Professional Identity Formation: Can It Be Developed? Is It Sustained Over Time?

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This study reports a 20-year follow-up on 90 of 386 dental graduates who completed a well-validated measure of professional identity formation as entering dental students, at graduation, and as a follow-up survey 18-22 years following graduation from a large Midwest Dental School. Respondents also completed a career satisfaction questionnaire. Archival pre and posttest data were available on measures of Rest's Four Component Model of Morality: ethical sensitivity, moral judgment, and moral implementation. Based on the results, professional identity formation was enhanced by an educational intervention, but only the authority dimension was sustained. Professional identity formation correlated positively with participants' current career satisfaction, and with moral judgment summary scores.

Keywords: professional identity, moral development

OBJECTIVES OR PURPOSE

This study explores changes in professional identity formation of dental graduates over time and examines associations between identify formation and current levels of career satisfaction. The study also examines associations between current identity formation and archival data on measures of ethical sensitivity, moral judgment, and moral implementation collected during the graduates' professional education.

PERSPECTIVE(S) OR THEORETICAL FRAMEWORK

The current interest in professional identity formation emerged from Shulman's (2005) observation that across professions studied by the Carnegie Foundation, the most underdeveloped aspect of

professional formation was the development of what Rest (1982; 1986) described as moral motivation—the third component of his Four Component Model of Morality (FCM). For an individual to behave morally in a specific situation, Rest argued, four psychological processes are necessary: moral sensitivity, moral reasoning, moral motivation and moral implementation. For operational definitions of the FCM, see Rest (1986) and Bebeau and Faber-Langendoen (2014) as applied to medical education.

The FCM served as the theoretical foundation for the design and implementation of a dental ethics curriculum at a large Midwest public university. To measure curricular impact on the components, the following measures were designed and validated: 1) The Dental Ethical Sensitivity Test (DEST, Bebeau & Rest, 1983) for moral sensitivity, 2) the Defining Issues Test (DIT, Rest, 1979) for moral judgment, 3) the Professional Role Orientation Inventory (PROI, Bebeau, Born & Ozar, 1993) for moral motivation, and 4) the Professional Problem Solving (PPS) Index (see You & Bebeau, 2012) for moral implementation. For a summary of studies supporting the validity of the aforementioned measures, see Bebeau and Monson (2014).

Although Rest's moral motivation is not as well articulated as his other components, Thoma and Bebeau's (2013) summary of the empirical research supports Rest's (1986) view that moral motivation directly impacts moral action and interacts with the other three components. Not only is moral motivation sensitive to educational interventions, but "moral motivation is furthered when individuals have a sense of connection between the self and others as well as confidence in one's ability to affect change" (P. 62). They suggested that future researchers investigate patterns across the four components to detangle the complexity of the relationship among the components.

Support for the importance of moral motivation is also derived from studies of 50 dental professionals referred for ethics instruction by their licensing board. Bebeau (2009) observed varying ability on measures of moral sensitivity, reasoning, and implementation but consistently low scores on measures of professional identity formation (i.e., moral motivation) among these professionals. Recently, Thoma and Bebeau (personal communication) observed that for the 120 dental graduates studied by You & Bebeau (2012), graduates with high marks on a measure of moral motivation also had high marks on measures of the other three components of morality. If replicated with a larger sample, this observation would suggest that identity formation is the driver for the development of the other components of morality.

More generally, support for the importance of moral motivation/identity formation is derived from studies of life-span development (e.g., Kegan, 1982) as well as studies of the relationship between moral commitment and exemplary professional behavior (Colby & Damon, 1992; Forsythe, Snook, Lewis, & Bartone, 2002; Rule & Bebeau, 2005). From Kegan's studies we know that individuals do develop across the life-span and that advanced levels of identity formation are not achieved much before mid-life. From Forsythe et. al, we learn that advanced identity development is a characteristic of military leaders who are perceived by their subordinates to be effective leaders. From studies of exemplary dental professionals (Rule & Bebeau, 2005), we learn that at advanced levels of identity formation, these dentists are self-aware of their own development, can clearly articulate professional expectations—compared to dentist referred by a licensing board for ethics instruction (Bebeau, 2009). Further, exemplars see professional responsibilities as obligatory—something they must do, rather than something that would be good to do, if possible.

