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Empathy in Social Work Education

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Introduction

Empathy is at the core of the provider-consumer relationship in social work; without it, successful outcomes for psychological treatment are unlikely (APA Presidential Task Force, 2005). The use of empathy is considered an essential part of the professional encounter and a standard in providing ethical care. Therefore it is expected and assumed that the mental health practitioner possesses the ability to be empathetic and that s/he is capable of providing empathetic social work services to clients who are experiencing physical, psychological, and/or emotional pain.

The concept of empathy as an essential component for the therapeutic relationship; the psychological healing process, has been discussed since the seminal works of Ralph Greenson [1], David Beres and Jacob A. Arlow [2], Rogers [3] and Heinz Kohut [4]. As differentiated from sympathy, imitation/mimicry, or terminal identification, empathy means to share the experience of another [1]. In the Social Work dictionary, empathy is defined as "the act of perceiving, understanding, experiencing and responding to the emotional state and ideas of another person" [5]. In general, most counseling literature suggests that empathy consists of more than an immediate affective response, it requires considerable ego development.

Given the centrality of empathy in clinical social work practice, teaching students about empathy and assisting them in acquiring the skills related to using it in the therapeutic relationship are important components of professional training. However, few studies have ever examined if graduates entering clinical training programs have empathy, and if the educational environment impacts empathy measures.

Pedagogical explorations of empathy

Whether it is due to genetics or to differences in upbringing, a consistent finding in the literature is that gender has bearing on empathy when measured in academic settings. While a few studies have found that male students have higher levels of empathy than their female counterparts [6-8], the vast majority of studies have noted the opposite. Female students in medicine [9-13], pharmacy [14], nursing [15-17], dentistry, veterinary [18], and law [19] were found to have higher levels of empathy than their male colleagues. Proposed explanations for the higher levels of empathy found among female students include that women are (1) biologically predisposed to have higher levels of empathy and (2) that specialties that require patient contact attract more nurturing individuals, such as females with higher levels of empathy [20]. Other reasons suggested include that women are interpersonally oriented and provide more emotional support [16], and that women tend to rely on more regions in the brain that relate to emotion [15].

There has been little pedagogical exploration of how graduate level mental health students acquire and maintain empathy. However, within the medical training schools, there appears to be a common finding that empathy declines as the student becomes more skilled. Bellini *et al.* [21] found that enthusiasm at the beginning of internships soon gave way to depression, anger, and fatigue. Similarly, results of a study at Jefferson Medical College indicated that empathy scores of students substantially declined after the third year of medical school and continued to decline through graduation [22]. Both female and male empathy declined across all specialties of medicine in comparison to their initial levels of empathy. Decline in empathy scores were attributed to lack of role models, high volume of learning material, time pressure, and the overreliance on computer-based diagnostic technology [22]. These findings are supported by a larger meta-analysis of medical students' which showed that empathy begins to decline at the start of clinical practice [23]. In particular, empathy levels decreased when students were exposed to clinical training in their third year [9-10,24] and fourth year of school (Hong *et al.*, 2012).

The cultural differences between students and to whom they show empathy is beginning to be studied in the social work field. Segal *et al.* [25] found that Latino students appeared to have more social empathy, particularly around helping others succeed, as compared to Caucasian students. This was seen as an "acculturation issue of the dominant (Caucasian) majority being less tolerant of those who are different than themselves" (p. 451). Though this issue of teaching cultural empathy to social work students is documented in the literature, there lacks a sufficient exploration of specific teaching strategies. If the problem is persistent in social work education, there is not enough evidence yet on how these cultural differences present themselves in the classroom setting.

Social workers are often in positions where they provide mental health treatment to some of the hardest to reach clients. Schools of social work are charged with preparing practitioners to be successful in these settings. Yet few schools of social work have worked to understand student's empathy and/or explore the challenges to enhancing empathy-related skills. A recent study of social work students in pursuit of a Master's degree demonstrated that many students are not inherently empathic, in some cases due to exposure of trauma themselves or lack of mirroring from primary care givers (Collins, 2013). Some students have specifically chosen the profession in spite of difficult early childhood experiences. Thus, professors are, at times, charged with "turning the tide" by enhancing both cognitive and affective empathy among future clinicians.

