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### Personality Types Among Athletic Trainers

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Personality Types among Athletic Trainers

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### **Abstract**

This research study analyzed the personality types among the Athletic Training (AT) profession. With no research present in the field of Athletic Training, research from similar fields like Physical Therapy, and Occupational Therapy were referenced throughout the research process. Throughout the literature review process it was observed that previous researchers used the Meyers-Briggs Type Indicator (MBTI) assessment tool to identify personality types. A MBTI assessment tool was used to identify personality types among the participants, and a demographics survey comprised of nine questions was used to determine participant's experience in the Athletic Training profession. After reviewing previous studies from other professions that closely resembled Athletic Training, the researcher hypothesized that AT's would possess extroverted-sensing-thinking-judgement (ESTJ) personality biases.

The target demographic for the study was NCAA Division III Athletic Trainers in Ohio. The survey was sent to 99 Athletic Trainers that practiced at the Division III level. A second round was sent halfway through the month long data collection process. Invitations to participate were sent at the beginning of the month, and again at the halfway point of the month. The nominal data was then analyzed by the researcher for a trend in responses.

Results identified that AT's possessed extroverted-sensing-feeling-judgement (ESFJ) personality biases. They also had a high amount of introverted-sensing-feeling-judgement (ISFJ) personality biases. Another interesting finding showed that 55 percent of personality types reported were introverted in nature when compared to 45 percent being extroverted. It was concluded that Athletic Trainers have a high amount of sensing-feeling-judging personality biases and are also more introverted in nature when compared to other professions like Physical Therapy and Occupational Therapy.

### **Statement of Problem**

Personality types are a topic that have been studied across a variety of career fields to understand if there is a correlation between personality type and success within that field of work. For example, an internet technology organization found that high performers have characteristic traits such as Extraverted Thinking with Introverted Sensing (ESTJ), Introverted Sensing with Extraverted Thinking (ISTJ), Extraverted Feeling with Introverted Sensing (ESFJ), or Introverted Sensing with Extraverted Feeling (ISFJ) were better performers (Lather, & Jain, 2015). They also found that gender did not play a role in whether or not these characteristics are seen in the field of business. This is one example where personality types can be used by administrators to delegate tasks and assignments to employees so they are completed in a proper and efficient manner.

Healthcare is a career field where many variables are present. Stress, conflict, competition, and even death are present in a healthcare provider's daily life. With all these variables present in healthcare one may wonder, "What is the best type of personality to deal with these issues and be a successful provider?" One study found that physicians in a hospital setting with a 'Type A' personality handle the stresses of healthcare better than 'Type B' providers (Janjhua, & Chandrakanta, 2012). 'Type A' individuals are typically outgoing, ambitious, aggressive, and competitive, while 'Type B' individuals are typically introverted, relaxed, and sensitive (Janjhua, 2012).

Millions of people are seen by a healthcare provider every year (Hing, & Hooker, 2011). According to the Mayo clinic, they alone saw 1.3 million patients for a variety of different medical conditions. The sports medicine sector of healthcare is comprised of Physical Therapists (PT), Occupational Therapists (OT), and Athletic Trainers (AT). According to the American Physical Therapy Association, 2 million patients are seen by a Physical Therapist every day. With the baby boomer generation aging, that number is projected to increase about 36% by the year 2024 (APTA, 2014).

Occupational Therapists also see a substantial amount of patients, 1.5 million per day according to the American Occupational Therapists Association (2014). This number is also projected to rise as the baby boomers age. There is no recorded data on the number of patients an Athletic Trainer sees each day. However, Athletic Trainers are in a variety of settings; colligate high school, industrial, military, and clinical settings (NATA, 2017).

Healthcare is also a career field where interactions with patients are common, and are often a part of everyday life for the provider. A recent study found that patients tend to prefer providers who look like them and can relate with them opposed to a provider who does not look like them and cannot connect with their personality (Callahan, Heath, Aubuchon-Endsley, Collins, & Herbert, 2013). Patients' stated that a characteristic that they would prefer is a provider that is the same gender as them. When patients were asked about other characteristics such as race or religious beliefs, patients rated those characteristics significantly lower (Callahan et al. 2013). The significance of patients preferring a provider that is the same gender as them is important because as stated earlier, in other careers such as business this characteristic does not seem to correlate to the individuals success or interpersonal skills with their clients. However,

patients did report that personality is the most important trait that they look for when consulting with a provider (Callahan, et al. 2013). The patients stated that they prefer a provider that is outgoing and extraverted in nature. The study found that patients felt they could confide in their consult because of their interpersonal skills (Callahan, et al. 2013).

With healthcare being a diverse career field with many specialties one must question whether that study holds true for all professionals within healthcare. The field of collegiate sports medicine is of particular interest because athletes respond to providers differently than non-athletic patients (Mladenović, Lazarević, Trunić, Bogavac, & Živković, 2016). Athletes are more receptive to individuals who are motivated, self-assured, and responsible. They are drawn to these characteristics because of their sports background, and that is what they look for in a provider (Mladenović, et al. 2016). According to previous validation studies of MBTI assessment tools, those traits are commonly found in extraverted people (Passmore, Holloway, & Rawle-Cope, 2010).

In the concentrated healthcare field of sports medicine, Athletic Trainers have a key role in prevention, evaluation, and rehabilitation of injuries seen in collegiate athletics. They are often first responders to injuries and will care for the athlete from the diagnosis of the injury to the return to play decision (Pryor, Casa, Vandermark, Stearns, Attanasio, Fontaine, & Wafer, 2015). Athletic Trainers also work in conjunction with team Physicians within the sports medicine team. According to the National Athletic Trainers Association (NATA), AT's produce the same diagnosis of an athletic injury that a Physician would 90 percent of the time (2017).

With AT's acting as a first responder and having specialized training in orthopedic injuries, they are a valuable healthcare provider to a sports medicine team.

### **Literature Review**

In review of the literature, the use of the Myers-Briggs Type Indicator (MBTI) to assess personality types was consistent throughout each research article. There was no research found related to the prevalence of a particular personality type in Athletic Training. However, there was research within other healthcare fields that closely resemble Athletic Training. The fields of Physical Therapy, Occupational Therapy, Nursing, and General Physicians did have research related to personality types.

Athletic Training is a career where the providers encounter a substantial amount of interactions with patients, much like Physicians, Nurses, Occupational Therapists, and Physical Therapists. With the lack of research in the field of Athletic Training, there is a lack of understanding of which personality types are most commonly seen in this career path. Due to this lack of understanding, the Athletic Training profession may be falling behind the ever evolving fields of Physical Therapy and Occupational Therapy (NATA, 2016). This halt in progress may potentially keep Athletic Trainers stagnant in this realm of professional development.

### **Myers-Briggs Type Indicator**

A common theme that was found throughout the review of literature was the use of the Myers-Briggs Type Indicator (MBTI) for measuring personality types. The MBTI is a tool that has claimed to best objectify and identify personality types (Greer, Ridley, & Levy, 1991).

