# The Connection Between Anxiety and Empathy in Social Work Students

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Abstract: Anxiety and empathy are familiar concepts for social work students. This study explored levels of anxiety and empathy in a group of students to understand if there was a connection between the two. The participants were current social work students studying at the undergraduate or graduate level. They were studying in in-person and online classrooms. A total of sixty-five participants completed two instruments, the Generalized Anxiety Disorder (GAD-7) scale for anxiety, and the Interpersonal Reactivity Index (IRI) for empathy. Within this sample of social work students, anxiety and empathy were moderately correlated. At p < .05, GAD-7 scores were significantly correlated with total IRI scores (r = .38, p < .01), as well as sub-scores for Fantasy (r = .34, p < .01), Personal Distress (r = .30, p < .05), and Empathic Concern (r = .31, p < .05). GAD-7 scores were not significantly correlated with Perspective Taking. Findings suggest that both educators and practitioners have roles to play in helping emerging professionals develop awareness of their reactions to those with whom they work. Through developing awareness, social workers may be better able to minimize emotional burden and maximize the advantages that come from empathic engagement.

Keywords: Anxiety, empathy, social work education, student

Teaching in a social work program is different than teaching in other disciplines. The goal is to prepare students to practice in a variety of roles that involve working with populations that may have significant trauma, difficult life situations, and mental and emotional stressors. Learning how to use empathy in practice both ethically and effectively often involves an introspective look at one's own functioning. To guide students in their learning journeys, social work educators benefit from a strong understanding of the social work student population (undergraduate and graduate), including how students deal with academic and life stressors. Incorporating this understanding into curriculum and program planning can help social work educators and programs enhance students' abilities to care for themselves while learning to care for others.

Social work is a demanding academic program of study and a demanding profession (Collins et al., 2010). Researchers examining individuals' pathways to the profession have observed the prevalence of adverse childhood experiences, trauma, and traumatic stress in individuals pursuing careers in social work (Branson et al., 2019; Mazza, 2015; Shannon et al., 2014). In a study of undergraduate students in the United States, Branson et al. (2019) found that those majoring in social work were more likely than those majoring in other disciplines to report adverse childhood experiences. The connection between childhood adversity and clinically significant levels of anxiety and depression is well-established in college students (Davies et al., 2022; Watt et al., 2020). Thus, the experiences that

introduce or draw individuals to social work may also be those that make them more vulnerable to the emotional strain often accompanying this work.

Adverse experiences have also been shown to be negatively correlated with empathy (Cerqueira & Almeida, 2023), albeit in studies often conducted with justice system-involved adolescents and adults (Narvey et al., 2021). Despite the high value and recognition accorded to empathy as a skill in social work practice, it has rarely been studied in student populations (Greeno et al., 2018). In a study of social work and nursing students, Greeno et al. (2018) found high levels of empathy across all groups, with higher levels recorded for graduate social work (MSW) and nursing students than for undergraduate social work (BSW) students. Work engagement and volunteer experience were positively related to empathy (Greeno et al., 2018), suggesting that exposure to the experiences of those receiving social services can enhance empathy.

This study investigated levels of empathy and anxiety among social work students and explored the connection between these two concepts. Information derived from the study can be used to enhance social work educators' understanding of students, as well as to plan and create programs, curricula, and assignments that enhance students' experiences and prepare them for the challenging nature of the career.

#### Literature Review

# **Empathy: Conceptualization and Measurement**

Empathy is the ability not only to understand another's emotional experience but also to take part in the emotions themselves (Knight et al., 2019). In healthcare settings, empathy enables connection. Empathic interaction allows for sensitivity and delivery of humane and effective treatment interventions (Barbosa et al., 2013). In prior studies, empathy has been correlated with positive provider and patient interactions as well as an improved quality of care (Hojat et al., 2002). Knight and colleagues (2019) described two distinct types of empathy: affective empathy and cognitive empathy. Affective empathy happens when a person experiences the emotional state of another, whereas cognitive empathy encapsulates the ability to understand or take someone else's point of view (Knight et al., 2019).

In a seminal and oft-cited work in the field of empathy research, Davis (1983) described empathy as a deeply felt reaction to observations of someone else's experience. Davis (1983) asserted that empathy is multidimensional and that to understand one's response to others, these dimensions should be explored.