In sum, the literature suggests that identity is a developmental construct, that exemplary professionals demonstrate advanced levels of identity formation, that entry level professional students are not able to articulate professional expectations (Bebeau, 1994), and that entry level scores on the Authority and Responsibility dimensions of the PROI indicate that many students endorse models of professionalism that are not considered defensible by exemplary professionals (Bebeau, Born, & Ozar 1993). The literature also demonstrates that a well-validated professional ethics curriculum promotes the ability to articulate professional expectations, to endorse more defensible models of professionalism, and to apply professional expectations to the resolution of challenging cases (You & Bebeau, 2012). What is not known is whether scores on the PROI measures of identity formation are maintained, eroded or enhanced, and whether these scores are related to satisfaction with professional practice.

METHODS, TECHNIQUES, OR MODES OF INQUIRY

PROI

The Professional Role Orientation (PROI) consists of four 10-item subscales designed and validated (Bebeau, Born & Ozar, 1993; Born, Bebeau & Rozmenoski, 1995; Kang, 2005; Thoma & Bebeau, 2013;) to assess a dentist's commitment to prioritize professional values over personal values. The Authority subscale reflects the view that a profession has ownership over the technical knowledge. The Responsibility subscale reflects the view that what a profession provides should be for the welfare of the general public and moreover, a profession should monitor its members' conduct and maintain standards. The Agency subscale reflects the view that a professional should have a sense of control and power as a practitioner. The Autonomy subscale reflects the view that a professional should have freedom and independence in one's professional role. The authority and responsibility subscales have been shown to reliably distinguish known group differences (e.g. beginning student, advanced student, and practitioner groups), however, distinctions are less clear with the agency and autonomy subscales. Thus, the current study only used the authority and responsibility subscales.

Professional Satisfaction Questionnaire

To assess current levels of career satisfaction, a series of questions were adapted from a study of mid-career dentists (Born & Nelson, 1984). After responding to the PROI, respondents indicated levels of frustration with 10 tasks: hiring and retaining staff; supervising staff and dealing with interpersonal problems; dealing with dissatisfied patients; dealing with patients who question or don't follow recommendations; dealing with third party payers; dealing with regulatory bodies; keeping up with technical and scientific advances; maintaining balance between practice demands and personal life; dealing with the physical stress of providing care; and dealing with psychological stress of being responsible for the health of others. Next, respondents rated career expectations and current satisfaction on a five-point scale: To what extent did dentistry fulfill the expectations you had for it as a profession? How would you rate your profession as the right career for you? How frequently have you considered changing your career during the last twelve months? How likely is it that you will change careers in the next five years? During your years in practice, to what degree have you experienced staff-turnover problems? Lastly, respondents provided demographic information (age, gender, type of practice) and responded to open-ended questions regarding their educational experiences.

DIT

The Defining Issues Test (DIT) (Rest 1979; Rest, Narvaez, Bebeau & Thoma, 1999) is an extensively validated test of moral judgment consisting of six moral dilemmas that cannot be easily solved by using existing norms, rules or laws. Participants rate and rank 12 statements for each dilemma in terms of importance concerning their decisions about what to do. There are four indexes. The Personal Interest index (PI) refers to the proportion of times a participant selects statements that are consistent with personal interests or loyalty to close friends and family, even though doing so might compromise the interests of people outside one's immediate circle of friends. The Maintaining Norms index (MN) refers to the proportion of times a participant selects statements that are consistent with the maintenance of law and order, irrespective of whether applying the particular rules or laws to the dilemma may actually lead to an injustice. The Postconventional index (P) refers to the proportion of times a participant selects statements that are consistent with moral ideas. The last index, N2, takes into consideration how well a participant can discriminate among the various statements and has been shown to be a more sensitive indicator of change than the P index. When an individual's N2 index score is higher than the P index, this indicates that the participant is better able to discriminate among statements than to recognize postconventional statements.

