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Abstract

Purpose: The prevalence and severity of anxiety among students is increasing. Elevated levels of anxiety may decrease students' academic performance, professionalism, and their ability to manage elements of patient care. Anxiety and the impact of anxiety have been well studied in medical and nursing students, but it has not been investigated as much in other healthcare professions programs. The purpose of the study is to describe the prevalence and determine predictors of anxiety in healthcare professions students.

Methods: Three-hundred and fifty-one, first and second year Doctor of Physical Therapy, Master of Science in Communication Science Disorders, and Master of Physician Assistant studies students were recruited to participate during the fall semester. Fifty-two percent, or 183 students completed the State-Trait Anxiety Inventory (STAI) and the Westside Test Anxiety Scale (WTAS), the tools used to assess different anxiety levels.

Results: Fifty-one percent of females and 37.5% of males have at least moderately high test anxiety. Eighty-three percent of students have greater than normal State Anxiety and 56% of students have higher than normal Trait Anxiety levels. The regression models identified several variables for predicting WTAS, STAI-trait (STAI-T), and STAI-state (STAI-S) scores. However, a large part of variance was unaccounted for, indicating there are other factors contributing to anxiety were not assessed.

Discussion: Healthcare professions students have higher anxiety levels compared to normative values in the general population. Qualitative research to explore further the etiology of students' anxiety is warranted.

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Keywords: Anxiety; Communication sciences and disorders; Health professions education, physical therapy, physician assistant

1. Introduction

There is growing concern regarding the increased prevalence and severity of mental health disorders in university students.^{1–3} In 2014, college counseling centers reported an 89% increase in students presenting with anxiety disorders over the past five years.⁴ During the 2014–2015 school year, one in six undergraduate

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students in the United States were diagnosed with or treated for anxiety.⁵ Anxiety also affects graduate students.^{6–10} For example, medical students have higher levels of anxiety when compared with the general population.^{6–9} The effects of anxiety on graduate students can be multi-faceted. Medical students with elevated anxiety levels demonstrated declines in academic performance and professionalism.^{6,11} High anxiety has been linked to decreased empathy in medical students.¹⁰

Most research concerning student anxiety has focused on general anxiety in medical, dental and nursing students.^{6–9,11–14} It is perceived that medical school is more stressful or general anxiety provoking than other graduate programs.^{15,16} However, information is limited regarding the prevalence of anxiety and its severity in other healthcare professions students, specifically Doctor of Physical Therapy, Master of Science in Communication Science Disorders, and Master of Physician Assistant studies students. Frank and Cassidy¹⁷ found that DPT students had high state and trait anxiety levels, but otherwise there is a paucity of recent data and data in other programs. The purpose of this study was to describe the prevalence of state, trait, and test anxiety levels in each profession, describe differences between the professions, and determine the predictors of anxiety in healthcare professions students. Reporting levels of anxiety in these graduate programs is a necessary step towards creating appropriate intervention strategies to decrease anxiety in healthcare professions students.

1.1. Background

Anxiety is an emotion that consists of “feelings of tension, worried thoughts and physical changes.”¹⁸ Anxiety disorders represent the most prevalent class of mental health disorders, with a lifetime prevalence greater than 15%.¹⁹ Anxiety leads to poor health outcomes.²⁰ It is associated with an increased occurrence of several pathologies: irritable bowel syndrome, cardiovascular disease, chronic pain, asthma, depression and cancer.^{8,9,20–24}

While there are many different categories of anxiety, this paper will focus on three types: trait anxiety, state anxiety, and test anxiety. Trait anxiety describes a predisposition for anxiety, and is a stable component of personality.²⁵ Heightened trait anxiety can mediate or intensify the response to a threatening situation.⁸ In graduate students, trait anxiety is their baseline anxiety

level. In contrast, state anxiety is a transitory anxiety that changes based on stimuli.²⁵ It can manifest as a disproportionate reaction to an identified or unidentified source.⁸ State anxiety can last for variable lengths of time depending upon the stimulus and individual personality traits. Graduate students may experience state anxiety during graduate school or specific to exam times. Lastly, test anxiety is a heightened anxiety level around taking a test.²⁶ For students, state test anxiety describes increased anxiety observed in response to an impending examination.²⁶ Trait test anxiety is a student's predisposition towards increased intensity or frequency of test anxiety.²⁶ A negative association exists between heightened levels of test anxiety and academic performance in graduate and medical students.^{7,27–29} Anxiety has been tagged as an important variable to consider in future research concerning predictors for success in medical school, especially given the prevalence of anxiety.¹² Determining anxiety's impact and potential mediating factors in other health professions graduate students may improve students' learning experience and success.

