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Moral Foundations in Undergraduate Pre-health Students

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Introduction

Moral Foundations Theory argues that there is an automatic nature to the decisions that we make. The individualizing domains, fairness and harm, deal with one's concern for an individual. The binding domains, ingroup, authority, and purity, indicate a preference for group success even in opposition to individual outcomes (Haidt and Graham 2007). These can have significant importance to healthcare professionals who make decisions impacting their patients' lives. Throughout the undergraduate years, students begin to solidify their identity and develop their morals in this formative time. This could be shaped by the pre-health professional track or more specifically, what the student studies in this time. Political beliefs are also evolving and have a relationship with the moral foundations (Haidt and Graham 2007). Additionally, empathy has a varied relationship with the different moral foundations (Dawson et. al 2021). Currently, research does not focus on moral foundations in undergraduate studies, and there are no comparisons regarding how the moral foundations differ between pre-health students, students who left pre-health, and nursing students.

The aim of this study is:

- To test the hypothesis that variables important in shaping a student's identity will impact different moral foundations uniquely

Methods

- The data come from a longitudinal panel survey sent to three consecutive cohorts of college freshman indicating an interest in pre-health or nursing. Students received one survey per year, via Qualtrics.
- A possible total number of 530 students were surveyed from three separate cohorts distinctive by time. The analytical population was 301 due to attrition rates over time and pairwise deletion in SPSS.
- Wave 1 includes all three cohorts' baseline data, and Wave 3 includes the same cohorts' data two years after the initial survey was given.
- Variables included:
 - Dependent Variables:** Five moral foundations: fairness, harm, ingroup, authority, and purity (Haidt and Graham 2007)
 - Independent Variables:**
 - Intellectual humility scale (Leary et. al 2017)
 - Empathic concern and perspective taking: Interpersonal Reactivity Index (Davis 1983)
 - College major with added double major category (Olsen and Gebremariam 2020)
- Data were analyzed using linear regressions in SPSS and were evaluated for significance at the 0.05 level.

Tables

Table 1: Regression Analysis for Differences in Individualizing Moral Foundations W 3

	Model 1: Fairness		Model 2: Fairness		Model 3: Harm		Model 4: Harm	
	b	Std. B	b	Std. B	b	Std. B	b	Std. B
Constant	2.22 ***	—	2.24 ***	—	2.09 ***	—	2.08 ***	—
Race	-0.03	-0.02	-0.03	-0.02	0.00	0.00	0.00	0.00
Moral Foundation W 1	0.32 ***	0.35	0.32 ***	0.34	0.37 ***	0.43	0.37 ***	0.43
Humility W 3	0.00	0.01	0.00	0.02	0.01	0.06	0.01	0.05
Perspective Taking W 3	0.00	0.02	0.00	0.01	-0.01	-0.09	-0.01	-0.09
Empathic Concern W 3	0.00	0.03	0.00	0.03	0.00	0.04	0.00	0.03
Double Major	-0.18	-0.12	-0.18	-0.13	-0.07	-0.05	-0.07	-0.05
Changed Majors	-0.07	-0.13	-0.06	-0.12	0.04	0.08	0.04	0.07
Nursing	-0.33 **	-0.25	-0.34 **	-0.25	-0.12	-0.09	-0.12	-0.09
Left Pre-Health	-0.04	-0.03	-0.04	-0.03	0.05	0.04	0.05	0.04
Politics W 3	—	—	-0.01	-0.04	—	—	0.01	0.03

p<0.1 = *, p<0.05 = **, p<0.01 = ***, p<0.001 = ****
Note: models were also controlled for cohort and gender but were not significant