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Due to the sparse information on how social work students learn empathy, the present study used a mixed methods design to determine if the MSW curriculum at one university was effectively teaching empathy. The research aim was to compare responses of first and second year students at the end of their second or fourth semester of social work graduate program. Follow-up qualitative interviews were conducted with a sample of students to understand how they had learned empathy (personally or professionally) and whether they felt their experience of empathic connection had changed since starting graduate school.

Because of the bi-level design of the Master of Social Work degree, the researchers had access to a large pool of diverse social work students. The students were enrolled in courses that took place in both the traditional brick and mortar classrooms and online classrooms. All students despite the specialization tracks (clinical and non clinical) were accepted.

Based on the literature, the following five hypotheses were created to explore the survey data:

H1: Female students will show more empathy than male students as measured by the Questionnaire of Cognitive and Affective Empathy (QCAE).

H2: Fourth semester students (graduating 2nd year MSW students) will show more cognitive and emotional empathy when compared with second semester (first year MSW students) as measured by the Questionnaire of Cognitive and Affective Empathy (QCAE).

H3: Traditional learning classroom students will not differ in empathy scores when compared to online MSW students, as measured by the Questionnaire of Cognitive and Affective Empathy (QCAE).

H4: Students who chose clinical foci will show higher levels of cognitive and affective empathy than students who chose more macro placements as measured by the Questionnaire of Cognitive and Affective Empathy (QCAE).

H5: Students who identify as Hispanic/Latino will show more empathy than those from other ethnic groups as measured by the Questionnaire of Cognitive and Affective Empathy (QCAE).

Methods

This exploratory research used an embedded mixed methods approach (Creswell & Plano-Clark, 2011) exploring empathy learning and levels through a pre-post survey and individual interviews. After obtaining Institutional Review Board (IRB) approval, 306 students in the social work graduate program at the University of Southern California agreed to participate in the study. These students attend both the traditional on-the ground teaching and online programs. They were given four weeks to complete the survey, receiving weekly reminders. This was a convenience sample as the participants self-selected through the email solicitation.

Measures: Students completed the Questionnaire of Cognitive and Affective Empathy (QCAE), a " measure of a comprehension of other people's experience (cognitive empathy) as well as the ability to vicariously experience the emotional experience of others (affective empathy) [26]. The QCAE is 31-item parametric scale rated on a 4-point Likert scale with the response options: "strongly agree," "slightly agree," "slightly disagree," and "strongly disagree." This instrument has five subscales: perspective taking and online simulation within cognitive empathy; emotion contagion, peripheral responsivity and proximal responsivity within affective empathy.

Demographic data collected included: Academic Year (First/Second [foundation] or Third/Forth [concentration] in the program); Academic Center (courses taken either Traditional Classroom Teaching or Online); Concentration (five specializations during the second year included: Community, Organization, Planning and Administration, Families and Children, Health, Mental Health, and Social Work in Business); Race/Ethnicity (African American, Asian, Caucasian, Hispanic, and Other; and Gender (Male, Female, and Other).

The research team conducted qualitative interviews between the baseline and follow-up surveys. Ten percent of the participating pool of students surveyed (n=32) were randomly selected (using a systemic random sampling technique) to participate in a semi-structured interview on the phone. The phone interview had ten open-ended questions and lasted on average between 20-30 minutes. The interview guide is included in Appendix A.

Interview participants' responses were recorded and transcribed. Interviewees had the opportunity to elaborate on personal and professional views and perceptions of empathy. Grounded theory methodology (Glaser & Strauss, 2012) was used to explore participants' insights into how they developed empathy. As emphasized by grounded theory, the researchers attempted to derive theory only from the interviewees' experiences expressed during the research interview (Glaser & Strauss, 2012). The data were first analyzed through a careful reading of the material and by noting the important subjective descriptions of each participant's experience. Next, the researchers attempted to find commonalities among the narratives and developed categories to describe those similarities. Urquhart *et al.* (2010) have stated, "Constant comparison with previous data, categories, concepts, and constructs is the key. Additional data are acquired using theoretical sampling until the existing categories are 'saturated' and until no more new conceptual categories or relations emerge" (p. 362). Dedoose online software was used to code answers and identify patterns among responses.