Data Sources

Participants

For the current study, archival data on all FCM measures were available for 363 of the 386 dental graduates (Classes of 1996-2000). Note: Scanning errors for DEST and PPS responses contributed to the reduced number of files available for the study. Efforts were made to locate current addresses through professional associations and public records. Of the 363 graduates with complete files, 2 were deceased. Addresses were located for 298 graduates, and four mailings were sent. Efforts to locate valid addresses for 20 returned mailings were successful for half the cases. Responses indicating a willingness to participate (3 declined) were secured for 90 of the 285 dentists located, for a response rate of 32%.

Study Procedures

Following IRB approval, the sample of dentists was contacted via postal mail to inform them of the study design, purpose, consent information, and study procedures. A return email address was provided. Persons contacting project staff via email implied consent. Shortly thereafter a second communication, again indicating the purpose of the study and advising them that participation implied consent, contained a link to a questionnaire based on the Qualtrics platform. No more than four reminders were sent to non-respondents (except those who had specifically opted-out). When the survey closed, data were stripped of identifying information and tabulations and statistical analysis were conducted.

RESULTS AND SUBSTANTIATED CONCLUSIONS

A one-way repeated-measures ANOVA was calculated comparing the PROI Authority scale scores of participants at three different times: pretest, posttest and 20 years after graduation. A significant effect was found ($F(2, 178) = 26.03$, $p < .001$) (Table 1A). Follow-up pairwise comparisons between the means revealed that scores increased significantly from pretest ($M = 36.79$, $SD = 4.83$) to posttest ($M = 41.43$, $SD = 4.37$), and remained about the same from posttest to 20 years after graduation ($M = 40.59$, $SD = 6.43$), which means not only can professional identity formation (authority) be increased by educational intervention, but it is sustained years after graduation (Table 1B).

TABLE 1A
RESULTS OF ONE-WAY REPEATED-MEASURES ANOVA

	Source	Type III Sum of Squares	df	Mean Square	F	Sig.
factor1	Sphericity Assumed	1101.719	2	550.859	26.025	.000
	Greenhouse-Geisser	1101.719	1.717	641.745	26.025	.000
	Huynh-Feldt	1101.719	1.747	630.535	26.025	.000
	Lower-bound	1101.719	1.000	1101.719	26.025	.000
Error(factor1)	Sphericity Assumed	3767.615	178	21.166		
	Greenhouse-Geisser	3767.615	152.791	24.659		
	Huynh-Feldt	3767.615	155.507	24.228		
	Lower-bound	3767.615	89.000	42.333		

TABLE 1B
RESULTS OF POST-HOC TESTS

		Mean	N	Std. Deviation	Mean Difference	Sig
Pair 1	PROI Pre A	36.79	90	4.833	-4.644	.000
	POSTAUTH	41.4333	90	4.36804		
Pair 2	POSTAUTH	41.4333	90	4.36804	.844	.247
	PROI autho 20 years later	40.5889	90	6.42833		
Pair 3	PROI Pre A	36.79	90	4.833	-3.800	.000
	PROI autho 20 years later	40.5889	90	6.42833		

A one-way repeated-measures ANOVA was calculated comparing the PROI Responsibility scale scores of participants at three different times: pretest, posttest and 20 years after graduation. A significant effect was found ($F(2, 178) = 20.96$, $p < .001$) (Table 2A). Follow-up pairwise comparison tests revealed that scores increased significantly from pretest ($M = 42.41$, $SD = 5.13$) to posttest ($M = 45.62$, $SD = 5.39$), however, the scores decreased significantly from posttest to 20 years after graduation ($M = 41.18$, $SD = 5.51$) (Table 2B). This suggests that an educational intervention has a positive impact on the responsibility dimension professional identity formation. however, more research needs to be conducted to examine factors that enhance or undermine the maintenance of the responsibility dimension.