2. Method

2.1. Subjects

To investigate anxiety in health professions students, trait, state and test anxiety levels were compared among graduate students at the MGH Institute of Health Professions (MGH IHP) in Boston, MA. The MGH IHP is a graduate institution focusing on health professions education. The academic programs assessed included Doctor of Physical Therapy (DPT), Master of Science in Communication Science Disorders (CSD), and Master of Physician Assistant studies (PA). The inclusion criteria for this study included enrollment in one of the identified programs. There were no exclusion criteria.

2.2. Research design

The study was a cross-sectional observational study. The first and second year students in each program were surveyed during the fall 2016 semester. The study was timed a few weeks after the students acclimated to their classes, but prior to midterm examinations. The study was approved by the institution's Internal Review Board. All data collected was anonymous.

2.3. Data collection

Research Electronic Data Capture (REDCap) was used to collect and manage the data.³⁰ REDCap is a secure, web-based application designed to support data capture for research studies.³⁰ All students enrolled in each program were emailed through REDCap. The email outlined the purpose of the study, provided background information on anxiety, and requested the students' participation in the study via an individualized link to the assessments. A reminder email was sent weekly for three weeks to those who had not yet participated. No protected health information was collected and the participants were assigned a random identification number, which allowed for blinded data analysis.

The State-Trait Anxiety Inventory (STAI) was selected for its ability to assess state and trait anxiety, its strong reliability and validity, and availability of norms across populations for comparison.²⁵ The Westside Test Anxiety Scale (WTAS) was chosen to assess test anxiety because of its ease of administration and its use in medical education.

2.3.1. State-Trait Anxiety Inventory

The STAI is comprised of 20 questions assessing state anxiety (STAI-S) and 20 questions assessing general, or trait, anxiety (STAI-T). Participants rate their responses to each question on a 4-point Likert scale, with 1 corresponding to "not at all" and 4 indicating "very much so." Positively oriented questions that do not indicate anxiety, such as "I feel calm," are reverse scored. A high score on the tool indicates greater anxiety.

The STAI is a reliable and valid measure of both state and trait anxiety.^{13,14,25,28,31} Test-retest reliability was assessed in college students; the results yielded a Pearson's $r = 0.73$ – 0.86 for trait anxiety and $r = 0.16$ – 0.54 for state anxiety.²⁵ A meta-analysis of seven studies reported the average test-retest reliability coefficients to be 0.70 for state anxiety and 0.88 for trait anxiety.³¹ The STAI has excellent internal consistency among working adults, college and high school students, and military recruits²⁵; nursing students^{13,14}; and engineering students.²⁸ A meta-analysis of 45 studies found the internal consistency to be 0.91 for the state subscale and 0.89 for the trait subscale.³¹ Concurrent validity of the trait measure was observed

when comparing the STAI to the Institute of Personality and Ability Test anxiety scale and the Taylor Manifest Anxiety Scale. Pearson's correlation coefficients ranged from $r = 0.75$ to $r = 0.83$, suggesting high correlations.^{25,32}

2.3.2. Westside Test Anxiety Scale

The WTAS was developed to objectively measure test anxiety in students.³³ It is comprised of 10 questions, six of which measure incapacity, or memory loss and poor cognitive processing, and four that involve worry or catastrophizing. Students rate themselves using a Likert scale, with 1 being "never true or not at all true," to 5 "extremely or always true." The total score is divided by 10, and the result is placed into categories for interpretation. The interpretations range from "comfortably low" to "extremely high". A score greater than 3.0, or moderately high anxiety, is accompanied with a recommendation of anxiety reduction training.³³

The WTAS was validated by comparing fifth graders and college-age students, and found to have a Pearson $r = 0.44$.³⁴ The WTAS demonstrated internal consistency in a study comparing different types of education styles.³⁵ Despite limited psychometric testing of the WTAS, it was chosen for this study because it was short and used effectively in medical education to assess test anxiety and the efficacy of anxiety reducing interventions.^{36–39}

2.4. Data analysis

Statistical Package for Social Sciences (SPSS), ver. 24 (IBM SPSS, Armonk, NY, 2016) was used to analyze the data. Descriptive statistics were used to describe the prevalence of anxiety in the three groups of students. The differences between the groups were described using several measures. The differences between groups on categorical demographic data were assessed with Chi Square for categorical data, and t -tests with continuous data. Cronbach's alpha was calculated to assess the internal consistency of the tools with this sample. A two-way ANOVA was used to determine the differences between programs and class years. Predictor variables included class year (first or second years) and program (CSD, DPT, or PA). The outcome variable was anxiety test scores. The Bonferroni correction was used for post-hoc testing. A t -test

Table 1
Demographic information for all students.