The team had regular meetings to discuss thematic concepts identified and initially read the first 5 interviews together to create similar coding categories. To ensure inter-coder reliability, each interview after the initial 5 interviews was read by two different researchers on the team. The analysis ended when the coders could no longer extract finite concepts and thus the saturation of the data was completed (Glaser & Strauss, 2012).

Quantitative results

All study participants (n=306) were social work students attending a Master's in Social Work (MSW) Program. The sample used is representative of the total population of the MSW program (N=3,000). The research team was interested in both assessing participants' levels of cognitive and affective empathy and learning variances in academic year, academic center, concentration, race/ethnicity, and gender. Table 1 shows the demographic information of participants. Table 2 shows results related to cognitive empathy. A total of 19 items in the QCAE were used. Findings suggest very little variance in cognitive empathy among variables tested. Furthermore, when breaking down the analysis into the two cognitive empathy subscales, perspective taking (item numbers 15, 16, 19, 20, 21, 22, 24, 25, 26, 27) and online simulation (item numbers 1 (r), 3, 4, 5, 6, 18, 28, 30, 31), variance remained insignificant. The remaining 12 items in the QCAE were used to assess affective empathy and three subscales: Emotion contagion (item

numbers 8, 9, 13, 14; alpha = .79), proximal responsivity (item numbers 7, 10, 12, 23; alpha = .74), and peripheral responsivity (item numbers 2 (r), 11, 17 (r), 29 (r); alpha = .83). Thus, the study hypotheses were not supported. The initial thought was that the results will show significant differences in three variables: Academic year, race/ethnicity, and gender. The expectation was that second year students, non-Hispanic, and males will show lower levels of cognitive empathy. The lack of statistical significance, with the exception of just a few items, seems to suggest that social work students do not differ when it comes to comprehending other people's experiences.

Table 3 shows results related to affective empathy. As with cognitive empathy, we hypothesized that academic year, race/ethnicity and gender would influence affective empathy. However, only gender was statistically significant with female social work graduate students reporting greater levels of affective empathy than males (9 out of 12 items showed statistical significance). For the Emotion Contagion subscale, whether the student was an on ground or on-line students (academic center) mattered with students attending the online program reporting lower levels of emotional contagion than traditional on-the-ground students. In other words, the synchronization of personal emotion among students seems to occur more frequently with the traditional on-the-ground program than the online program. Additionally, Table 4 shows Independent T-Test Results on Gender (Male v. Female) and Academic Center (Traditional Classroom Teaching v. Online) verifying statistical significance between these values.

Table 1. Particpants' Demographics (N=306).

Variable	Values	Count	%
Academic Year	First year	128	42%
	Second year	120	39%
	Other	58	19%
	TOTAL	306	100%
Academic Center	On the Ground	162	53%
	Online	144	47%
	TOTAL	306	100%
Concentration	None	54	18%
	Health	53	18%
	F&C	50	16%
	SWB	8	2%
	Mental Health	93	30%
	COPA	48	16%
	TOTAL	306	100%
Race/Ethnicity	White/Caucasian	150	49%
	African American	34	11%
	Hispanic	75	25%
	Asian	22	7%
	Other	25	8%
	TOTAL	306	100%
Gender	Male	41	15%
	Female	262	84%
	Other	3	1%
	TOTAL	306	100%

Qualitative results

The qualitative grounded theory exploration was designed to understand the pedagogical phenomenon of how social work students learn, and have learned, empathy in their lives. Of the 306 study participants, thirty-two were randomly selected to be interviewed. Interview participants included twenty-seven females and seven males. Race/Ethnicity breakdown is as follows: Caucasian (16), Hispanic (8), African American (4), and Asian American (4). Fourteen interviewees were first year MSW students and eighteen were second year MSW students. Of the thirty-two interviewees, fifteen were traditional on-the-ground classroom students and seventeen were students enrolled in the online academic program. Through coding and analysis, the following three themes emerged from the student interviews: 1) personal experiences of empathy; 2) empathic challenges; and 3) empathy as an ongoing learning process. Each of the three themes has direct pedagogical implications which will be expanded upon in the discussion section of this paper.