TABLE 2A
RESULTS OF ONE-WAY REPEATED-MEASURES ANOVA

Source		Type III Sum of Squares	df	Mean Square	F	Sig.
factor1	Sphericity Assumed	947.563	2	473.781	20.962	.000
	Greenhouse-Geisser	947.563	1.944	487.487	20.962	.000
	Huynh-Feldt	947.563	1.987	476.995	20.962	.000
	Lower-bound	947.563	1.000	947.563	20.962	.000
Error(factor1)	Sphericity Assumed	4023.104	178	22.602		
	Greenhouse-Geisser	4023.104	172.996	23.256		
	Huynh-Feldt	4023.104	176.801	22.755		
	Lower-bound	4023.104	89.000	45.203		

TABLE 2B
RESULTS OF POST-HOC TESTS

		Mean	N	Std. Deviation	Mean Difference	Sig
Pair 1	PROI Pre R	42.41	90	5.130	-3.211	.000
	PROI Post R	45.62	90	5.392		
Pair 2	PROI Post R	45.62	90	5.392	4.444	.000
	PROI res 20 years later	41.1778	90	5.51113		
Pair 3	PROI Pre R	42.41	90	5.130	1.233	.106
	PROI res 20 years later	41.1778	90	5.51113		

A hierarchical growth curve analysis was applied to the Responsibility and Authority data to assess whether the overall trends masked individual variation. As expected from previous research (Bebeau,

2009), results analyses indicated that participants differed in their overall mean levels on both the responsibility and authority scales. Importantly, these analyses also indicated that change in scores across the three time-points differed across individuals. That is, the average trends indicated in Figures 1 and 2 mask statistically significant variation across individuals. The presence of different slope coefficients across individuals suggest that other factors may be influencing these patterns and gives us license to apply further analyses designed to explain these individual differences.

FIGURE 1
PROI AUTHORITY SCORE AT THREE TIMES

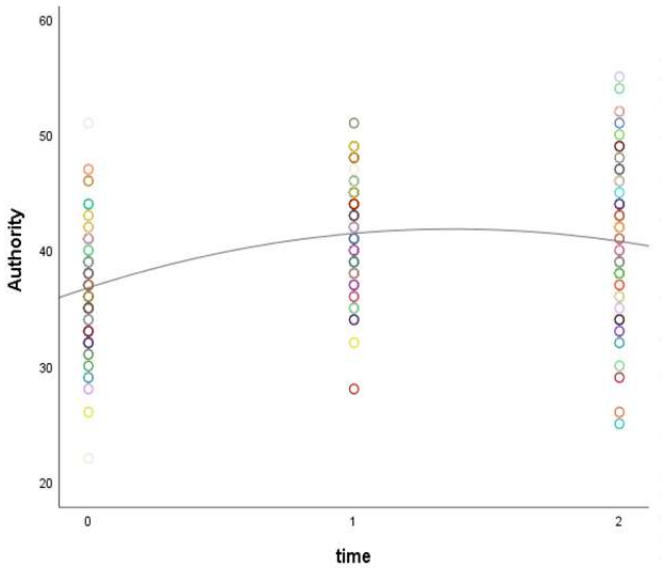
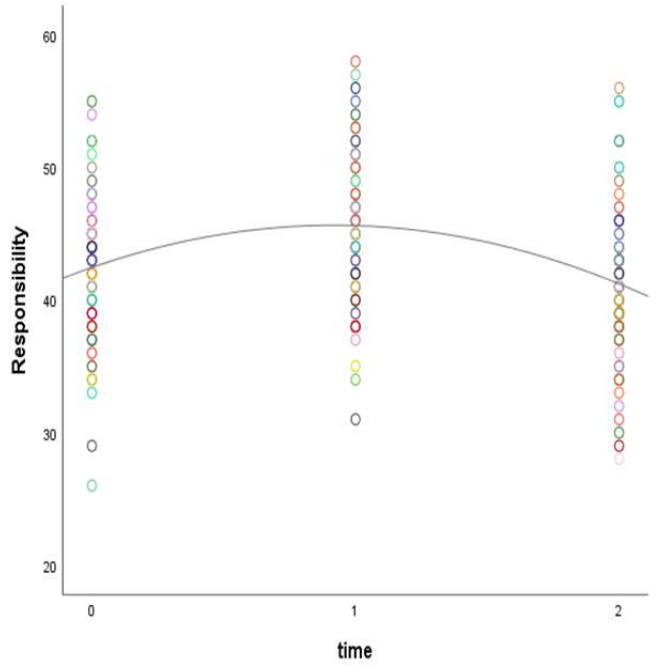