		CSD	CSD Norms	DPT	DPT Norms	PA	PA Norms
Gender	Female	93%	95.7% ^a	75%	64% ^b	68%	66.6% ^d
	Male	6%	4.2% ^a	23%	36% ^b	16%	33.4% ^d
Ethnicity	Asian	9%	–	12%	–	5%	5.1% ^d
	Black	4%	–	8%	3% ^c	–	3.9% ^d
	Hispanic/Latino/a	2%	–	5%	4.4% ^c	–	–
	Mixed Race	2%	–	5%	–	5%	–
	Other	2%	–	4%	–	–	4.2% ^d
	White	79%	84% ^a	63%	77.5% ^c	79%	86.8% ^d

^a2010–2011 National Master's in Speech Language Pathology.⁶⁵

^b2013 Census Data.⁶⁶

^c2015–2016 Aggregated DPT Program Data.⁶⁷

^d2014 Certified Physician Assistants.⁶⁸

assessed the gender differences between the groups on the STAI subscales, and a Mann–Whitney *U* assessed the difference on the WTAS because the data was not normally distributed.

Linear regressions were used to determine the predictors for each anxiety assessment: STAI-I, STAI-T, and WTAS. The models were built in a forward, step-wise fashion. The predictor variables considered in the analysis were gender, ethnicity, current grade point average (GPA), undergrad major (health sciences or not health sciences), time off after undergraduate school, working while in graduate school, current profession as first career, children, personal history of anxiety, family history of anxiety, first generation to attend college or graduate school, and responsible for paying for graduate school. The outcome variables were scores on the anxiety measures (WTAS, STAI-T, STAI-S).

3. Results

Three hundred and fifty-one, first and second year students were recruited to participate in the study. The response rates in the respective programs were 43% (53/123) in the CSD program, 80% (111/138) in the DPT program, and 21% (19/90) in the PA program. The sample size yielded a power of 0.86, assuming a moderate effect size of $f = 0.25$, $\alpha = 0.05$, which is adequate for analysis. The low response rate for the CSD and PA programs precluded individual program assessment for multiple analyses.

Seventy-eight percent of the responding students were female, and 67% identified themselves as white, non-Hispanic. Most students (73%) entered graduate school with a healthcare related undergraduate major. Many students (63%) took time off between their undergraduate graduation and matriculating in their

Table 2
Predictor variables for all students.

		CSD	DPT	PA
Undergraduate Major	Health Related	12	83	14
	Non-health Related	38	20	3
Time-off ^{***}	Yes	23	80	13
	No	29	28	4
Working ^{**}	Yes	27	37	2
	No	25	72	15
First Career ^{**}	Yes	43	77	7
	No	9	30	10
First Generation [*]	Yes	8	28	8
	No	44	81	9
Children	Yes	3	4	1
	No	49	104	16
History of Anxiety	Yes	10	19	1
	No	42	90	16
Family History of Anxiety	Yes	25	36	6
	No	27	72	11
Pay for School	Yes	7	15	1
	No	46	98	18
Gender	Female	49	83	13
	Male	3	26	4
Ethnicity	Asian	5	13	1
	Black	2	9	0
	Hispanic/Latino/a	1	6	0
	White	42	70	15
	Other	1	4	0
	Mixed Race	1	5	1

all assessed via Chi Square.

^{*} $p < 0.05$.

^{**} $p < 0.01$.

^{***} $p, 0.001$.

graduate program. The mean time off was 3.7 years, with a mode of 1 year, median of 2 years, and a range of 0.5 – 27 years. The majority of students (59%) are responsible for paying for all of their graduate education, with 38% working while in school. Seven-

Table 3
Mean scores on the WTAS and STAI scores across disciplines.