As a measure of the concept of empathy as a multidimensional construct, Davis created the Interpersonal Reactivity Index (IRI). The IRI assesses empathy using four distinct areas or dimensions: perspective-taking, fantasy, empathetic concern, and personal distress. The perspective-taking dimension addresses "the tendency to spontaneously adopt the psychological point of view of others" (Davis, 1983, pp. 113-114). According to Davis, individuals who scored high in this dimension tended to function better socially and had higher levels of self-esteem. Fantasy "taps respondents' tendencies to transpose themselves

imaginatively into the feelings and actions of fictitious characters in books, movies, and plays" (p.114). Davis found no statistically significant connection between fantasy and self-esteem or the ability to function in social settings. He also discovered that when a person scores higher on the fantasy subscale, they tend to show their intelligence verbally. Such individuals also had a "tendency towards emotional reactivity" (p. 120) and to be more sensitive to other people.

The empathetic concern dimension of the IRI assesses "other-oriented' feelings of sympathy and concern for unfortunate others" (p. 114). Davis found a weak connection between empathic concern and how a person functions socially; having a high score in empathetic concern can lead to the person being shy and anxious. There was a weak relationship between empathetic concern and self-esteem. Empathetic concern was significantly and moderately associated with emotional reactivity and having a selfless care for other people. The fourth and final dimension of the IRI - personal distress - "measures 'self-oriented' feelings of personal anxiety and unease in tense interpersonal settings" (p.114). This dimension of empathy addresses how an individual feels while being around others and viewing their experiences. According to Davis, individuals who scored high in personal distress "tended to report being more shy, more anxious, and less extroverted than those with low [personal distress] scores" (p. 121). They were more likely to be emotionally vulnerable.

## **Empathy in Social Work Students**

While there is little current research on the correlates of empathy in social work students, some authors have described ways that empathy might be cultivated or enhanced. Walter and Shenaar-Golan (2018) explored incorporating exercises in sensory language to try to enhance empathy in social work students. Gair (2017) researched the impact of increasing social work students' levels of confidence on their empathy for social justice issues. Researchers in Australia explored reflections from students on social media and empathy in a course that focused on interpersonal skills (Blakemore & Agllias, 2020). Another article explored the use of "diversity dolls" to help students develop empathy for populations the student and social worker would serve who would be considered vulnerable (Papouli, 2019). None of these studies was conducted with students in the United States, and none examined correlates of empathy in students.

### **Anxiety in Social Work Students**

While most college students experience some degree of anxiety during their educational journeys, social work students may experience it more frequently and at higher levels. Some studies have documented specific sources of anxiety in social work students, such as the effects of climate change (Doğan & Buz, 2024) and the impact of the COVID-19 pandemic (Díaz-Jiménez et al., 2020). In a study of social work students in Peru, Palomina-Coila et al. (2020) found that 48% of the study participants reported symptoms of depression, anxiety, and stress.

Social work students are expected to work in different environments and understand and react to many situations through their internships and education. While researching anxiety among social work students, Baird (2016) found that students experience anxiety from a variety of situations such as their field practicums, statistics classes, research, and overall fear because of how they might be performing. Multiple reasons for this anxiety exist, like events that occur during practicum, the pressure put on students during internships, lack of confidence, lack of preparedness, and stress and concern (Baird, 2016).

Students who have difficulty regulating their emotions during these stressful or tough experiences have been found to struggle with anxiety as well and have less confidence in their abilities (Baird, 2016). Symptoms of anxiety could also be prominent in social work students due to underlying mental health issues, their relationships with their field instructors, and their level of education and age which might determine the amount of experience they have (Baird, 2016).

## **Connecting Empathy and Anxiety in Social Work Students**

Prior studies exploring relationships between empathy and anxiety suggest that these constructs may share an underlying foundation of sensitivity and emotional awareness (Knight et al., 2019). Knight and colleagues used neuroimaging, functional MRI, visual images, and validated questionnaires (i.e., Toronto Empathy Questionnaire, State-Trait Anxiety Inventory, Penn State Worry Questionnaire, and Ruminative Response Scale) to investigate the underlying neural correlates of empathy and anxiety. Their findings demonstrated that empathy was highly associated with worry and that worry, rumination, and anxiety were all highly correlated. Higher empathy related to higher worry which then increased anxiety. Furthermore, empathic concern and empathy in general were reported more frequently when self-reflection and predicting the emotional responses of others occur. Anxiety then tends to be present when internally generated thought is reinforced by emotion-driven rumination (Knight et al., 2019).