Despite the lack of quantitative data that supported social work school as being a conduit of empathic growth, the interviewees believed that classroom learning and field supervision had helped them to become more empathically connected. Further, their experiences showcased the varied ways in which they learn empathy, both in and outside the classroom. They also referenced their unique characteristics and enhanced or hindered their empathic growth, such as being in a warzone or having loving parents. The results are discussed below.

Theme 1: Personal experiences of empathy

Interview participants referred to the need to relate to an experience in order to have empathy for another person. Personal experiences and

Table 2. Cognitive Empathy Statistical Results (N=306).

	Item	1	3	4	5	6	15	16	18	19	20	21	22	24	25	26	27	28	30	31
Statistic	Mean	3.36	2.48	2.56	2.12	2.27	2.47	2.32	2.32	2.14	2.58	2.59	2.52	2.44	2.16	2.24	1.95	2.41	2.26	1.79
	St Dev	0.74	0.70	0.62	0.73	0.72	0.63	0.66	0.65	0.67	0.56	0.56	0.58	0.59	0.68	0.65	0.74	0.62	0.64	0.84
Academic year	Chi square	7.55	5.70	5.32	9.00	4.20	11.13	10.34	10.47	16.18	4.18	6.47	12.48	4.19	5.63	1.93	11.92	4.86	9.38	7.11
	df	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9
	p-value	0.58	0.77	0.81	0.44	0.90	0.27	0.32	0.31	0.06	0.90	0.69	0.17	0.90	0.78	0.99	0.22	0.85	0.40	0.63
Academic center	Chi square	1.59	3.60	1.73	4.16	6.19	1.59	**9.39**	**9.26**	**6.61**	1.00	4.59	1.50	6.38	5.42	3.14	0.58	6.93	6.73	7.44
	df	3	3	3	3	3	3	**3**	**3**	3	3	3	3	3	3	3	3	3	3	3
	p-value	0.66	0.31	0.63	0.25	0.10	0.66	**0.02**	**0.03**	0.09	0.80	0.20	0.68	0.09	0.14	0.37	0.90	0.07	0.08	0.06
Concentration	Chi square	18.35	15.30	20.28	19.93	19.11	14.72	10.19	10.78	20.95	9.66	11.30	10.07	16.93	14.35	16.73	22.73	22.39	**53.44**	13.35
	df	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	**18**	18
	p-value	0.43	0.64	0.32	0.34	0.38	0.68	0.93	0.90	0.28	0.94	0.88	0.93	0.53	0.71	0.54	0.20	0.22	**0.00**	0.77
Race/ethnicity	Chi square	1.28	1.86	0.65	3.30	3.04	1.74	1.03	3.31	1.52	0.19	3.67	4.28	2.61	4.07	0.64	2.90	0.28	1.78	2.92
	df	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
	p-value	0.73	0.60	0.88	0.35	0.39	0.63	0.79	0.35	0.68	0.98	0.30	0.23	0.46	0.25	0.89	0.41	0.90	0.62	0.40
Gender	Chi square	8.97	7.31	14.33	8.20	6.35	**20.91**	2.69	9.66	8.81	3.11	**20.98**	10.34	10.53	11.31	7.39	9.26	5.74	3.24	5.35
	df	9	9	9	9	9	**9**	9	9	9	9	**9**	9	9	9	9	9	9	9	9
	p-value	0.44	0.60	0.11	0.51	0.70	**0.01**	0.98	0.38	0.45	0.96	**0.01**	0.32	0.31	0.26	0.60	0.41	0.77	0.95	0.80

Table 3. Affective Empathy Statistical Results (N=306).