Program	STAI-S		STAI-T		STAI-Total		WTAS	
	Female	Male	Female	Male	Female	Male	Female	Male
CSD	45.69 (49)	45.50 (4)	45.82 (49)	41.75 (4)	91.51 (49)	87.25 (4)	2.55 (49)	2.28 (4)
DPT	40.13 (80)	35.28 (29)	41.44 (82)	36.29 (28)	81.61 (79)	71.64 (28)	2.65 (81)	2.26 (30)
PA	40.50 (12)	46.00 (5)	42.85 (13)	46.25 (4)	83.08 (12)	91.75 (4)	2.64 (13)	2.52 (6)
Total Sample	42.09 (141)	37.76 (38)	43.06 (144)	38.00 (36)	85.20 (140)	75.61 (36)	2.62 (143)	2.30 (40)

Note: The numbers in parentheses are the sample for each discipline and measure. The WTAS scores are between 1 and 5, with 2.5 and below indicating normal or low test anxiety. The STAI-S and STAI-T scores range from 20 to 80.

teen percent of the students reported a personal history of anxiety, and 38% had a family history of anxiety. Only 5% of the students have children. See Tables 1 and 2 for the descriptive statistics for each discipline.

A significant difference was found between the groups in “time taken off between undergraduate and graduate school” χ^2 , (2, $N = 177$) = 14.84, $p = 0.001$, “working while in graduate school” χ^2 , (2, $N = 178$) = 10.04, $p = 0.007$, “current program is your first career” χ^2 , (2, $N = 176$) = 10.99, $p = 0.004$, and “are you the first generation in your family to attend graduate school” χ^2 , (2, $N = 178$) = 7.05, $p = 0.029$.

The reliability of the tools was assessed using Cronbach's alpha. All were found to have high levels of internal consistency with the STAI-S Cronbach's $\alpha = 0.95$ ($n = 179$), STAI-T Cronbach's $\alpha = 0.93$ ($n = 180$), and WTAS Cronbach's $\alpha = 0.89$ ($n = 183$).

Table 3 summarizes the mean scores on the STAI-S, STAI-T, STAI-Total and WTAS. On the STAI-S, between 44.8% and 80% of the students had scores above the norms. On the STAI-T, between 28.6% and 75% of students had scores higher than norms. Between 16.7% and 32.1% of students had WTAS scores greater than 3, which is moderately high or worse anxiety.

There was a non-significant interaction between class and program for the STAI-S [$F(2, 171) = 2.65$, $p = 0.07$], STAI-T [$F(2, 173) = 0.61$, $p = 0.54$], and WTAS [$F(2, 175) = 1.25$, $p = 0.29$]. For the STAI-S, there was a significant main effect of program [$F(2, 171) = 5.17$, $p = 0.007$]. The CSD students had significantly higher scores than DPT students ($p = 0.002$). There was no difference between CSD or DPT students and PA students. For the STAI-T, there was significant main effect of both program [$F(2, 173) = 3.99$, $p = 0.02$] and class year [$F(1, 173) = 4.00$, $p = 0.047$]. The CSD students had significantly higher scores than DPT students ($p = 0.011$). The second year students had significantly STAI-T scores than first year

students. For the WTAS, there was significant main effect of class year [$F(1, 175) = 6.63$, $p = 0.011$], with second year students presenting with higher test anxiety scores than first year students. To account for the unbalanced sample, Type I and Type III sum of squares were assessed and were the same.

The difference in anxiety scores between males and females were assessed. There was a statistically significant difference on STAI-T and STAI-Total scores between males and females, with females displaying higher mean anxiety levels. There was no difference between males and females on the STAI-S or the WTAS ($U = 2316$, $z = -1.88$, $p = 0.06$).

The assumptions of a linear regression were assessed and met. The regression analysis demonstrated that having to pay for graduate school, a history of anxiety, and female gender predicted STAI-S scores, $F(3, 170) = 5.11$, $p = 0.002$. The variables predicted 8.3% of the variance for STAI-S scores [$R^2 = 0.08$, $F(3, 170) = 5.11$, $p = 0.002$]. The STAI-T scores were significantly predicted by a personal history of anxiety, female gender and GPA, $F(3, 150) = 7.13$, $p < 0.000$, which accounted for 12.5% of the variance [$R^2 = 0.125$, $F(3, 150) = 7.13$, $p < 0.001$]. The WTAS was statistically significantly predicted by GPA, family history of anxiety, and female gender, $F(3, 149) = 11.97$, $p < 0.000$. The three variables accounted for 17.8% of the variance in the model [$R^2 = 0.178$, $F(3, 149) = 11.97$, $p < 0.001$].