Personality types are historically difficult to objectify until Carl Jung was the first to create a tool to assess personality types. He was quoted on why he created a personality types tool stating, "One gets a profound, indelible impression of the diversity of individual psychic dispositions, tendencies, and convictions. While on the other hand one increasingly feels the need for some kind of order among the chaotic multiplicity of points of view. This need calls for a critical orientation and for general principles and criteria, not too specific in their formulation, which may serve as "points of departure" in sorting out empirical matter." (Jung, 1971). Jung's work was translated to English in 1923 and was evaluated by Isabel Briggs Myers and her mother for non-clinical use. By 1975, the Myers-Briggs Type Indicator was selected as an appropriate tool to assess personality types in a non-clinical setting (Myers & McCaulley, 1985).

The MBTI tool analyzes an individuals' answers and categorized them into four bipolar preferences. Extraversion (E) and Introversion (I) attitudes assess how an individual engages their surrounding environment. Extraverted individuals are outgoing and engage the world around them, while introverted individuals are more timid and interact with their inner self (McCaulley, 1990).

Sensing (S) perception relates to what is real, immediate, practical, and observable by the senses. Individuals who use Intuitive (N) perception are interested in future possibilities, implicit meanings, and symbolic or theoretical patterns suggested by insight (Mccauley, 1990).

Thinking (T) judgement is defined as whether a person rationally makes decisions through cause-effect analysis. While Feeling (F) judgement is defined as a person making rational decisions based on weighing the relative importance or value of competing alternatives (Mccauley, 1990).

The final two bipolar preferences are Judgement (J) and Perception (P). Judgement oriented individuals enjoy making quick decisions, organization, and structure. While perception individuals are curious, open to change, and keep options open for better opportunity (Mccauley, 1990).

These four bipolar preferences are scored after completing the questionnaire and the preferences are revealed. There are 16 possible combinations a person can possess, but it is believed that every individual prefers all eight at some point in their lives. However, as people grow older and wiser, these preferences can and often do change (Mccauley, 1990).

A review of the literature indicated that the Myers-Briggs Type Indicator is the best tool to use when assessing an individuals' personality type (Passmore, et, al. 2010). This is a tool that was utilized in every study that was used by researchers throughout the literature review process. One study assessed the construct validity of the extroversion and introversion subscales to see if they were unitary in nature. To accomplish this, researchers utilized an Eysenck Personality

Questionnaire (EPQ) and the Howarth Personality Questionnaire (HPQ). The research found that at first glance they were not unitary but did contain interfactor correlations (Zumbo, & Taylor, 1993).

The common theme that was found throughout the literature review process is that the participants agreed with the personality types that the MBTI assessment identified them with. The participants confirmed that because of the MBTI assessment they were able to understand their personality type. Thus, the participants believed they could better understand how to work well with others, as well as care for their patients better (Callahan, Heath, Aubuchon-Endsley, Collins, & Herbert, 2013).

Another study was conducted to determine the validity of the MBTI test by administering the test to 93 college students, as well as the Harrower Multiple-Choice Rorschach. The results showed that “of the 9 Rorschach variables examined, 6 were related to the MBTI’s unidimensional types, 2 were related to its multidimensional types. Thus, the results support the validity of the Jungian personality types measured by the MBTI” (Geer, Ridley, & Levy, 1991).

### **Physical Therapy**

Physical Therapy (PT) is already a saturated profession with thousands of undergraduate students applying to Physical Therapy schools across the country (Bezner & Boucher, 2001). With all of these applicants, researchers were curious if personality types had any role in the admission process. A study was done to see if students applying to Physical Therapy school had

an increased probability of being accepted if they were identified as a particular personality type. The results of the study found that PT students who are ESTJ personality types have an increased chance of being accepted into PT school (Bezner, & Boucher, 2001).

A review of the literature also suggests that healthcare providers that are able to identify what their personality type is are also aware enough to identify their patient's personality type. The literature suggests that this is a major advantage in healthcare fields such as Physical Therapy, or Occupational Therapy due to the amount of patient-provider interaction that is present in each appointment (Moorhead, Cooper, & Moorhead, P., 2011). This is critical in healthcare because it helps the provider communicate effectively with their patient, as well as identify if their patient understands what the provider has just communicated to them (Moorhead et al., 2011).

### **Occupational Therapy**

A review of the literature within the field of Occupational Therapy (OT) determined that Occupational therapist possess a extroverted, intuitive, thinking, and judging personality types (Radnosky, 1980). The study that was conducted analyzed if OT's with specific personality types had a higher chance of having literature published. The study found that after they took an MBTI test, OT's that have been published also had an Extrovert-Intuitive-Thinking-Judging (ENTJ) personality type. While the nonpublished OT's tended to be Introvert-Sensing-Feeling-Judging (ISFJ) personality type (Radonsky, 1980). The recurrent theme throughout the article is that the more extroverted personality types seemed to have more positive interaction among their

peers and a willingness to progress the profession to seek research publication (Randonsky, 1980). However, a theme that was also observed from this article is that the patients of the extroverted providers rated their provider's level of care higher than those of the introverted providers (Randonsky, 1980).

One study observed if female OT's have a dominant personality type compared to females in other healthcare professions such as PT, Pharmacy, Medical Technician, and dietetics. The data was gathered using an MBTI test, and the results showed that OT's preferred changing situations and flexibility in their work environment. But a specific personality type was not identified in regards to female OT's (Rezler, & Buckley, 1977).

### **Nursing**

A review of the literature of nurses found that nurses are generally extroverted due to the high amount of patient interaction they have on a daily basis. The literature also revealed that nurses show an intuitive personality bias due to their work experience. However, this trait is not seen in the young nursing population, but rather it forms over time with increased experience (Pretz, & Folse, 2011). The literature also suggests that nurses are more inclined to identify with the thinking personality bias because they need to make cause-effect decisions for their patients. The literature also suggested that they are biased towards the judging personality type as well because they prefer organization and structure in their day to day operations (Waite, & McKinney, 2015).

## **Physicians**

Physicians have a large amount of interactions with patients on a day to day basis, often seeing hundreds of patients every week (Zardouz, German, Wu, & Djalilian, 2011). A review of the literature revealed that there is a difference in personality types between the general population and physicians. The results found that the general population personality type was introverted, sensing, thinking, and judging. While the Physician's personality types were extroverted, sensing, thinking, and perceiving (Zardouz et. al, 2011).

This was a common theme throughout the scope of research on Physicians and their personality types. Another common theme was that the hypothesis for the research was that the Physicians would be extroverted, sensing, thinking, and perceiving. The researchers based this hypothesis off of their literature review that stated that the majority of Physicians are extroverted and interact well with their patients. As well as their ability to think critically with reason and make quick decisions (Zardouz et. al, 2011).

## **Research Question**

The question that was asked in this research was “what personality types are commonly seen in Athletic Trainers?”

## **Hypothesis**

The hypothesis for the research was that Athletic Trainers would possess a Extroverted-Sensing-Thinking-Judgement (ESTJ) personality type. This hypothesis was based off of a review of the literature from other career fields that closely resemble the Athletic Training profession.

Athletic Trainers often work with a variety of people throughout their work day so it was hypothesized that they will be extroverted with their patients. They often have to sense what is real and practical with their rehab planning and return to play decisions so sensing and thinking personality preference is hypothesized for these reasons. Finally, a perceiving personality type was hypothesized because of the ever changing landscape of an AT's day; changes in practice times, an injury that is not progressing, or the amount of moving pieces in an Athletic Trainer's daily life, leans toward an individual who has a perceiving personality type.