	Item	2	7	8	9	10	11	12	13	14	17	23	29
Statistic	Mean	2.43	1.57	1.28	1.58	1.86	1.71	1.42	1.53	1.44	3	2.68	2.87
	St Dev	0.89	0.86	0.96	0.89	0.8	0.94	0.83	0.9	0.47	0.87	0.52	0.83
Academic year	Chi square	10.55	10.6	7.91	6.46	6.41	6.71	8.45	11.63	14.04	8.27	6.36	15.76
	df	9	9	9	9	9	9	9	9	9	9	9	9
	p-value	0.35	0.3	0.54	0.69	0.7	0.67	0.49	0.23	0.12	0.51	0.7	0.07
Academic center	Chi square	5.82	**9.23**	**11.1**	**29.34**	5.46	4.07	2.3	**15.72**	**15.98**	0.78	2.87	**6.9**
	df	3	**3**	**3**	**3**	3	3	3	**3**	**3**	3	3	**3**
	p-value	0.12	**0.03**	**0.01**	**0**	0.14	0.25	0.51	**0**	**0**	0.85	0.41	**0.05**
Concentration	Chi square	13.51	19.38	19.11	20.34	18.52	9.25	18.56	23.11	12.46	14.55	9.59	15.52
	df	18	18	18	18	18	18	18	18	18	18	18	18
	p-value	0.76	0.37	0.38	0.31	0.42	0.95	0.42	0.19	0.82	0.69	0.94	0.63
Race/ethnicity	Chi square	11.14	18.1	19.52	20.88	20.67	7.91	9.72	20.85	14.19	11.2	9.62	19.6
	df	18	18	18	18	18	18	18	18	18	18	18	18
	p-value	0.89	0.45	0.36	0.29	0.3	0.98	0.94	0.29	0.72	0.89	0.94	0.36
Gender	Chi square	**19.87**	**17.61**	**22.2**	**15.33**	**16.57**	6.66	**22.72**	4.24	**18.77**	6.7	**20.54**	**18.92**
	df	**9**	**9**	**9**	**9**	**9**	9	**9**	9	**9**	9	**9**	**9**
	p-value	**0.02**	**0.04**	**0.01**	**0.03**	**0.05**	0.67	**0.01**	0.9	**0.03**	0.67	**0.01**	**0.03**

Items 2, 14, 29 are reversed
Bold items are statistically significant (p<.05)

Table 4. Affective Empathy T-Test Statistical Results (N=306).

	Item	2	7	8	9	10	11	12	13	14	17	23	29
Gender	T-Test	3.84	3.71	4.25	-	2.42	3.28	-	4.85	5.57	-	2.73	2.79
	df	3.70	3.70	3.70	-	3.70	3.70	-	3.70	3.70	-	3.70	3.70
	p-value	0.04	0.04	0.00	-	0.02	0.00	-	0.00	0.00	-	0.01	0.01
Academic center	T-Test	-	-	2.75	5.66	-	-	-	3.59	3.86	-	-	2.15
	df	-	-	309	309	-	-	-	309	309	-	-	309
	p-value	-	-	0.00	0.00	-	-	-	0.00	0.00	-	-	0.03

Items 2, 14, 29 are reversed
Items showed are statistically significant (p<.05)

the environments that an individual is a part of, throughout the life span, have a significant impact on their ability to understand another person's experience and express empathy. One example of this is,

…I would say some of the veterans. I think are, at least some of them are in line with some of the same struggles I have. Here, it is easier to be empathetic to the veteran population versus other populations.

And another participant shared,

Her [the participant's client in internship] situation just sucks and so I'm very empathic to that because I've been in hopeless situations before, so… I've been able to connect a little bit more over that, which then has allowed me to be more empathetic.

Some interview participants explained that not having empathic people in one's life motivated the person to demonstrate empathy for others. One example of this response is,

Because there's times where I didn't really get that…It would have been helpful and made a lot of things easier, so I think to see that need, that's what motivates me to be empathetic towards other people; because I didn't really get that enough until I was older.

Another participant example is,

I think just because I had none…you know I haven't really thought about if it's because of the fact that I didn't get it from my parents that I showed empathy or if because I needed it so badly I chose to show it towards others…

The multiple dimensions of this theme illustrate factors that impact one's ability to demonstrate empathy. This note is an important concept for social work education. Using experiential exercises and emotionally directed vignettes seemed to help the student activate their personal experiences and learn about their empathic connection in the classroom.