4. Discussion

Increased prevalence and severity of mental health disorders is a growing concern in students.^{2,4} Anxiety influences students' academic performance,⁶ professionalism,¹¹ and health outcomes.²⁰ This study sought to describe the prevalence of anxiety and to identify predictors of anxiety in health professions graduate students at a small graduate institution. The MGH IHP

programs' demographic data is comparable to national program or census data for each profession. All groups of students demonstrated higher than normal state and trait anxiety compared to working adults (males = 36.54 and female = 36.17) and college students (males = 36.47 and female = 38.76). Frank and Cassady¹⁷ previously found comparable scores for state and trait anxiety in DPT students.

4.1. Prevalence of anxiety

The prevalence of anxiety in MGH IHP graduate students was comparable to data based on gender matched norms.^{2,40} Eisenberg et al.² found 5.4% of females and 2.6% of males of graduate students at a large public university had anxiety. Bayram and Bilgel⁴⁰ discovered 18.5% of male and 22.1% of female students at a university had severe or extremely severe anxiety. Intense academic coursework at the graduate level combined with a rigorous schedule may contribute to these findings. Elevated anxiety places students at risk for poor health outcomes²⁰ and anxiety-related performance issues in school.^{6,10,11}

Anxiety scores were significantly higher in second-year DPT students compared to first-year students. Frank and Cassady¹⁷ found a comparable result, reporting a statistically significant higher rate of state anxiety in second year PT students across three universities. The second-year DPT, PA and CSD students at MGH IHP are approaching a transition to full-time clinical training and licensing examinations, which may account for the increased levels of anxiety. Several studies substantiate that there is increased stress when transitioning from academic coursework to clinical training.⁴¹ This trend warrants further investigation as it may be a critical time to institute anxiety reducing interventions.

Females have higher anxiety levels than males,^{2,40,42,43} and are twice as likely to have an anxiety disorder as men.⁴⁴ Biochemical and hormonal differences between males and females have been identified as factors increasing risk for anxiety in females.⁴⁴ The present study found that females had higher trait anxiety levels, however, this should be interpreted with caution as males accounted for only 4.8% of our sample.

The students in this study demonstrate high, normal test anxiety, which is consistent with findings in medical school students.^{33,36,38,45} However, a large percentage of students scored in the moderately, high,

or extremely high test anxiety ranges (16.7–32.1% depending upon program of study). Test anxiety negatively correlates with performance, and could perpetuate further anxiety and poor performance.^{7,27–29}

4.2. Predicting anxiety

The burden of paying for graduate school predicted the greatest proportion of the STAI-S scores, or transient anxiety. The findings are consistent with literature that found financial distress linked to poorer levels of mental health in students⁴⁶ and mental and psychiatric disorders.^{47,48} Ozen et al.⁴⁹ suggested that financial and emotional support may help to alleviate students' anxiety.

A lower self-reported GPA was associated with higher anxiety scores. McEwan and Goldenberg⁵⁰ also found a negative correlation between state and trait anxiety and GPA in nursing students. Additionally, higher-than-normal levels of stress has led to a greater prevalence of depression, anxiety, and lower GPAs.⁵¹ Providing support and resources to assist with studying to students with lower GPAs may assist with reducing anxiety.

Female gender was a significant predictor of all anxiety measures. Higher anxiety levels in females have been replicated in many studies of graduate students,⁴⁰ including DPT students,^{17,52} medical students,^{7,53} chiropractic students,⁵⁴ and psychology students.⁵⁵ While gender is an unmodifiable risk factor for anxiety, helping female students across all health professions education programs to understand that they are at risk for higher anxiety levels, the consequences of high anxiety and strategies to help reduce anxiety may be beneficial.

A personal history of anxiety (STAI-S and STAI-T) and a family history of anxiety (WTAS) were significant predictors of anxiety. A genetic component of generalized anxiety disorders is well established.^{56–58} There is limited evidence available demonstrating a link between personal history of anxiety and current levels of state, trait or test anxiety. However, due to the strongly supported genetic link to anxiety,⁵⁸ it is important that students are aware and offered appropriate resources to mediate their anxiety.