## **Methodology**

### **Participants**

Participants for the study had to be Certified Athletic Trainers who worked at an NCAA Division III Universities in Ohio. There are 21 NCAA institutions located in Ohio that classify their athletics as Division III. Of those 21 institutions, there are 99 Certified Athletic Trainers practicing. The goal of the research is to obtain a sample size of 30% for a successful and reliable data pool.

### **Exclusion Criteria**

Criteria that disqualified an individual from participating in the study were if the individual was not providing AT services for an NCAA Division III institution, or if they were not a Certified Athletic Trainer. This means that full-time academic faculty were excluded from the research. Participants had to be clinical faculty, and Certified by the Board of Certification for Athletic Trainers, and licensed by the Ohio OT/PT/AT board.

## **Instruments**

The instruments that were utilized in this study were a demographics survey so that potential correlations between personality type factors such as age, gender, and experience could be identified (**Appendix A**). A validated personality assessment tool that is similar to an MBTI tool was utilized to identify the participant's personality type for the study (**Appendix B**). The tool was selected because after a review of the literature, it was deemed the most valid and objective way to measure personality types. The tool that is being used to assess the participant's personality is found for free at 16personalities.com. This tool uses a 6 point Likert scale to assess an individual's personality type. The test takes less than 12 minutes and consists of 60 questions.

## **Procedure**

After obtaining IRB approval from Otterbein University, participants were contacted by their listed email that is accessible to the public on the institution's website. When the participants opened the email, there was a description of the research that he conducted (**Appendix C**).

After the invitation was sent via e-mail, individuals who were willing to participate in the study clicked on a hyperlink that directed them to the study with the consent (**Appendix D**) above the demographics survey itself. Consent was given by participating in the research and completing the demographics survey and MBTI survey. The initial invitation to participate was sent to all participants on November 1, 2017. Another invitation to participate was sent to all

participants two weeks after the initial invitation on November 15, 2017. The second invitation had a statement that read: "If you have already participated in this research please disregard this invitation as not to skew the data." Data collection ceased on November 30, 2017 and was analyzed by the researcher.

Once participants completed the demographic questions listed directly below the consent, they clicked another hyperlink that was located within question 10 of the survey. That link directed them to a survey that is similar to a MBTI assessment tool. After the MBTI was completed, participants were instructed to write down the four letters that comprise their personality type on a piece of paper and to save it for later instruction. The participants then returned to the survey and the participants filled in the blank to question 10 on the demographics survey with their personality type that they received and copied down after completing the 16personalities assessment. They were then instructed to click submit and all results were sent back to the researcher where they were kept on a password protected computer for data analysis.

### **Statistical Analysis Tools**

The data that was collected, stored, and analyzed using the survey monkey website. The Survey Monkey website automatically organized any data that was collected from participants and reported it in the form of a bar graph as well as organized each response as a percentage once data collection was complete. This aided the researcher in finding a statistical pattern or significance in the findings.

### **Descriptive Statistics**

The research that was conducted was analyzing responses to ordinal questions so no p-values were used. The collected data was trying to identify a pattern from participant's responses. The questions asked in the research was trying to identify variables such as gender, age, time practicing as an AT in a specific setting, education level, if participants are a clinical preceptor, the conference that the institution's athletic teams compete in, and how many AT's do their institutions have on staff. The final nominal data point was for the participants to report which personality type with which they identified. Based off of these statistical data points, the researcher identified a pattern with each demographic question and with the participant's personality type.

### **Inferential Statistics**

The data from the study was biased enough that the researcher was able to make inferences of the target population based upon their responses. The inferences were based upon a comparison to the demographic survey responses and the participant's identified personality type. Personality type was compared with gender, length of time as a certified Athletic Trainer, length of time as an Athletic Trainer in the colligate setting, level of education held, and the number of sports assigned to the participant to provide Athletic Training services at their institution. Responses were compared to find a trend as it related to extroversion compared to introversion in each category listed above.

### **Limitations**

The only limitations that could be found pre-data collection was that people did not have any incentive to participate in the study, and that the researcher was an employed Athletic Trainer at a Division III institution.

The success of the study was based off of the number of responses to the invitation. If people did not respond because it was not convenient then there would not be a reliable data pool to analyze the results and formulate a conclusion. The limitation was hoped to be eliminated by adding a second reader to the research that was well known in Ohio at the Division III level. It was the plan of the researcher to add this well-known second reader as a way to increase the response rate for the data pool.

The limitation of the researcher being an employee of a Division III institution was a potential limitation because he could structure the research questions in a way that could skew the results to support the research hypothesis and create a bias result. The researcher prevented this from happening by having a third party that was familiar with healthcare practices read the questions and search for potential bias.

### **Ethical Considerations**

There were few perceived ethical limitations that would cause participants any harm. Participants were informed in the consent that their participation was voluntary and that they could withdraw from the research at any time. They were also aware that their responses and information was anonymous and that all of their information would be kept on a password encrypted computer. The primary researcher's contact information was also made available to the participants if they have any questions regarding their participation, responses, or potential

mental stresses that could occur from participating in the research. Mental stress from taking a MBTI survey is extremely rare and was listed as the only ethical consideration for participating in the research. According to a study performed by Golden (2009), there is little evidence to support the claim that mental stress levels increase as a result of taking the Myers-Briggs Type Indicator test. Due to the rarity of mental stress from participating in the survey, the research was submitted to the Otterbein University Internal Review Board for expedited review.

One perceived ethical limitation that was identified was that the primary researcher fits into the demographic being studied. There is a possibility that the researcher could accidentally breach the confidentiality if one of his colleagues approaches him about his research. However, the primary researcher is unable to see names of participants and is able to keep individual's responses anonymous. Participant's identity will remain anonymous as they have not signed their name to their consent, survey, or demographics page. The only information that will be seen by the researcher is the participant's responses.

## **Results**

After the data was collected, a total of 48 individuals participated out of 99 possible participants. That resulted in a 48% overall population participation, which exceeded the goal of 30% participation.

### **Demographics**

Out of the 48 participants, 64% reported that they were female while 35% reported they were males. The age range for participants were predominately between the ages of 21-30, with

a total of 52% of participants falling into that age demographic. Followed by 33% of participants reporting an age range of 31-40. The 41-50 and 51-60 year old age groups each reported a 6% finding, while only 2% reported an age of 61 years or older.

The vast majority of participants reported practicing as a Certified Athletic Trainer for 10 years or less with a total of 64% of participants falling into this demographic. Twenty percent of participants reported practicing as an ATC for 11-20 years, 8% have practiced for 20-30 years, 4% for 30-40 years, and 2% for more than 40 years.

When asked how long the participants have practiced in the collegiate setting as a Certified Athletic Trainer, 12.5% of participants reported practicing less than a year as a collegiate ATC. While the majority reported working in the collegiate setting for 1-5 years, 35%. 29% reported 6-10 years of experience in the collegiate setting, while 10% reported 11-15 years, 4% reported 16-20 years, and 8% reported more than 20 years.

When asked if participants serve as a clinical preceptor for their institution the majority of participants answered yes, with a 70% response rate, while 30% reported that they are not clinical preceptors for their institutions.

The research revealed that 68% of participants held a Master's degree, while 32% held a Bachelor's degree. None of the participants currently held a Doctorate at the time of data collection.