Theme 2: Empathic challenges

Despite the empathic role models discussed above, many interview participants discussed their struggles with empathy. Study participants expressed difficulty with having empathy when they could not understand where the client was coming from. As one person noted, "*It was hard to be empathetic because it was so far removed from something I could comprehend, but I tried.*" Another participant shared, *So now I am working with a client from a military background and I am not a military background so she just said how she has been feeling sad and… so I guess I couldn't provide empathy because I couldn't really put myself in her shoes and so I responded with like, oh that must be hard for you but that was being sympathetic not really empathetic at that moment, like I felt bad for her but couldn't really relate.*

Interview participants also discussed how the environments they were a part of, from childhood through adulthood, lacked empathy and this made it difficult to demonstrate empathy for others. For example, one participant noted

…The whole affection thing was not huge in my family. So that could be an issue with how I empathize with others. I personally believe in having a connection with someone, it all begins with your family and sometimes when you don't have that it might affect how you connect with people professionally.

And another participant shared,

I think I used to be a more empathetic person. In fact, I know I used to be a more empathetic person in my childhood. I think that my military experience has colored my empathy quite a bit, especially my combat experience. Empathy is a liability in the warzone because you cannot be emotionally connecting with the situations that you find yourself in. Otherwise you'll go crazy. Since coming home from that, I have found it extremely, extremely difficult to connect with human suffering on the level of day-to-day systemic interactions.

These responses reminded us that social work students do not feel inherent empathy and highlighted the need to understand how social work education can better model empathic behaviors for those who had not had them modeled. Further, the responses also highlighted the cognitive versus affective empathy explored quantitatively. That is, students might have understood the need to be empathic, but due to cognitive dissonance (or un-relatability) and an absence of personal empathic role models, the affective empathy did not appear to be present.

Empathy as an ongoing learning process

Interview participants discussed the multiple ways they had learned to be empathic and the realization that continual growth occurred as they became more knowledgeable and comfortable with social work skills. The subcategories that emerged for this theme were 1) presence of empathic role models and 2) education increases empathy. Modeling of empathy was referred to as a critical component of developing empathy. One participant stated, "*I see my mom's ability to connect with her patients and just be there for them and you know I feel like I learned how to do that from her*". Another participant expressed this idea a bit differently stating, *I think what brought that student-professor relationship closer was when I was having personal issues, in my personal life, he noted that I was not myself in class. So he took me out of class and said, "I noticed you are acting a lot differently than you normally do and I just want to see if everything is okay". And that went a long way. That was a good example of being that attuned to someone.*

Interview participants discussed how they were able to be more empathic as they learned more about social issues and become less judgmental. As one person shared, "*I can now look at this person and see them as a victim of the circumstances that brought them to this point." And as noted by another, It's been a lot of the things that we have had to study about generational cycles of, as far as marginalization, and poverty, and you know, just the welfare cycle, and how drug abuse and violence and dysfunction at home affects a person, their brain, their makeup, just the way that they present in society and what they think is the real world in their eyes. I think we all grow up thinking everybody knows this sort of black and white, right and wrong, and I've really learned through school and internship that that's not necessarily so.*

Interview participants discussed the many ways that they learned empathy and the crucial role that others played in their development of empathy. This finding speaks to the power of role models and the ongoing need to understand the personal histories of students and the impact their experiences may have on their capacity for empathy. Additionally, the overall themes that arose from the interviews illustrate that while students are able to demonstrate empathy, they also face ongoing challenges with empathy. This important finding should be utilized to enhance the teaching of empathy to students.

Discussion

This work explored cognitive and affective empathy among a diverse group of social work graduate students at one university. The interest of this study is specifically based on measuring the level of empathy among social work students due to the population social workers serve. Many individuals who seek services by social workers are homeless, traumatized, physically impaired and or psychologically compromised.

We hypothesized that female students would show more empathy (as measured by the QCAE) than male students. The results only partially supported the hypothesis. Though women scored higher on cognitive empathy scores, the differences were not statistically significant. However, women's scores in the Affective Empathy scale were significantly higher than those of men. These findings support prior literature that found women to be more empathic than men in most career health fields. Why these differences occur cannot be answered through this exploratory research it does raise some areas for continued investigation. For example, "Does it matter that men are less empathetic than women?" Further research might study if gender differences in social workers impact the quality of care Instead, it might be that a client's perception of the social worker's empathy matters more than the providers/staff actual levels of both cognitive and affective self-reported empathy.