The regression equations for the three outcome measures of anxiety accounted for 8.3–17.8% of the variance. Therefore, there are additional variables not assessed in this study that may be significant predictors of anxiety in health professions education students.

Future research concerning predictor variables is needed to understand the influence of personal factors and environmental contexts on anxiety levels in health professions students. The results will assist with creating more targeted interventions to help students manage their anxiety.

4.3. Limitations

The response rates varied significantly between programs, from 21% (PA) to 80% (DPT). The difference may be due to the DPT students and researchers being in the same department. The large sample size allowed for regression analysis of the student population, however, analysis by discipline was limited due to the small CSD and PA student sample size. Likewise, the two-way ANOVA may have been underpowered, especially concerning the PA students. The DPT students made up 60% of the data collected, and therefore the predictors of anxiety may be skewed to over-represent the DPT program. Additionally, the data analyzed in the present study was from one institution. Assessing students at other institutions will improve the generalizability of the findings. However, many of the findings of the study were consistent with previous literature and seem to be indicative of a broader population. The study was cross sectional, which may contribute to bias as students situational or trait anxiety may have been altered from their baseline. Longitudinal student data would help to account for possibility. Similarly, while the timing of data collection was at a “quiet” time in each program's semester, there are may have been competing demands with a program that increased anxiety, but were not accounted for in the study.

Possible confounding variables were class year (first versus second year) and gender. Seventy-eight percent of the study population were female, which may have skewed the results as women have a greater incidence of anxiety than males.^{2,40} Both DPT and CSD professions have higher proportions of females, so the results may be appropriate. The sample size limited the assessment of an interaction between these variables and the outcome measures. Further analysis of the difference in predictors of anxiety between these groups with an increased sample size in each variable would be beneficial.

While improved from previous research,⁵⁹ the regression models for each assessment tool still accounted for less than 18% of the variance. Further research is required to determine other predictors of anxiety. A better understanding of the contributing

variables to anxiety is essential to designing interventions that will decrease personal anxiety and improve interprofessional team dynamics.

4.4. Recommendations

Given the noted health and learning consequences from anxiety, health professions programs may want to consider introducing interventions to help students better manage their anxiety. Several authors have proposed strategies to assist students in reducing their anxiety.^{60–62} One successful technique in older students involves self-regulation, where students learn strategies to control their emotional responses to stimuli.⁶² Such strategies may be beneficial to introduce in health professions education programs to help students manage their anxiety.

Encouraging health professions education to utilize existing psychological services to assist with managing their pre-existing anxiety may be helpful. Healthcare professions programs are required by accrediting bodies to offer a myriad of services, including counseling and disability services, to assist students to manage their anxiety and to be successful.

Healthcare professions education programs may want to consider decreasing the emphasis on GPAs to assist with reducing anxiety and improving students' learning experiences. Spring et al.⁶³ completed a systematic review of medical schools that shifted to pass/fail evaluation and found decreased anxiety. Similar paradigm shifts regarding assessment and its impact on students may be beneficial.

At our institution, there are several initiatives in place to help reduce anxiety. Pet therapy has been initiated at exam times to allow help students reduce stress. Other exam time stress reductions include coloring, snacks during study breaks, and puzzles. The institution created a new student space with a quiet area, targeted at promoting relaxation. One faculty member has introduced mindfulness and mindful practice to students. The students created a mentor program where a second-year student acts as a resource for a first-year student. Outcomes of these initiatives are being collected to determine if they are successful or if other programs are needed.

4.5. Conclusion

Health professions education students have significantly elevated anxiety levels compared to normative values. Anxiety places the students at risk for health consequences and learning deficits. The impact of

anxiety may extend beyond personal detriment. All of the professions studied and referenced in the current paper must work together in the clinic. However, current research on the impact of anxiety on inter-professional practice in healthcare is limited, yet interprofessional teams work in many high-pressure situations, including disaster response teams, intensive care units, emergency departments and operating rooms. The key components of an effective and successful healthcare team include effective communication, clearly defined roles, mutual trust, and a diverse make-up.⁶⁴ Anxiety may negatively affect each of these elements. Further research is warranted to investigate the impact of anxiety on interprofessional teams.

Disclosures

Ethical approval

This study (Protocol # 2015P001800/SRH) was approved by the Spaulding Rehabilitation Institutional Review Board (the IRB for the MGH Institute of Health Professions) on October 8, 2015.

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