The conferences that are in the state of Ohio at the NCAA Division III level are the Ohio Athletic Conference (OAC), North Coast Athletic Conference (NCAC), the Heartland Collegiate Athletic Conference (HCAC), and the University Athletic Association (UAA). Out of these conferences, the OAC was the leader with a 62.5% response rate, followed by the NCAC with 29%, then the HCAC with 8%.

Researchers asked participants how many Certified Athletic Trainers they had on staff including themselves at their institutions. 29% of participants reported only having 3-4 ATCs on staff. The majority was 5-6 ATCs on staff at a reported 45%, followed by 7-8 ATCs at 22%. Only one participant reported an 8-10 person staff at their institution for a total of 2%. No participants reported more than 10 ATCs on staff at their institution.

Researchers asked participants how many sports that they were responsible for providing Athletic Training services to at their institution. The majority was 3-4 sports at 41%, followed by 1-2 sports at 25%, then 5-6 sports at 22%, and finally more than 6 sports at 10%. Complete demographics survey responses can be found in appendix E.

### **Personality Types Identified**

The results of the MBTI survey revealed that only 12 out of the 16 possible combinations for personality types were represented in the results. Out of the 48 participants, only three participants did not complete the MBTI questionnaire and did not input their personality type data. Out of the 45 participants that completed the survey in its entirety, the results shown in appendix F were found. Ten participants identified with the Introverted Sensing Feeling Judging

(ISFJ) personality type, one identified with the Introverted Sensing Thinking Judging (ISTJ), two identified with the Introverted Intuitive Feeling Perception (INFP), five related with Introverted Intuitive Feeling Judging (INFJ), four related with Introverted Sensing Feeling Perception (ISFP), one participant for Introverted Intuitive Thinking Perception (INTP), one for Introverted Sensing Thinking Perception (ISTP), and one for Introverted Intuitive Thinking Judging INTJ).

The remaining personality types were three Extroverted Sensing Feeling Perception (ESFP), two reported Extroverted Sensing Thinking Judging (ESTJ), fourteen reported Extroverted Sensing Feeling Judging (ESFJ), and one reported Extroverted Intuitive Feeling Judging ENFJ).

All of these personality type combinations resulted in a total of twenty-five introverted Athletic Trainers in the state of Ohio at the NCAA Division III level. That means that the remaining twenty results were extroverted in nature. That resulted in a 55% introverted majority to 45% extroverted minority (**Appendix F**).

### **Analysis/Discussion**

After conducting the research, it appears that Athletic Trainers at the NCAA Division III level are primarily introverted in nature. This result was not similar to the findings found in previous literature based on the professions of PT, and OT (Bezner, Boucher, 2001). In a review of the literature, individuals tended to be more extroverted in career fields of Physical Therapy, Occupational Therapy, General Physicians, and Nursing. They also tended to have a personality

bias towards sensing, thinking, and judging. Between the two categories of introverted and extroverted, 24 out of the 45 participants identified with the Sensing, Feeling, and Judging personality biases.

The bias towards thinking was supported for Physical Therapists and Occupational Therapists because they often have to sense what is real and practical through evidence-based medicine. Their rehabilitation planning and return to life decisions tended to be focused around this personality bias. It was hypothesized that Athletic Trainers would carry these biases as well. However, they showed more of a feeling personality bias. This may be because Athletic Trainers often have to make rational decisions based on weighing the relative importance or value of competing alternatives. This bias could allow them to identify the fact that the athlete could return to competition with an ankle sprain if it was taped, make it through the rest of competition, and then start rehab the following day. They have to be able to make critical decisions with multiple team variables while still keeping the patient's best interest in mind (NATA, 2016).

The data also revealed that men are more introverted in nature than women. The study identified that 71% of men that participated in the survey were introverted. Women were split almost evenly among the participants. Of the women surveyed, 51% were extroverted, while the remaining 49% were introverted. The findings that men are more introverted than women refuted the researcher's theory that men would be extroverted due to the increased number of males in the AT profession in Ohio. According to the NATA 2017 Annual report, Ohio was a state with predominantly males working as AT's (2017). However, the findings would indicate that male predominance in the profession has no relevance if a male AT would be extroverted.

The study found that ATs that had been practicing for 10-20 years or more were more extroverted in nature. The data shows that 67% of participants who reported 10-20 years' experience or more were extroverted, while the remaining 33% of participants held less than 10 years' experience were more introverted. The research supported the claim by the nursing profession in the literature review that indicates that more professional experience allows healthcare providers to change their personality biases and their personality type over time (Pretz, & Folse, 2011). After reviewing the data, it was found that AT's that had 10 years or more of work experience were more extroverted in nature, while the young professionals who possessed less experience were more introverted.

Extroverted participants also provided more sports with Athletic Training services. Forty-six percent of extroverted participants provided 3-4 sports teams with Athletic Training services. Introverted participants typically provided 1-2 sports teams with Athletic Training services and accounted for Twenty-three percent. This data supports the claim that extroverted AT's provided more Athletic Training services to more sports teams than their introverted counterparts. The finding was supported by literature that stated that extroverted healthcare providers were more approachable and often sought out by more patients (Callahan, et al. 2013).

Education also was a crucial factor when determining personality types in participants. The majority of individuals that stated they had earned a Master's degree were extroverted in majority. But all of the participants that stated they had a Bachelor's degree were introverted. The finding would indicate that a Graduate level education would increase the likelihood that the AT would be extroverted in the future after gaining work experience as indicated in a nursing study found in the literature review (Callahan, et al. 2013).

## **Limitations**

The two limitations that were perceived in the pre-data collection aspect was a concern of obtaining enough participants, and the possibility of skewed data that showed bias to support the researcher's hypothesis as a result of the researcher being a member of the demographic being studied.

The pre-data limitation of obtaining a 30% response rate for an adequate data pool was eliminated when a 48% response rate was obtained. The pre-data limitation of skewed data to support the researcher's hypothesis as a result of question formation was eliminated by a secondary reader who is not an AT reading the questions and looking for potential bias.

There was a limitation that was observed during the data collection process was that was not observed in the pre-data collection process. There was a case where an institution did not have an up to date website with their current staff members and their contact information. During the research, the primary researcher was contacted by a member of an institution who stated that everyone on their staff had completed the research except for one. The participant stated that the staff member did not receive an email from the researcher like the rest of the staff had earlier that day. This limitation was not foreseen in the pre-data collection phase, however, because there was only one missing participant and a 48% response rate, the data was not skewed as a result.

## **Conclusions**

After the data has been collected and analyzed, it appears that Athletic Trainers at NCAA Division III institutions in Ohio tend to be more introverted. A total of 55% of participants reported an introverted personality type, while only 45% reported an extroverted personality type. However, the personality type that was most prevalent was an extroverted personality type with a Sensing, Feeling, and Judging personality bias (ESFJ). The sensing, feeling, and judging personality biases were shown to be the most dominant traits amongst participants as well. These results did not support the researcher's hypothesis that an Extroverted, Sensing, Thinking, Judging (ESTJ) personality type would be most prevalent personality type found.

## **Use of Results**

The uses for these results could be utilized in a variety of different ways. The first being that Athletic Training administrators in the collegiate setting could use these results in order to identify the best way to lead their staff in an effective way that correlates with their personality type. Especially as it relates to communication within the Athletic Training setting, administrators could use this research to identify how to effectively communicate with their staff members to accomplish a common goal. The research would also benefit administrators because it would allow them to make an informed decision on delegating particular tasks that match the Athletic Trainer's personality type. This would ensure that the staff member is happy in their daily tasks and would create a positive work environment overall.

