098 female), ranging in age from 21 to 23. The university incentivized participants with early pick-up of June commencement tickets. The majority of the sample was Caucasian (59.9 %) and female (62.7 %). However, the sample also included Asian/Pacific Islander (19.1 %), Latino/Hispanic (14.8 %), Other (4.8 %), Native American/Alaskan (3.3 %), and Black (2.9 %) participants.

Measures

Data were extracted from five years (2009–2013) of the university's college senior survey, which is distributed to graduating seniors annually. The survey consisted of 56 total questions; only 20 of the items were used in analysis. The researchers selected the included questions due to their potential relevance to compassion, based on prior research. Participants completed questions about demographic data, political and social attitudes, and activity involvement during the college years, as well as the Santa Clara Brief Compassion Scale (SCBCS). The SCBCS is a 5-item measure designed to measure "compassion and its relation to pro-social behaviors" (Hwang et al. 2008, p. 421). Items on the SCBCS were generated from Sprecher and Fehr's Compassionate Love Scale (Sprecher and Fehr 2005), which seeks to measure altruistic love towards others. Items on the SCBCS are scored on a 7-point scale, from 1 being *not at all true of me* to 7 being *very true of me*. Sample items include, "When I hear about someone (a stranger) going through a difficult time, I feel a great deal of compassion for him or her" and "I tend to feel compassion for people, even though I do not know them." Research has found that the SCBCS has adequate reliability and validity as well (Plante and Mejia 2016).

Procedure

The college senior survey data was stored in the university's Institutional Research Department and accessed, with permission from the university's Institutional Review Board, for analysis. All identifiable student information was removed, including students' names and university ID numbers, preserving their anonymity. Data were then analyzed using correlational, multiple regression, and ANOVA procedures.

Once variables correlating with compassion scores were identified, a step-wise regression analysis was performed to find the best-fit regression equation. The data were self-reported, and therefore, emphasis was placed on action-oriented variables rather than those asking about personal beliefs or feelings in the regression equation.

Results

Analysis of variance (ANOVA) results

Results indicate that women ($M = 3.47$, $SD = 0.99$) and those who identify as politically liberal ($M = 3.58$, $SD = 1.05$), actively attend religious services ($M = 3.68$, $SD = 0.93$), frequently perform volunteer work ($M = 3.58$, $SD = 1.13$), have been exposed to diversity training ($M = 3.56$, $SD = 0.95$), and who have essential goals toward helping others in difficulty ($M = 3.90$, $SD = 0.88$) and participating in community action ($M = 4.10$, $SD = 0.88$) scored the highest on the Compassion Inventory Scale, whereas men ($M = 2.98$, $SD = 0.98$) and those who identify as politically conservative ($M = 2.71$, $SD = 1.32$), do not attend religious services ($M = 3.05$, $SD = 1.04$), do not participate in community service ($M = 3.00$, $SD = 1.07$), frequently drank beer in college ($M = 3.15$, $SD = 0.98$), and have essential goals of being well-off financially ($M = 3.18$, $SD = 1.01$) and are seeking a profession with high income potential ($M = 3.23$, $SD = 1.05$) scored the lowest on the compassion inventory scale according to analysis of variance (ANOVA) analyses (all $p < .01$).

Correlational results

Of the top 15 variables most highly correlated with compassion scores, five were related to volunteering and community service, such as "Goal: Helping others in difficulty" ($R = 0.54$, $p < .01$), "Career Concern: Work for social change" ($R = 0.50$, $p < .01$), and "Act: Performed community service for class" ($R = 0.23$, $p < .01$). Four of the top 15 variables were related to the tolerance and awareness of racial and cultural diversity, such as "Ability to see from others' perspective" ($R = 0.29$, $p < .01$), "Ability to tolerate different beliefs" ($R = 0.28$, $p < .01$), and "Attended a racial/cultural awareness workshop" ($R = 0.22$, $p < .01$). Another three variables of the top 15 were connected to religiosity and spirituality: "Goal: Develop a meaningful philosophy of life" ($R = 0.25$, $p < .01$), "Self-rating: Spirituality" ($R = 0.23$, $p < .01$), and "Act: Attended a religious service in the past year" ($R = 0.23$, $p < .01$).

Multiple regression results

Correlational analysis was used to determine the variables most highly correlated with compassion and then a multiple regression analysis was performed, based on those variables, to determine the best-fit regression equation. To obtain a more objective measure of compassion, variables that were action-oriented rather than opinion-based were prioritized to minimize the effects of demand characteristics. Approximately 40 % of the variability in compassion scores can be predicted by the following five variables: gender, attended a religious service, attended a racial/cultural awareness workshop, performed community service as part of a class, and identified political views. The model summary of the best-fit regression equation is reported in Table 3 ($R = 0.40$, $SE = 0.93$, $p < .01$).