Knight et al.'s findings are consistent with the results of prior studies conducted with helping professionals. In a study of staff nurses in Madrid, Spain, Ayuso-Murillo et al. (2020) identified a positive relationship between anxiety and empathy (specifically the components of warmth and liveliness). Rodrigues Sampaio et al. (2020) found a positive relationship between anxiety and empathy in a sample of Brazilian nurses and physicians, with the relationship driven primarily by the components of fantasy and personal distress.

Within the past five years, researchers have published two meta-analyses examining relationships between anxiety and empathy in adults. The first, published in 2021 by Pittelkow et al., included 48 studies, some using clinical samples (i.e., individuals with Social Anxiety Disorder) and some using non-clinical samples. The authors reported a weak, positive association between social anxiety and affective empathy, but a weak, negative association between clinically significant levels of social anxiety and cognitive empathy. This suggests the possibility that, at sub-clinical levels, individuals with more social anxiety may feel or experience greater empathy. However, social anxiety that reaches a level of clinical concern may compromise individuals' capacities for cognitive empathy (i.e., their capacity to take another's point of view).

The second recent meta-analysis to examine anxiety and empathy identified 116 quantitative studies, covering nine types of anxiety (e.g., global anxiety, social anxiety, agoraphobia) and three categories of empathy (i.e., cognitive, affective, general; Nair et al., 2024). Nair et al. (2024) found weak, statistically significant relationships between anxiety and empathy, across types of anxiety. Consistent with Pittelkow et al. (2021), Nair et al. (2024) found the relationship between anxiety and empathy to be weaker and less consistent for cognitive empathy than for affective empathy.

This study explored levels of anxiety and empathy in social work students to see if there was a connection between the two constructs. There is limited literature on anxiety in social work students and very little on empathy in social work students. We found no prior studies exploring possible connections between anxiety and empathy in social work students in the United States.

#### Method

We surveyed students enrolled in either an undergraduate (BASW) or graduate (MSW) program at a public, teaching-focused university. The survey included questions about gender and age, as well as items from two assessment scales, the Generalized Anxiety Disorder (GAD-7) scale to measure anxiety and the Interpersonal Reactivity Index (IRI) to measure empathy. The information was gathered using Qualtrics, allowing participants to take the survey either on computer or their mobile phone.

# **Participants and Recruitment**

Participants were recruited through Constant Contact during the spring of 2022, using an email list containing current social work students. In addition, flyers with a QR code linked to the survey were distributed directly to students, as well as to students via faculty and staff. The students were all currently enrolled in classes (either in-person or online) and included BASW students (junior or senior) and MSW students. Of the approximately 651 students enrolled that spring, 65 completed the measures of both anxiety and empathy (for a response rate of 10%). Respondents were invited to self-identify their gender. Of the 63 who provided their gender identity, 54 identified as female/woman, 7 as male/man, and 2 as non-binary, queer, and/or trans. Of the 64 respondents who provided data on age, a quarter (n = 16) reported being between ages 18-21; just over a quarter (n = 17) were between 22-25; another quarter (n = 17) were between 26-40; and the remaining 14 students were over 40. Responses were collected between March 23, 2022, and May 11, 2022.

### **Assessment Measures**

We chose two instruments to assess anxiety and empathy. Developed by Spitzer et al. (2006) as a brief, self-report measure used to detect generalized anxiety in adults, the GAD-7 includes seven items inquiring about the frequency of respondents' anxious experiences over the previous two weeks (i.e., "Feeling nervous, anxious, or on edge"; "Not being able to stop or control worrying"; "Worrying too much about different things"; "Trouble

relaxing"; "Being so restless that it is hard to sit still"; "Becoming easily annoyed or irritable"; "Feeling afraid, as if something awful might happen"). Individual item scores range from 0-3 (0=Not at all; 1=Several days; 2=More than half the days; 3=Nearly every day). The scores are then totaled, with totals corresponding to degrees of anxiety: 0-4 indicating minimal anxiety; 5-9 indicating mild anxiety; 10-14 indicating moderate anxiety; and 15-21 indicating severe anxiety. In its initial validation study, the GAD-7 was shown to have excellent internal consistency reliability ( $\alpha$  = .92) and test-retest reliability. Factorial validity, construct validity, and convergent validity were also good, with GAD-7 scores correlated with scores on both the anxiety subscale of the Symptom Checklist-90 and the Beck Anxiety Inventory (Spitzer et al., 2006).