These results could also be utilized by AT's when working with coaches. Athletic Trainers typically have frequent interaction with coaches on a daily basis. If AT's used the research and identified the personality types of their coaches, then AT's could potentially have a

fluid working relationship and avoid any potential conflict that may arise through communication.

Finally, these results could also benefit AT's in the treatment of their patients. If an AT was to understand their own personality type and the personality type of their patient it would allow them to understand how to interact and motivate that particular patient in their rehab in the best way using the AT's personality type.

It is the hope of the researchers that this data may be used for Athletic Training administrators and associate Athletic Trainers in the future in order to better manage and lead their staff and guide their practice.

### **Further Research**

Although the research does not investigate if there was a correlation between clinical style and personality types, it may explain why some Athletic Trainers are more aggressive or conservative in their management of athletic injuries than others. Future researchers could expand upon this study and identify if extroverted Athletic Trainers tended to be more aggressive in their clinical style as opposed to introverted Athletic Trainers. Another question that could be researched is if there is a correlation between an Athletic Trainer's personality type and their leadership style with patients and Athletic Training students.

The research could also spark future research in fields like Physical Therapy, and Occupational Therapy. After reviewing the literature, it seemed that many PT's and OT's were extroverted in nature, while the study found that AT's are introverted in nature. A study could be performed to see how many of those individuals who did not get accepted into PT or OT school

change their career path to being an Athletic Trainer. The study could analyze their personality type and acceptance to either of those professional schools.

In future research it would be beneficial for the limitations discussed above to be corrected to identify if that could change the data or not. If future researchers are able, it would be suggested that there be a larger time window in order to appropriately gather data from a larger population and answer any questions that may form as a result from the initial data collection process.

Future researchers could use the study to analyze if AT's personality changes over time and as they gain experience. During the literature review process, it was found that over time, individuals can change their personality biases. If this research is repeated in ten years I would be curious if the data would change or remain the same as individual's age, and/or retire.

## **Summary**

Personality types are a topic that has been studied since the early 1900s and have often been utilized in various different work settings. The field of healthcare is diverse, but all healthcare providers interact with people on a daily basis. There is literature on personality types in general medicine, Nursing, Occupational Therapy, and Physical Therapy. However, there is no previous research on personality types in Athletic Trainers. After research was conducted using a demographic survey and a personality assessment tool, it was found that Athletic Trainers have an extroverted, sensing, feeling, and judging (ESFJ) personality type. This refutes the researcher's hypothesis that they would have an extroverted, sensing, thinking, judging (ESTJ) personality type.

It was found that Athletic Trainers scored second highest in the introverted, sensing, feeling, judging personality type (ISFJ). This leads researchers to believe that Athletic Trainers tend to have sensing, feeling, and judging personality biases. This research can help Head Athletic Trainers identify how to properly assign and place Associate Athletic Trainers to sports rotations and assign daily tasks properly. This information could also aid in the communication for the Athletic Trainer between coaches, patients, and colleagues.

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## **Appendices**

### **Appendix A (Web-Based Survey)**

#### Demographics Survey

\*1. What gender do you identify with?

Male

Female

Other

\*2. What age range do you fall into?

21-30

31-40

41-50

51-60

61+

\*3. How long have you been a Certified Athletic Trainer?

> 10 Years

10-20 Years

20-30 Years

30-40 Years

>40 years

\*4. How long have you practiced as an Athletic Trainer in the collegiate setting?

>1 Year

1-5 Years

6-10 Years

11-15 Years

16-20

<20 Years

\*5. Do you serve as a Clinical Preceptor at your institution?

Yes

No

\*6. What level of education do you hold?

Bachelors

Masters

Doctorate

\*7. In which conference do your institution's athletic teams compete?

NCAC

OAC

HCAC

Other

\*8. How many Athletic Trainers are on staff at your institution? (This includes Graduate Assistant, and Intern Athletic Trainers)

3-4

5-6

7-8

8-10

More than 10

\*9. How many sports are you responsible for providing Athletic Training services to at your institution?

1-2

3-4

5-6

>6

10. Please take 10 minutes and complete this free personality assessment tool that is based on the Myers-Briggs Type Indicator (MBTI). Click on the hyperlink below to enter a new browser window and complete the survey. After you have completed the assessment, please write your four (4) letters down on a piece of paper and return to the demographics survey. Then enter your results from the survey in the box below. After you have entered your results in the box below, please submit your results to complete the research.

<https://www.16personalities.com/>.

## Appendix B

### MBTI Survey

You find it difficult to introduce yourself to other people.

AGREE



**DISAGREE**

You often get so lost in thoughts that you ignore or forget your surroundings.

**AGREE**

**DISAGREE**

You try to respond to your e-mails as soon as possible and cannot stand a messy inbox.

**AGREE**

**DISAGREE**

You find it easy to stay relaxed and focused even when there is some pressure.

**AGREE**

**DISAGREE**

You do not usually initiate conversations.

**AGREE**

**DISAGREE**

You rarely do something just out of sheer curiosity.

**AGREE**

**DISAGREE**

You feel superior to other people.

**AGREE**

**DISAGREE**

Being organized is more important to you than being adaptable.

**AGREE**

**DISAGREE**

You are usually highly motivated and energetic.

**AGREE**

**DISAGREE**

Winning a debate matters less to you than making sure no one gets upset.

**AGREE**

**DISAGREE**

You often feel as if you have to justify yourself to other people.

**AGREE**



**DISAGREE**

Your home and work environments are quite tidy.

**AGREE**



**DISAGREE**

You do not mind being at the center of attention.

**AGREE**



**DISAGREE**

You consider yourself more practical than creative.

**AGREE**



**DISAGREE**

People can rarely upset you.

**AGREE**



**DISAGREE**

Your travel plans are usually well thought out.

**AGREE**



**DISAGREE**

It is often difficult for you to relate to other people's feelings.

**AGREE**



**DISAGREE**

Your mood can change very quickly.

**AGREE**



**DISAGREE**

In a discussion, truth should be more important than people's sensitivities.

**AGREE**



**DISAGREE**

You rarely worry about how your actions affect other people.

**AGREE**



**DISAGREE**

Your work style is closer to random energy spikes than to a methodical and organized approach.

**AGREE**

**DISAGREE**

You are often envious of others.

**AGREE**

**DISAGREE**

An interesting book or a video game is often better than a social event.

**AGREE**

**DISAGREE**

Being able to develop a plan and stick to it is the most important part of every project.

**AGREE**

**DISAGREE**

You rarely get carried away by fantasies and ideas.

**AGREE**

**DISAGREE**

You often find yourself lost in thought when you are walking in nature.

**AGREE**

**DISAGREE**

If someone does not respond to your e-mail quickly, you start worrying if you said something wrong.

**AGREE**

**DISAGREE**

As a parent, you would rather see your child grow up kind than smart.

**AGREE**

**DISAGREE**

You do not let other people influence your actions.

**AGREE**

**DISAGREE**

Your dreams tend to focus on the real world and its events.

**AGREE**

**DISAGREE**

It does not take you much time to start getting involved in social activities at your new workplace.

**AGREE**



**DISAGREE**

You are more of a natural improviser than a careful planner.