FIGURE 2
PROI RESPONSIBILITY SCORE AT THREE TIMES



Pearson's correlation was calculated between the PROI authority and responsibility scale scores at three different times and participants' career satisfaction 20 years after graduation. A significant correlation was found between PROI responsibility scale 20 years after graduation and current career satisfaction (r = .29, p <.01) (Table 3). The results supported Born and Nelson's (1984) notion that many professionals (dentists) derive their sense of identify from their jobs; the more satisfied they are with their career, the more advanced is their professional identity formation.

TABLE 3
PEARSON'S CORRELATION: AMONG PROI AUTHORITY, PROI RESPONSIBILITY (THREE TIME POINTS) AND CURRENT CAREER SATISFACTION

	1	2	3	4	5	6	7
1. Pre Autho	-	.398**	.169	-.301**	-.255*	.082	.160
2. Post Autho		-	.236*	-.032	-.169	-.127	.015
3. Autho 20 years later			-	-.157	-.175	-.215*	-0.096
4. Pre Res				-	.311**	.093	.089
5. Post Res					-	.227*	.044
6. Res 20 years later						-	.290**
7. Career Satisfaction							-

** correlation is significant at the 0.01 level (2-tailed)
*Correlation is significant at the 0.05 level (2-tailed)

Further Analysis was conducted. The sample was split into quartiles, based on the distribution of the total career satisfaction score. Scores were compared between the first and the fourth quartile, that is respondents with the lowest career satisfaction scores were compared to those with the highest. The result indicated that there was no difference on total career satisfaction ($p < 0.257$) regardless of gender. No difference was found between the two career satisfaction groups on the Authority or Responsibility PROI scales.

Both groups felt the profession met their expectations in the first five years following graduation (no difference, $p < 0.844$), but relative to their current aspirations, the least satisfied dentists are more likely to rate the profession as highly frustrating and unfulfilling ($p < 0.015$).

Furthermore, a statistically significant difference ($p< 0.033$) was found when looking at the frequency with which the high and low groups think about career change, but no difference ($p < 0.233$) in their actual likelihood of changing.

The results are consistent with Born and Nelson's (1984) earlier work with dentists in the mid-life/mid-career age group (35-50). The earlier study found male dentists who were experiencing a mid-career "crisis," exhibited low career satisfaction AND they were more likely to feel dentistry was not fulfilling their present aspirations. Despite feeling frustration with their careers at present, they frequently and seriously considered changing careers, but confessed they were unlikely to do so. The least satisfied of our present sample of dentists likewise frequently consider changing careers, but express little likelihood of doing so.

In essence, long-term engagement in a profession decreases the likelihood that one will be able to change careers, despite feelings of frustration and a lack of fulfillment. Interestingly, these are individuals who often have the financial resources, skills, and abilities which would enable them to shift their vocational pursuits. Similar to the results of the earlier studies (Sarason, 1977), we find dentists whose individual and career development are sufficiently complicated, and perhaps in conflict, to leave them feeling trapped in the profession with no perceived options.

To help interpret these trends and bring together both PROI scales within a single analysis, we blocked participants on how they changed on the authority and responsibility scales from dental school graduation to mid-career. Using this approach, we created two groups for each scale (increased or

declined on each scale). When these two scales were considered together, four groups emerged: increased on both scales; declined on both; increased on the authority scale but declined on the responsibility; and declined on the authority but increased on the responsibility scale. Figure 3 presents the findings for the question on whether dentistry fulfilled expectations. Using a two-way ANOVA, the findings indicate a statistically significant interaction indicating that more positive attitudes were associated with increases on both scales. Similarly, participants who increased on both PROI scales endorsed dentistry as the right career choice at higher levels. Interestingly, a decline on both PROI scales was related to a positive endorsement of the career (Figure 4). Age and gender did not account for these findings. Taken together, our findings suggest a more fluid professional role orientation that reflects one's interactions with, and evaluation of the profession.