The second hypothesis posited that fourth semester students (graduating students) would score higher than second semester students (those students completing their foundation year) on the QCAE. This hypothesis was null on all measures of empathy. This result is in contrast to prior literature, which showed that graduating students were less empathetic than those closer to program completion. Perhaps the nature of social work education attracts more empathic individuals who have less empathy differences as compared to the hard sciences where most empathy measures have been tested. Further, social work education may buffer the empathy fatigue that burdens other health-related graduate education. This finding is hopeful, but more research is needed to more clearly understand whether it is the discipline or other factors that may be protective.

We hypothesized that there would be no differences in empathy by learning environment (online vs traditional classroom platforms). The results showed that the students reported the same empathy levels except for one area: emotion contagion. One consideration for this finding may be that being in a room with others can elicit the non-verbal cues that trigger our empathic connection systems. Rather, in an online environment students do not interact interpersonally and are only seen two dimensionally on a screen. With online education becoming more popular, this is an important aspect of empathic connection that will need to be further explored.

Regarding the fourth and fifth hypotheses, there were no statistical differences in empathy scores regardless of the field of study chosen by the student or the ethnic breakdown of the participants. This finding was contrary to the literature which suggests that more macro fields with less direct patient contact might hinder the empathic development and Hispanic/Latino students may have more empathic responses than other groups.

The qualitative interview questions were designed to assess if participants felt that social work education could help them be more empathic in their personal and professional lives. The interviewees suggested that they believe social work school helped them better

understand client's struggles; this suggests that graduate social work education has an impact on cognitive empathy. Some interviewees suggested that despite not having personal, historical role models in their life to mirror empathy, professors in social work education could become the role model they needed to assume a stance of affective empathy.

Perhaps not surprisingly, most of the interview participants reported personal struggles in their life that influenced them to pursue a career in social work. The personal experiences of empathy showcased how the students have persevered through difficult situations in their or their loved ones lives, and how they use that personal experience to develop empathy for their clients. To relate this to the quantitative survey findings, it appears that the participants used their cognitive understanding of an event to help with the affective attunement to the client. The participants also talked about how early experiences of empathic failures, that is people important to them who did not show empathy during difficult moments, fueled the participants drive to heal others. Respondents attributed their own empathic ability to their parent or teacher who mirrored positive empathic qualities to them in childhood. Students remembered times when they fell off a bike or failed an exam and how the empathic reactions of their caregivers positively influenced their sense of self.

Interestingly, respondents who reported struggling with empathy still chose a career in the social work field, which suggests a positive sign of a desire to empathically connect. The respondents described how their cognitive dissonance interfered with helping their clients. The cognitive dissonance was shown through the students self-reports of not being able to understand the emotional responses of their clients, and because they lacked the cognitive understanding of their clients' needs. In other words, if the student could understand why the client found their problem so disturbing, they could more easily empathize. This suggests that cognitive engagement in academia, and affective learning through field work, can positively enhance the sense of empathic ability in an empathically-challenged student.

Furthermore, the respondents were clear in that they continued to develop themselves empathically as they aged. Some interviewees referenced the graduate coursework as instructive in deepening their sense of empathic connectedness. Though 'cognitive empathy' was not discussed specifically with the student interviews, many showcased the idea of how school can impact their view of themselves and their social world. They discussed how empathy is an ongoing learning process and through empathic role models (such as caregivers and professors) as well as classroom learning, have shaped their sense of how they connect to others experiencing life circumstances that are different than their own.

Limitations

This study was an exploration into how social work students learn empathy. Though not conclusive, the research supports further exploration of how a social worker's early childhood experiences can impact their empathic ability with their clients. The limitations of the study included selection bias and time. All the participants were selected non-randomly and attended one higher education institution. The data was collected within eight months (2 semesters). To offset these limitations, the researchers used an availability sampling technique with a large number of participants (n=306) and collected participant insights by conducting semi-structure interviews. Longitudinal research can be conducted in the future to assess students learning and variability of empathy levels.