**AGREE**



**DISAGREE**

Your emotions control you more than you control them.

**AGREE**



**DISAGREE**

You enjoy going to social events that involve dress-up or role-play activities.

**AGREE**



**DISAGREE**

You often spend time exploring unrealistic and impractical yet intriguing ideas.

**AGREE**



**DISAGREE**

You would rather improvise than spend time coming up with a detailed plan.

**AGREE**



**DISAGREE**

You are a relatively reserved and quiet person.

**AGREE**



**DISAGREE**

If you had a business, you would find it very difficult to fire loyal but underperforming employees.

**AGREE**



**DISAGREE**

You often contemplate the reasons for human existence.

**AGREE**



**DISAGREE**

Logic is usually more important than heart when it comes to making important decisions.

**AGREE**



**DISAGREE**

Keeping your options open is more important than having a to-do list.

**AGREE**

**DISAGREE**

If your friend is sad about something, you are more likely to offer emotional support than suggest ways to deal with the problem.

**AGREE**

**DISAGREE**

You rarely feel insecure.

**AGREE**

**DISAGREE**

You have no difficulties coming up with a personal timetable and sticking to it.

**AGREE**

**DISAGREE**

Being right is more important than being cooperative when it comes to teamwork.

**AGREE**

**DISAGREE**

You think that everyone's views should be respected regardless of whether they are supported by facts or not.

**AGREE**

**DISAGREE**

You feel more energetic after spending time with a group of people.

**AGREE**

**DISAGREE**

You frequently misplace your things.

**AGREE**

**DISAGREE**

You see yourself as very emotionally stable.

**AGREE**

**DISAGREE**

Your mind is always buzzing with unexplored ideas and plans.

**AGREE**

**DISAGREE**

You would not call yourself a dreamer.

**AGREE**

**DISAGREE**

You usually find it difficult to relax when talking in front of many people.

**AGREE**

**DISAGREE**

Generally speaking, you rely more on your experience than your imagination.

**AGREE**

**DISAGREE**

You worry too much about what other people think.

**AGREE**

**DISAGREE**

If the room is full, you stay closer to the walls, avoiding the center.

**AGREE**

**DISAGREE**

You have a tendency to procrastinate until there is not enough time to do everything.

**AGREE**

**DISAGREE**

You feel very anxious in stressful situations.

**AGREE**

**DISAGREE**

You believe that it is more rewarding to be liked by others than to be powerful.

**AGREE**

**DISAGREE**

You have always been interested in unconventional and ambiguous things, e.g. in books, art, or movies.

**AGREE**

**DISAGREE**

**You often take initiative in social situations.**

**AGREE**



**DISAGREE**

## **Appendix C**

Invitation to Participate in Athletic Training Research Study

Dear Athletic Trainer,

This letter is intended to serve as an invitation to participate in a research study entitled “Personality Types Among NCAA Division III Athletic Trainers in Ohio” that is being conducted by Anthony S. Bartko, AT, Graduate Student at Otterbein University in Westerville, Ohio.

The purpose of the study is to assess if one personality type is more prominent in Athletic Trainers than another. To assess personality type, a free tool that has been validated and resembles a Myers-Briggs Personality Type Indicator (MBTI) will be used to identify personality type.

The surveys will be sent out during the time frame of October 1st, 2017, and again on November 1st, 2017, with data collection stopping on December 1st for analysis.

I hope that you will be interested in participating in the survey process and help by providing your valuable insight into personality types among NCAA Division III Athletic Trainers in Ohio.

If you would like to participate in the study or if you have any questions regarding the study, e-mail me at [anthony.bartko@otterbein.edu](mailto:anthony.bartko@otterbein.edu).

Sincerely,

Anthony S. Bartko, AT

Graduate Student

Otterbein University

## **Appendix D**

Consent/Survey

Dear Athletic Trainer,

Thank you for your interest in participating in the research study entitled “Personality Types Among NCAA Division III Athletic Trainers in Ohio” that is being conducted by Anthony S. Bartko, AT, Graduate Student, at Otterbein University in Westerville, Ohio.

The purpose of the study is to assess if one personality type is more prominent in Athletic Trainers than another. To assess personality type, a free tool that has been validated and resembles a Myers-Briggs Personality Type Indicator (MBTI) will be used to identify personality type.

The survey will take about 10-15 minutes to complete, and all data will be sent directly back to Mr. Bartko where it will be kept safe in a password protected computer. Your participation is completely voluntary and you may withdraw from the survey at any time. No perceived risks have been identified with participation in the study. By participating in the study, you acknowledge your informed consent in the research project. All data collected will be kept confidential and will only be viewed by the researcher. To increase your confidentiality, you will NOT be asked to sign your name when giving consent; rather you will check the box below granting your consent. Upon completion of the study, the data will be maintained by the researcher for potential future use which may include presentation and publication of findings.

I hope that you will be interested in participating in the survey process and help by providing valuable insight into the personality types among NCAA Division III Athletic Trainers in Ohio. To maximize the benefits of the study, I will ask you to please answer all questions.

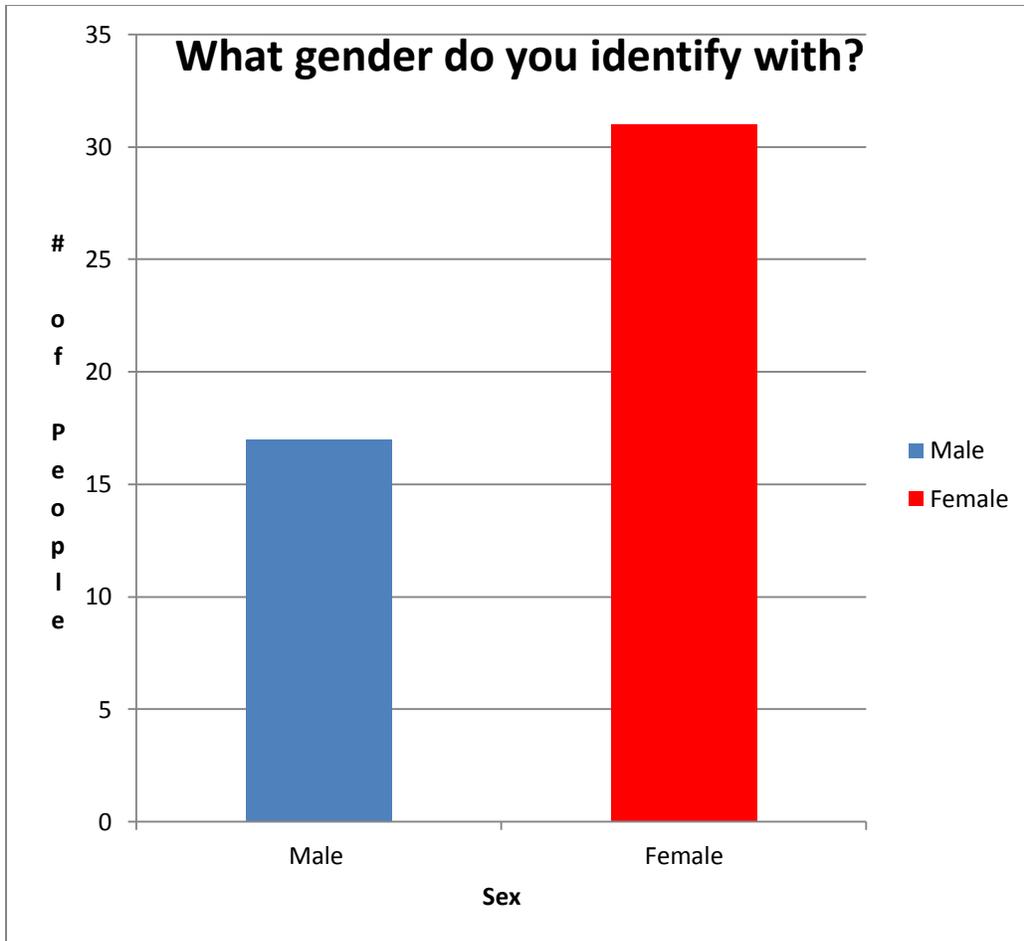
If you have any questions about this study, please do not hesitate to ask. Also, do not hesitate to contact Anthony Bartko at [anthony.bartko@otterbein.edu](mailto:anthony.bartko@otterbein.edu) after the interview has been completed. Thank you for your participation!