We measured empathy using the Interpersonal Reactivity Index (Davis, 1980). The IRI is a 28-question assessment with four subscales, each with seven items. The subscales are perspective-taking, fantasy, empathic concern, and personal distress. Perspective-taking measures how a person responds when attempting to see things as another person might (e.g., "I believe that there are two sides to every question and try to look at them both"). Fantasy measures the person's response to taking on "feelings and actions of fictitious characters in books, movies, and plays" (Davis, 1983, p. 114) in an imaginative manner (e.g., "After seeing a play or movie, I have felt as though I were one of the characters"). Empathetic concern measures the level of "other-oriented' feelings of sympathy and concern for unfortunate others" (p. 114; e.g., "I would describe myself as a pretty softhearted person"). Personal distress describes how the person responds to being exposed to the experiences of others which can result in anxiety and feeling ill at ease (e.g., "I tend to lose control during emergencies"). Individual item scores range from 0-4, with 0 indicating that the statement "does not describe me well" and 4 indicating that the statement "describes me very well."

According to Davis (1983), "All four scales have satisfactory internal and test-retest reliabilities (internal reliabilities range from .71 to .77; test-retest reliabilities range from .62 to .71)" (p. 117).

# **Results**

We began by calculating mean scale scores on anxiety and empathy for the 65 students in the sample. The average GAD-7 score for the sample of social work students was 9.61 (SD = 4.87), indicating mild to moderate levels of anxiety. Coefficient alpha ( $\alpha$ ) for the 7-item scale was .85, indicating good internal consistency reliability.

The average IRI score for the sample was 2.53 (SD = 0.47). Coefficient alpha ( $\alpha$ ) for the 28-item scale was .85, indicating good internal consistency reliability.

Table 1 summarizes descriptive statistics and coefficient alpha for each of the four IRI subscales. As was the case for both the GAD-7 and the total IRI score, alpha coefficients were all above .70, a range generally considered acceptable (Doval et al., 2023).

Table 1. Descriptive Statistics and Reliability: IRI Subscales (n = 65)

	Mean	Standard	Coefficient	
	(M)	Deviation (SD)	Alpha (α)	
Perspective-taking	2.99	.55	.72	
Fantasy	2.30	.89	.82	
Empathic concern	3.27	.59	.78	
Personal distress	1.56	.69	.72	

We then examined correlations between anxiety and empathy, as well as between anxiety and each of the empathy subscales. As shown on Table 2, GAD-7 scores were positively correlated with total IRI scores (r = .38, p < .01), as well as with subscale scores for fantasy (r = .34, p < .01), empathic concern (r = .31, p < .05), and personal distress (r = .30, p < .05). GAD-7 scores were not significantly correlated with perspective-taking.

Table 2. Correlation Matrix: Anxiety and Empathy (n = 65)

ΓY -taking	_	
i -taking	Fantasy	concern
.27*		
.52***	.45***	
02	.36**	.17
	.52***	.52*** .45*** 02 .36**

As noted above, we collected data on two demographic indicators: self-described gender and age (in categories). Consistent with the profession of social work in the United States (Salsberg et al., 2020), as well as with the population of social work students at the research site, women comprised a majority (86%) of the study sample. To explore whether gender and age play a role in the anxiety-empathy connection, we conducted a multivariate linear regression, regressing total IRI scores on GAD-7 scores, controlling for age and gender (with female/woman compared to all other genders). The relationship between anxiety and empathy remained the same in magnitude, direction, and level of statistical significance with the introduction of control variables for gender and age (Table 3).

Table 3. Linear Regression: Regressing Empathy on Anxiety (n = 62)

Variable	b (SE)	95% CI	ß	p			
Empathy (IRI)	3.49 (1.39)	[.71, 6.28]	.33	.01			
Age	28 (.35)	[-3.93,3.33]	11	.41			
Woman (excl. man/non-binary)	30 (1.81)	[98,.41]	02	.87			
$F(3, 58) = 3.29, p < .05, Adjusted R^2 = .10$							
Notes: SE = Standard Error; CI = Confidence Interval							

### **Discussion**

### **Anxiety and Empathy in Social Work Students**

The social work students who participated in this study had average GAD-7 scores of 9.62, between mild (5-9) and moderate (10-14) levels of anxiety. The finding that the participants, on average, scored in the mild to moderate range of anxiety on the GAD-7 is consistent with prior studies. Specifically, Baird (2016) discussed how events that occur during practicum, the pressure put on students during internships, lack of confidence, lack of preparedness, and stress and concern can lead to anxiety. Palomina-Coila et al. (2020) observed symptoms of anxiety, as well as stress and depression, in 48% of social work students studying in a university in Peru. Davies et al. (2022) and Watt et al. (2020) linked clinically significant levels of anxiety to experiences of adversity in childhood, an area that may warrant further exploration in future studies of social work students.