Table 2: Regression Analysis for Differences in Binding Moral Foundations W 3

	Model 5: Ingroup		Model 6: Ingroup		Model 7: Authority		Model 8: Authority		Model 9: Purity		Model 10: Purity	
	b	Std. B	b	Std. B	b	Std. B	b	Std. B	b	Std. B	b	Std. B
Constant	1.96 **	—	2.04 **	—	2.34 ***	—	2.58 ***	—	2.06 ***	—	2.02 ***	—
Race	-0.12	-0.06	-0.02	-0.01	-0.23 *	-0.16	-0.21	-0.14	-0.06	-0.04	-0.03	-0.02
Moral Foundation W 1	0.37 ***	0.36	0.30 **	0.29	0.20 *	0.22	0.10	0.11	0.22 *	0.23	0.22 *	0.23
Humility W 3	0.02	0.12	0.00	0.02	0.02	0.12	0.00	0.01	0.01	0.09	0.00	0.03
Perspective Taking W 3	0.02	0.12	0.03	0.16	0.02	0.13	0.02	0.17	0.00	0.03	0.01	0.04
Empathic Concern W 3	0.01	0.04	0.00	0.01	0.00	-0.01	-0.01	-0.06	0.02 *	0.19	0.02	0.16
Double Major	-0.26	-0.12	-0.22	-0.10	-0.06	-0.04	-0.03	-0.02	-0.25 *	-0.16	-0.23	-0.15
Changed Majors	-0.07	-0.08	-0.10	-0.12	-0.03	-0.05	-0.05	-0.09	-0.11 *	-0.19	-0.12 *	-0.21
Nursing	-0.39 *	-0.19	-0.40 *	-0.20	-0.10	-0.07	-0.11	-0.81	-0.30 *	-0.21	-0.29 *	-0.20
Left Pre-Health	0.00	0	-0.02	-0.01	-0.04	-0.03	-0.09	-0.07	0.22 *	0.18	0.21 *	0.17
Politics W 3	—	—	0.13 **	0.28	—	—	0.10 **	0.33	—	—	0.05	0.15

p<0.1 = *, p<0.05 = **, p<0.01 = ***, p<0.001 = ****
Note: models were also controlled for cohort and gender but were not significant

Results/Discussion

- While each moral foundation is stable throughout time, authority and purity are the most fluid. The extreme stability of harm and absence of significance in other predictors may be indicative that harm is not dependent on identity formation or that college students care about harm equally.
- Purity appears to be the most susceptible to influence. Students who double major or have changed their major have lower levels of purity, while students who have left healthcare score higher. Therefore, changing aspects of a student's identity are predictors of purity.
- Nursing students have lower levels of fairness, ingroup, and purity when compared to pre-health students. Future research should determine if nursing students' moral foundations are dynamic or static relative to pre-health students.
- Politics have a potent effect in the models, particularly with the binding domains. This seems to mediate the moral foundation's relationship with other variables. Previous research has established that liberals are most concerned with the individualizing domains (Graham et. al 2009), yet the opposite is true in this research where they have higher levels of authority and ingroup. This may be because of the ideology of this particular population of students, or how politics have changed.
- Race is a marginal predictor of authority, a relationship that appears to be mediated by politics. This is consistent with previous research that have found politics and race to be related to the binding domains (Davis et. al 2016).
- Empathy has been related to moral foundations (Dawson et. al 2021), but empathic concern was found to only predict purity here. Empathy is positively correlated with humility, which was included in the models but not related to the moral foundations in this dataset (Davis et. al 2011).

Conclusions

There are differences in moral foundation stability, with purity and authority being more fluid than ingroup, harm, and fairness. Additionally, clear discrepancies exist between pre-health and nursing students, as nursing students have lower levels of fairness, ingroup, and purity. Politics play a significant role in the binding domains, with liberals scoring higher in authority and ingroup.

Future research should focus on how politics may mediate the relationship between variables analyzed in this study and moral foundations. It also can continue to explore differences in nursing and other pre-health students, as well as those who left pre-health completely.

Limitations

- The survey contains missing data due to some participants not completing all questions, as well as a small sample size. This may have been impacted by the COVID-19 pandemic as well.

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