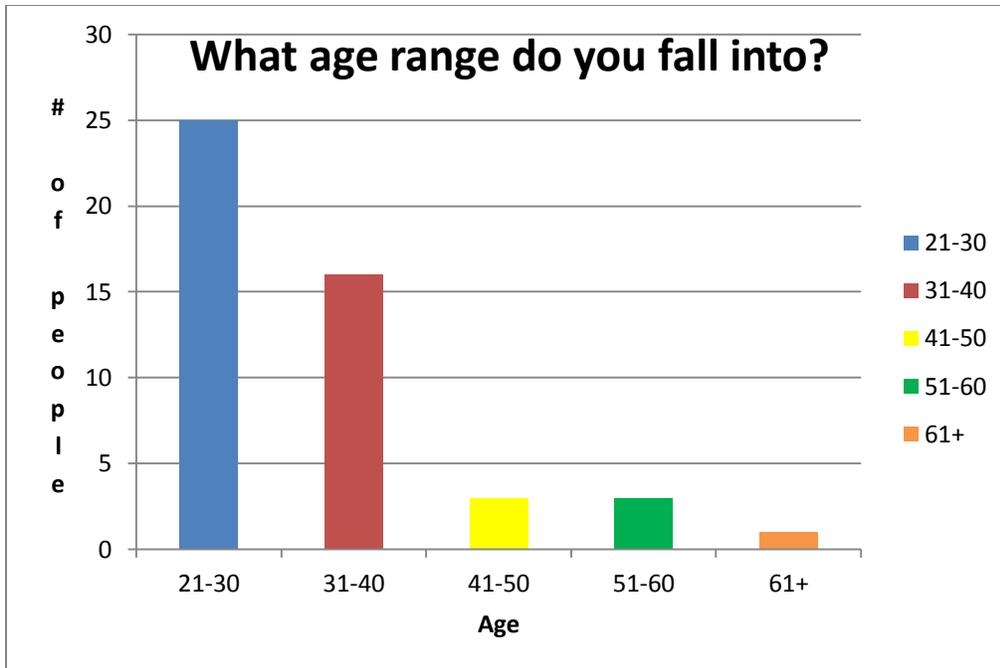
Anthony S. Bartko, AT

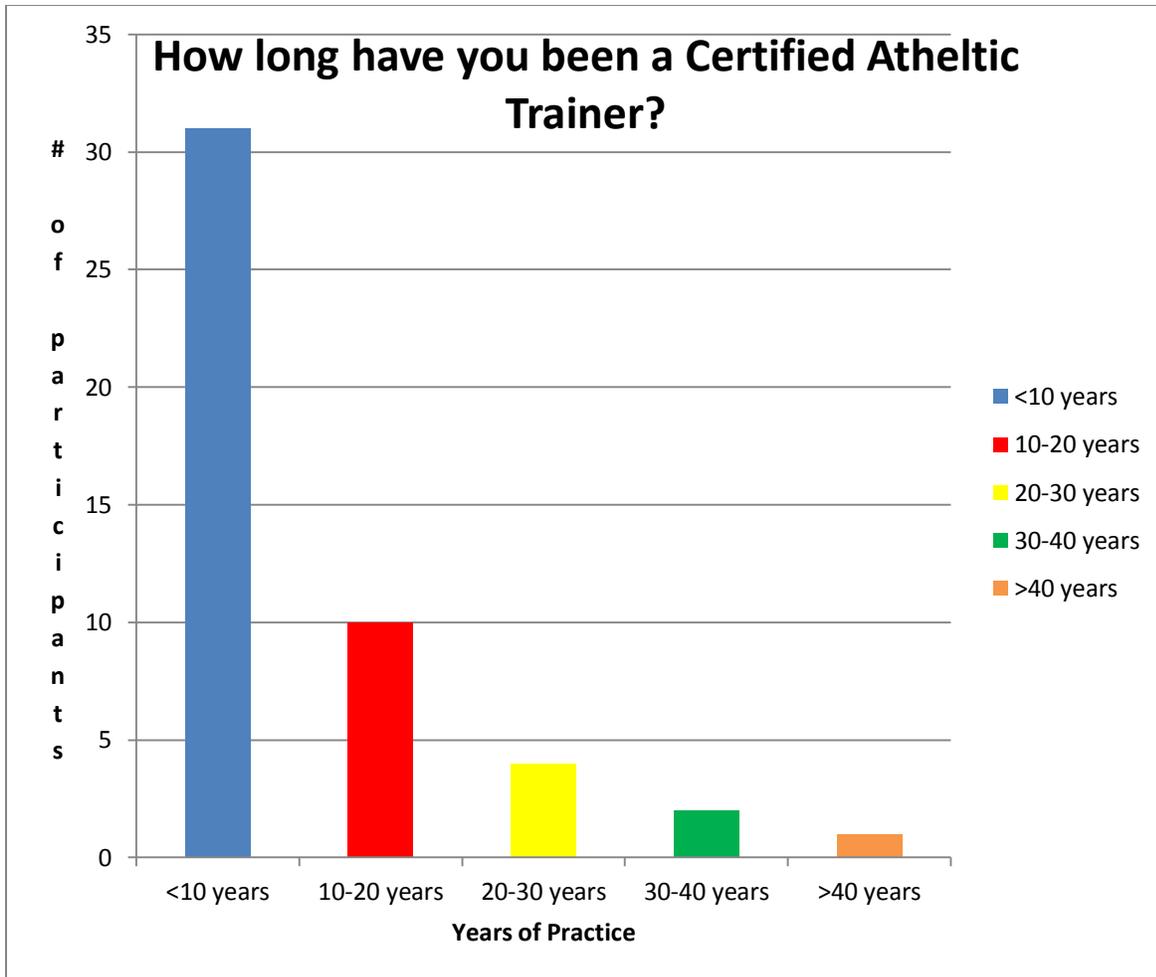
Graduate Student