The findings of this study suggest that certain demographic factors such as gender, religious views, and political views predispose certain individuals to be more compassionate than others (see Tables 1, 2 and 3). Results also reveal that college experiences and programs such as participation in community service and racial awareness workshops, cultivation of a spiritual life, and studying the natural or social sciences were associated with higher compassion scores in our regression analysis, whereas financial goals and partying behavior were associated with lower compassion scores (all $p < .01$).

Discussion

According to evolutionary theory, people are orientated toward altruistic behavior because it's considered more adaptable—communities could not survive without its members working together (Goetz et al. 2010). Additionally, current and past research demonstrate that compassionate people are happier, better adjusted, and moral citizens of the world (Smith 2009). Although there has been skepticism about the possibility of teaching compassionate behavior through institutionalized education (Lovette-Coyler 2013), our results indicate certain elements in higher education are associated with higher compassion scores.

There was a significant positive correlation between compassion scores and being female, identifying as politically liberal, participating in community service, participating in racial awareness workshops and other diversity training, and preparing for a service-oriented career such as healthcare. These results suggest compassion may be connected to human-centered and service-oriented experiences (Shih et al. 2013).

Table 1 Compassion score means and standard deviations by study variables

Variable	N	M	SD
Gender			
Male	552	2.98	0.98
Female	1013	3.47	0.99
Political View			
Conservative	269	3.14	1.01
Middle-of-the-road	573	3.22	1.01
Liberal	660	3.44	0.98
Religiosity			
Secular/Non-Religious	453	3.09	1.02
Catholic	665	3.40	0.97
Other Christian	318	3.39	1.00
Non-Christian Religions	122	3.35	1.09
Attended a Religious Service			
Not at all	606	3.05	1.04
Occasionally	663	3.36	0.96
Frequently	296	3.68	0.93
Field of Study			
Engineering	184	2.93	0.90
Business	500	3.21	0.96
Arts & Humanities	260	3.30	1.02
Sciences	203	3.45	1.02
Social Sciences	420	3.51	1.05
Community Service for Class			
Not at all	366	3.00	1.07
Occasionally	870	3.28	0.95
Frequently	331	3.69	0.99
Attended Racial Awareness Workshop			
Yes	666	3.56	0.95
No	899	3.11	1.01
Hours per Week Praying/Meditating			
None	732	3.11	1.03
Less than 1 h	439	3.34	0.95
1–2 h	278	3.57	0.95
Over 2 h	117	3.74	0.94
Hours per Week Partying			
None	221	3.47	1.12
1–5 h	696	3.32	1.01
Over 6 h	490	3.21	0.97
Hours per Week Studying/Homework			
5 h or less	337	3.08	0.99
6–10 h	500	3.30	1.00
11–15 h	373	3.45	0.99
Over 16 h	357	3.35	1.05

Table 1 (continued)

Variable	N	M	SD
Drank Beer			
Not at all	304	3.45	1.07
Occasionally	727	3.35	1.00
Frequently	535	3.15	0.98
Performed Volunteer Work			
Not at all	137	2.92	0.95
Occasionally	211	3.38	0.97
Frequently	65	3.58	1.01
Opinion: I Feel Valued at this Institution			
Strongly disagree	11	2.94	0.96
Disagree	77	3.00	1.00
Agree	337	3.25	0.94
Strongly agree	324	3.58	1.04
Goal: Being Very Well-off Financially			
Not important	61	3.81	0.97
Somewhat important	376	3.44	1.01
Very important	630	3.26	1.00
Essential	499	3.18	1.01
Goal: Participating in community action			
Not important	262	2.50	0.98
Somewhat important	608	3.15	0.87
Very important	481	3.57	0.87
Essential	214	4.10	0.88
Career Concern: High income potential			
Not important	89	3.74	1.04
Somewhat important	398	3.43	1.05
Very important	617	3.21	0.93
Essential	461	3.23	1.05

One of the main predictors of higher compassion scores was community service and volunteering. This finding is in line with previous research, which suggests there are positive benefits to CSL. Just as Bernacki and Jaeger (2008) reported that CSL increased students' feelings of empathy and compassion, we found that participation in community service, even to satisfy a class retaquirement, was associated with higher compassion scores. These results support the mission of programs like Campus Compact (2013) that aim to institutionalize volunteering and community action as part of an undergraduate college education.