FIGURE 3
INTERACTION EFFECT OF PROP AUTHORITY AND RESPONSIBILITY SCALES ON EXPECTATION FULFILLMENT

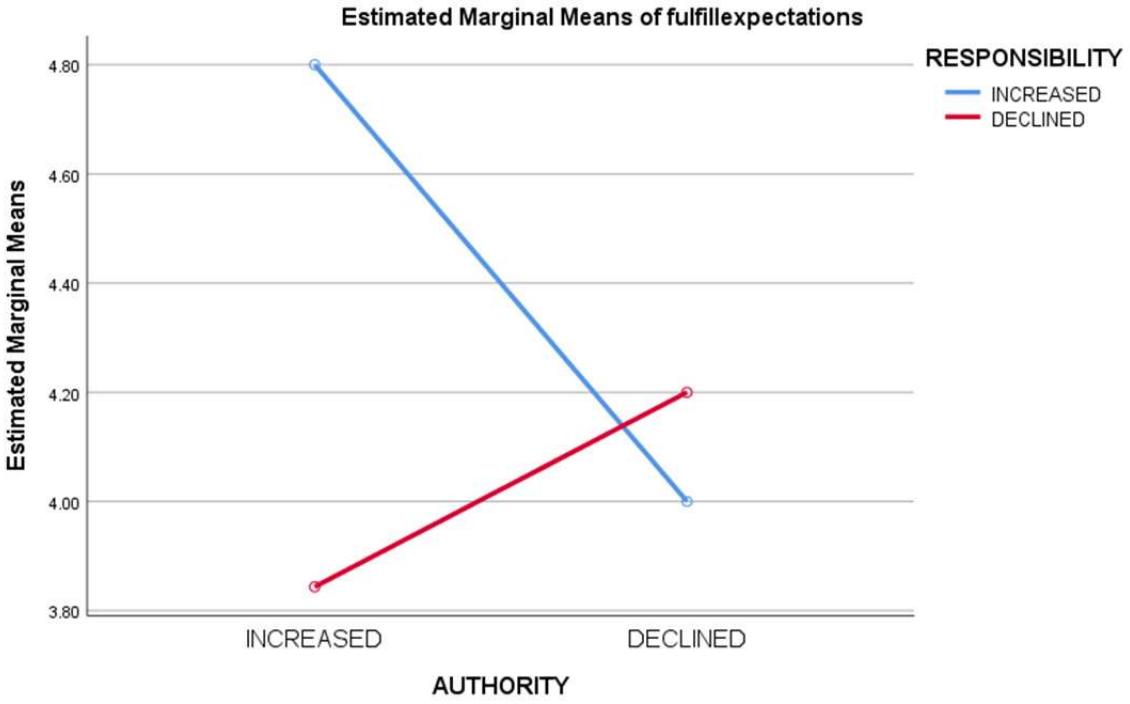
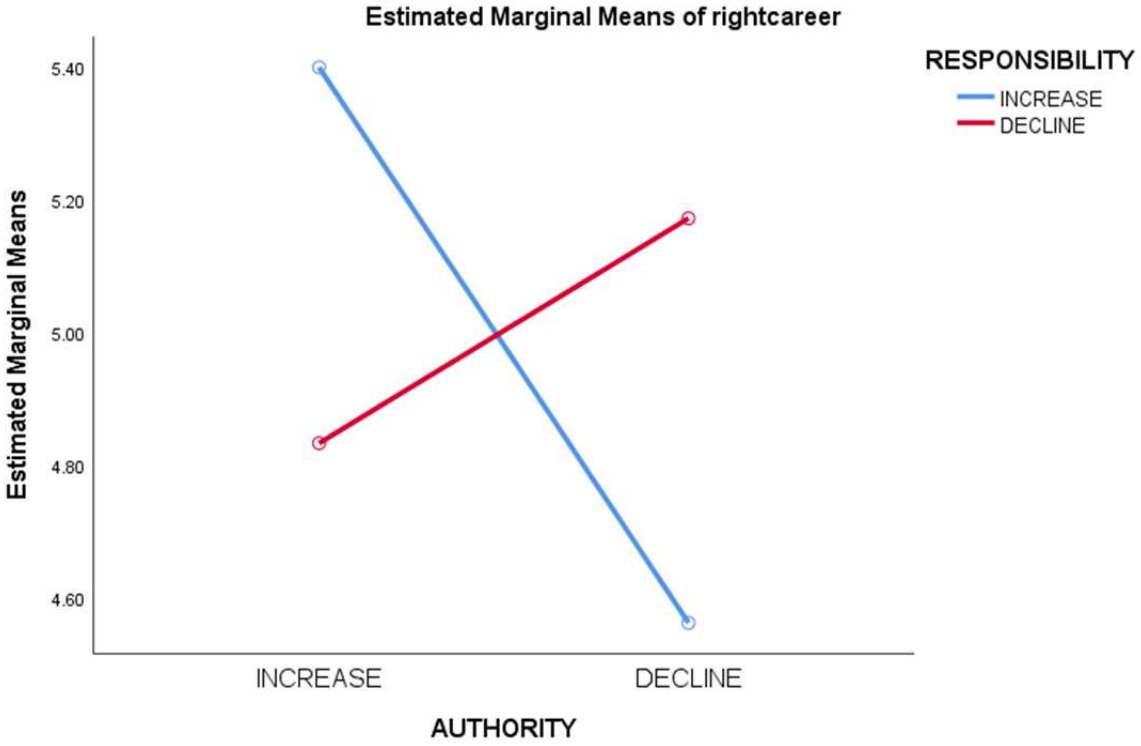