Empathy and neuroplasticity in social work pedagogy

Recently Molenberghs *et al.* [27] used the QCAE and an MRI to examine how gray matter in the brain influences cognitive and affective empathy. Their results showcase how empathy is present in the gray matter of our brains, not the organs of the brain, and therefore may have the ability to be influenced and shaped over time. Further, the two dimensions of cognitive and affective empathy are in different parts of the brain, therefore suggesting that one aspect of empathy can be primed, shaped, or changed despite its effect on the other. If the gray matter is shaped throughout the lifespan via interpersonal experiences, the hope may be that social work training can help increase empathic connection in a graduate student. The one variable that remains unknown is how long it takes to prime empathic connections, and if a two year graduate level program is enough to change neuronal connectedness.

Another neurobiological consideration in this research is how the present study found that 'emotion contagion' was significantly less in online students than in traditional classroom students. Scheonwolf (1990) defines emotional contagion as a process in which a group or person influences the emotions or behavior of another person or group through the conscious or unconscious induction of emotional states and behavioral attitudes. Eres *et al.* (2015) suggest that affective empathy is found in the "processing hub involved in simulating the affective components of the emotions we observe in others" (p. 308). In humans, brain activity consistent of mirror neurons is found in the prefrontal cortex, the supplementary motor area, the primary somatosensory cortex and the inferior parietal cortex [27]. When considering mirror neurons from a pedagogical neurobiological framework, the question arises if a web based camera ("webcam") can provide the necessary visual input to trigger mirror neurons to create empathic attunement and engagement? Though the online platform is through "live" teaching, is it possible that eye contact, physical proximity, and in-person auditory processes are essential components to the online platform's ability to get the students to empathically engage at an affectual level?

Another consideration could be the nature of online learning attracts the person who may struggle with affective attunement in the first place, thus the online education program reinforces the students already-refined strategy of affectual dis-engagement. These are unanswered questions that warrant another deeper study into this phenomenon and the future of social work online education.

Pedagogical implications

A fundamental question that presents itself in this study is if social work education can increase empathic attunement on a cognitive and affective level. From the quantitative responses, there were no statistical differences between first year and second year students' empathy levels. This would suggest that the social work education program may not be affecting empathic attunement. However, in qualitative interviews, the respondents suggest the clear impact that empathic modeling from professors and field supervisors can have on their empathic connection. This is an area needed for further exploration.

Professors and Field Instructors modeling empathy to students is critical. This may be challenging for some faculty because they are not in a therapeutic role. Rather, they are charged with evaluating the students and are in a position of power. However, based on the new awareness that many social work students come to the profession without empathic modeling, the role of the educator is

particularly important. Social work educators need to focus less on the on traditional teaching (i.e., aligned with ideas of conventional professionalism that draw a very clear line between the teacher and the students) and more about teaching through relationships. Teaching through relationships is a progressive teaching technique that posits teachers who have knowledge about their students will be better able to teach them. It also describes the complex social environment in which students and instructors converse, share experiences, and participate in activities that, together, make for engaged learning. Professors and Field Instructors need to get to know the students' learning styles and where they are in terms of their knowledge, abilities, and potential. More importantly, however, they also need to get to know their interests, personality, and background. For the teacher, this body of knowledge opens up the possibilities of growth and dramatic learning opportunities.

Of particular interest to the authors of this study is the pedagogical implications of teaching empathy to the less empathic student. Specifically, how can MSW faculty facilitate a shift in the empathic responses of the students who struggle connecting both cognitively and affectively? This connection is essential, and it is perceived as a key competence in social work practice. Modern day attachment theory asserts that empathy is a result of attachment security, showing how early childhood experiences are essential building blocks to empathic ability in the adult [28]. This phenomenon supports Heinz Kohut's theory of affect mirroring as an essential part of empathy and in healing trauma in a therapeutic dyad. Can a professor and/or Field Instructor take the role of secondary attachment figure and influence a social work student's empathy in both cognitive and affective learning? As educators, we are tasked with becoming empathic mirrors to the social work student. We can assist our future social work colleagues by providing better classroom and field environments that foster a caring, empathic, and collaborative learning relationship. This research study provides hope that individuals who enter school with low levels of empathy can still graduate with strong empathy skills which is a key component in the therapeutic relationship. We must continue to find ways to reach out to these students and empower them with the empathic tools necessary for success in the social work field.

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