### Relationships Between Anxiety and Empathy in Social Work Students

In the current study, the correlation between anxiety and empathy was low-to-moderate (r = .38, p < .01) and positive. Higher levels of anxiety corresponded with higher levels of empathy. These results do not reveal the direction of the relationship and, indeed, it is likely that additional factors, such as emotional sensitivity, may underlie both (Knight et al., 2019). Results of studies conducted with other helping professionals, such as nurses, are generally consistent with our results, suggesting positive relationships between anxiety and empathy, driven primarily by affective components.

Davis (1983) identified four key aspects of empathy: perspective-taking, fantasy, empathetic concern, and personal distress. In this study, anxiety was significantly correlated with fantasy, empathetic concern, and personal distress. It was not, however, correlated with perspective-taking, a particularly cognitive dimension of empathy. Such a pattern of relationships is consistent with the results of meta-analyses conducted by Pittelkow et al. (2021) and Nair et al. (2024). Both concluded that relationships between anxiety and empathy varied by the measures used, by whether clinical or subclinical groups were examined, and by whether cognitive or affective components of empathy were examined. Overall, however, relationships between the two constructs tended to be stronger and more consistent for affective empathy than for cognitive empathy.

These findings are particularly worthy of note when considering how these elements may present in students. According to Davis (1983), those who score high in the fantasy dimension of empathy may be more emotionally reactive and sensitive to others' emotions. It is not unusual for social work students to believe that they are high in empathetic concerns for others. However, Davis (1983) found that those high in empathic concern may experience shyness and anxiety in social situations. While the settings in which social work programs place students are professional rather than social, social work educators, practicum coordinators, and practicum supervisors can be attentive to the ways that anxiety may show up alongside empathy - something we often try actively to cultivate in students.

### Limitations

The students in this study were all actively studying social work which can cause them to be more introspective in general about what they experience and to have some level of anxiety about how they relate to others in a helping role. It is possible they were already familiar with these measures due to their own personal experience in therapy or use of the instrument in a class or field setting. While both measures used in this study have demonstrated good reliability and validity (in both the current study and prior studies), these measures were self-scored and are vulnerable to response bias. Our response rate was also low at approximately 10% (65 respondents). The gender and age profile of the sample was similar to the profile for the student population from which the sample was drawn. The small sample size and reliance on participants from a single university limits the ability to generalize results to a larger group of social work students in different geographic areas. Due to both assessments being quantitative measures, there is no significant explanation of the students' experiences with empathy or anxiety as would be gathered in a qualitative study.

# **Implications for Social Work Education**

This study examined anxiety and empathy in students who are taking social work courses. The information can be used to build awareness of the person in the environment. In this case, the person in the environment is the student who is sitting in the classroom or field setting. Greeno et al. (2018) emphasized using this information to guide curricular development and enhance the chances of success in professional endeavors. Social work programs can be purposeful in helping students to develop their empathy skills but also to learn to regulate their responses to empathy to be able to protect themselves and promote their overall wellbeing (Grant, 2014). To this end, this research should be used to guide overall curriculum development and classroom and field/practicum experiences. Educators can help students to be aware of their own reactions to others, not as "right versus wrong," but as characteristics of how they feel when experiencing working with troubled individuals. Skill-building in managing and keeping a balance in their empathetic response could enhance how students feel about themselves and their ability to take perspective of the clients they will serve (Davis, 1983). By understanding the challenges that social work students may face during their education, professors and field instructors can implement new strategies to help relieve anxiety. The strategies differ depending on a variety of factors such as the individual's characteristics, the student's context and situation, and the way the student experiences anxiety. Strategies to help social work students manage their anxiety include mindfulness and cognitive behavioral therapy, identifying specific teaching strategies, normalizing anxiety, providing stress management techniques, preparing students fully for their practicum, facilitating supportive relationships with field instructors, or reducing organizational stressors during students' practicum (Baird, 2016). Learning basic skills of emotion regulation can help them deal with their own levels of anxiety but could also be applied to their work with anxious clients. Measures of empathy can be used with students to engage them in reflecting on ways in which their

own distinct profile of empathy may show up in practice settings, both now and in the future.

#### **Future Research**

There are several areas of interest that could drive future research efforts. It would be helpful to study different skill building exercises and their impact on empathy and anxiety. It would also be interesting to study in general the somatic experience of students who have higher levels of anxiety and empathy. This could be done in a mixed-methods study using both quantitative scales and qualitative interviews.

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