FIGURE 4
INTERACTION EFFECT OF PROI AUTHORITY AND RESPONSIBILITY SCALES ON RIGHT CAREER CHOICE



To examine the relationship between PROI scores 20 years after graduation and the archival data on measures of ethical sensitivity, moral judgment and moral implementation collected during the graduates' professional education, we reanalyzed the growth models using scores on measures of moral sensitivity (DEST), moral judgment development (DIT) and moral implementation (PPI) as potentially explanatory variables. These analyses were not informative. Across scales the only statistically significant finding indicated a moderate relationship between levels of responsibility and DIT N2 scores (Table 4). As expected from previous findings (Bebeau, 2009), higher levels of responsibility to others is related to higher levels of moral judgment development.

TABLE 4
PERRSON'S CORRELATION AMONG CURRENT PROI AUTHORITY, PROI RESPONSIBILITY, ETHICAL SENSITIVITY, MORAL JUDGMENT AND MORAL IMPLEMENTATION

	1	2	3	4	5	6	7	8	9	10	11	12
1. Current Autho	-											
2. Current Res	-.215*	-										
3. DEST	-.055	.097	-									
4. PrePI	.007	-.020	.002	-								
5. PostPI	-.036	.077	-.151	.253*	-							
6. PreMN	.206	.045	.031	.232*	-.076	-						
7. PostMN	.130	-.053	.059	.069	-.115	.389**	-					
8.PreP	-.221*	-.037	-.048	-.376**	-.054	-.744**	-.426**	-				
9. PostP	-.066	-.030	.016	-.188	-.411**	-.281**	-.765**	.372**	-			
10. PreN2	-.149	-.032	-.045	-.637**	-.118	.471**	-.312**	.902**	.316**	-		
11. PostN2	-.106	-.022	.059	-.305**	-.534**	-.157	-.605**	.379**	.878**	.358**	-	
12. PPS	.007	.010	.066	-.138	.082	-.004	-.130	.097	.068	.254*	.021	-

Future research might investigate, qualitatively, what dentists have to say about professional ideals and their relationship to professional satisfaction. How, for example, do the realities of providing care to the segment of the population with limited resources and lack of knowledge about the cause and prevention of dental disease affect frustrations with what the individual can do to meet the public duties of the profession? How does the environment in which the individual practices support or undermine the values presented during education? For whom are these values enhanced; for whom are they undermined? What role does continuing education—or life-long learning, or collaboration with colleagues play in satisfaction with one's professional practice?

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