The current study also supports the findings of Wey Smola and Sutton (2002) that Generation Y is likely to be socially active in the future. In our sample, 44 % of students listed the goal of participating in community action as "very important" or "essential," and 51 % reported that working for social change was "very important" or "essential" to their career. Plante et al. (2009) established an earlier link between college students who participated in immersion trips involving CSL and higher compassion scores. In this

Table 2 Regression coefficients for compassion scores ($N = 1706$)

Coefficients[a]	Unstandardized Coefficients		Standardized Coefficients		
	B	SE	β	t	Sig.
(Constant)	.95	.15	6.43	.00	
Gender:	.36	.05	.17	7.18	.00
Attended a religious service	.27	.03	.19	8.04	.00
Attended a racial/cultural awareness workshop	.30	.05	.15	6.01	.00
Performed community service as part of a class	.20	.04	.13	5.35	.00
Identified political views	.14	.03	.11	4.74	.00

[a] Dependent Variable: Mean compassion score

study, students retained their measures of higher compassion scores in a three-month follow-up assessment. Although this study is not longitudinal or causational as Plante et al. (2009) was, the fact that students reported community action and volunteering were important to their career plans and goals suggests there could be a lasting relationship between higher compassion scores and interest in community service. This emerging relationship supports the conclusions of Pascarella and Terenzini (1991) that the influences and lessons learned during the college years have staying power.

Another strong link was revealed between religiosity and/or spirituality and higher compassion scores. In our study, those who identified with a religion, regardless of tradition, tended to have significantly higher compassion scores than those who identified as having no tradition affiliation. Saslow et al. (2013) found that those who identify as 'spiritual' tend to be more compassionate than those who identify as 'religious,' but our findings suggest this distinction may not be particularly important. In line with Armstrong (2010) ideas that compassion is the common factor in the world's religions, our findings reveal that having *any* type of religious or spiritual practice is associated with higher compassion scores. Those who identified as religious or spiritual had significantly higher compassion scores than those who identified as secular. Additionally, those who attended a religious service, regardless of whether he or she identified with a religion, tended to have higher compassion scores than those who never attended any religious gathering or service.

The current study revealed another pattern in higher compassion scores, suggesting a connection may exist between compassion and participation in racial and cultural awareness workshops as well as exposure to a diversity of values, beliefs, and perspectives different from one's own. Currently, very little exists in the literature on the association of compassion with

Table 3 Model summary of best-fit regression equation ($N = 1706$)

Model[a]	R	R^2	Adjusted R^2	SEM
1	.40[a]	.16	.16	.93

[a] Predictors: (Constant), Gender, Attended a religious service, Attended a racial/cultural awareness workshop, Performed community service as part of a class, Identified political views

exposure to diversity and different racial and/or cultural perspectives. However, Bernacki and Jaeger (2008) found a link between CSL and the development of greater sensitivity and increased awareness and understanding of social problems among college students. Although this programming does not explicitly involve racial and cultural awareness workshops as our data does, there are similarities in the level of exposure to diverse perspectives in both workshops and CSL, particularly with marginalized populations. However, more research should be conducted to tease out whether or not exposure to diverse perspectives or the act of volunteering is driving the association with compassion scores in CSL. It is possible that both contribute to higher scores, making the case for developing university-based racial/cultural awareness programs for students.

Our data not only revealed patterns for activities and opinions that are associated with compassion scores, but it also revealed areas that were associated with lower compassion scores. One particular trend was the connection between valuing monetary incentives and goals and lower compassion scores. Students who listed the goal of being very well-off financially as "very important" or "essential" were significantly less compassionate than those who said such a goal was "somewhat important" or "not important." Additionally, students who responded that high income potential was "very important" or "essential" as a career concern tended to have significantly lower compassion scores than students who said it was "somewhat important" or "not important." The relationship between financial values and altruistic values should be explored in more depth in future studies.

Another area that tended to correlate negatively with compassion scores was partying behavior. In general, the data revealed a trend that as the number of hours reported partying increased, correlated compassion scores tended to decrease. Additionally, people who reported drinking beer "frequently" had significantly lower compassion scores than those who drank beer "occasionally" or "not at all."

There are several limitations of the current study. One such limitation is that correlative analysis was used, which does not allow cause-effect conclusions to be drawn. No longitudinal or change data was included. Furthermore, measurements were based on self-reports, and therefore demand characteristics may lead to biased results. The sample was collected from a pool of graduating seniors from a private, Jesuit university, and therefore generalizability cannot extend to other universities. Additionally, the sample was primarily Caucasian and female students, limiting generalizability further. There were approximately two females represented in the study for every male, making the sample narrow and poorly reflective of the general population.

Future research should examine compassion in more objective, observable ways and ideally be able to draw conclusions about cause-effect relationships. Creating more objective, behavioral measures of compassion would be a helpful additional to the literature. Future research should aim to include randomized trials and longitudinal models with follow-up data and pre- and post-assessment scores. Additionally, a broader range of universities (public, non-religious) should be included for results to be generalizable to more college students. Future research should target a more diverse participant pool that includes higher representation of males and ethnic minority groups.

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