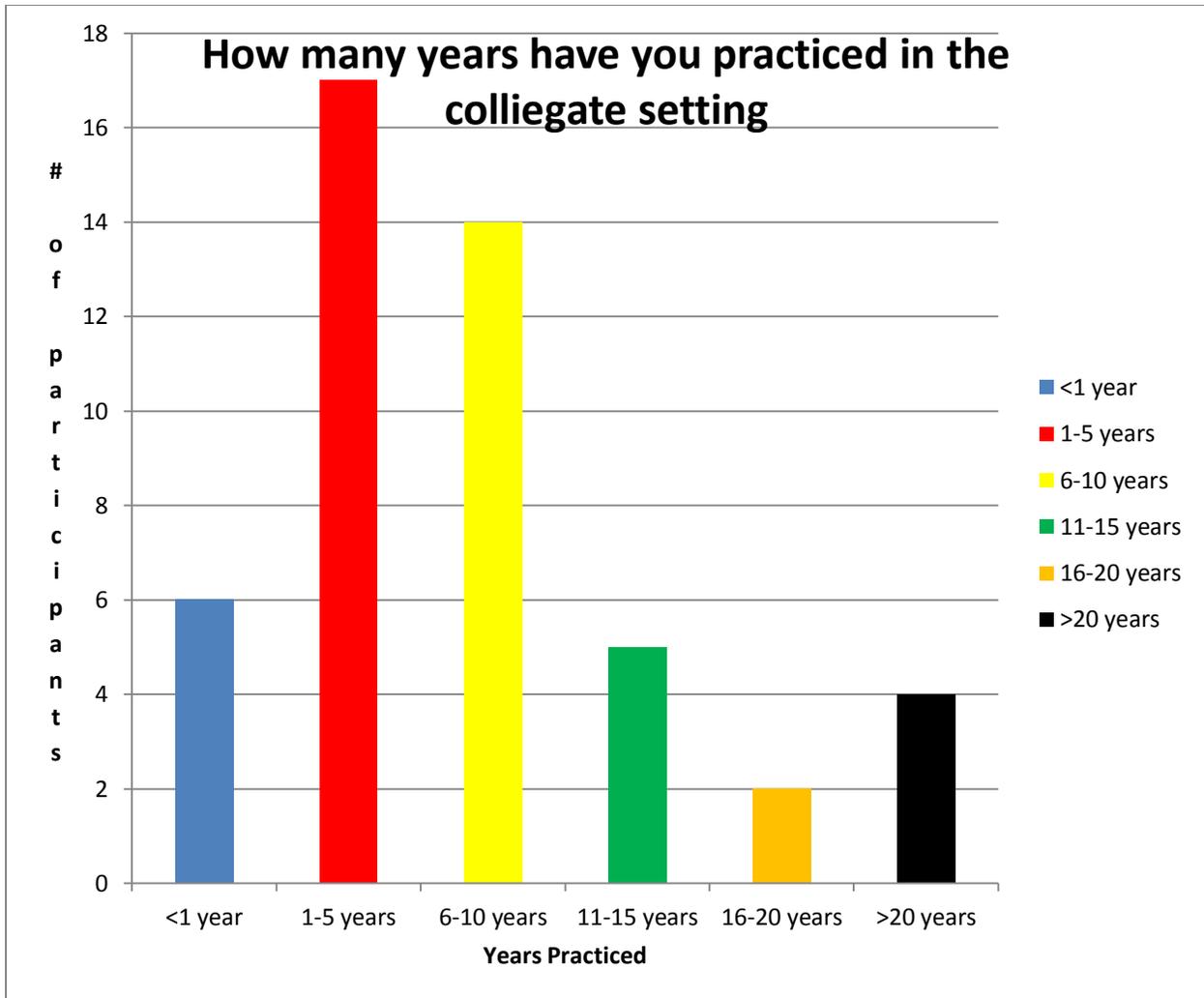
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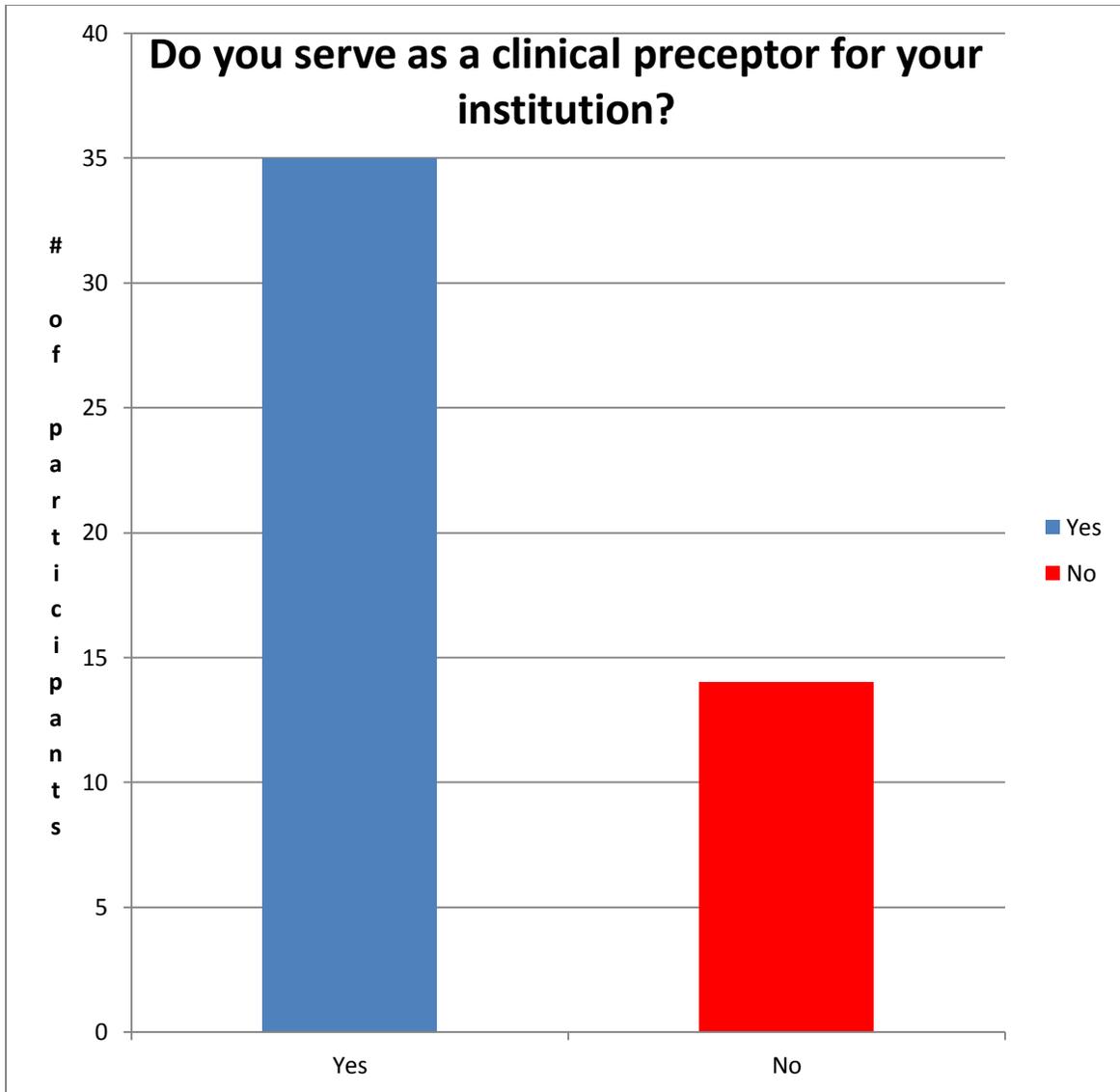
**Appendix E**

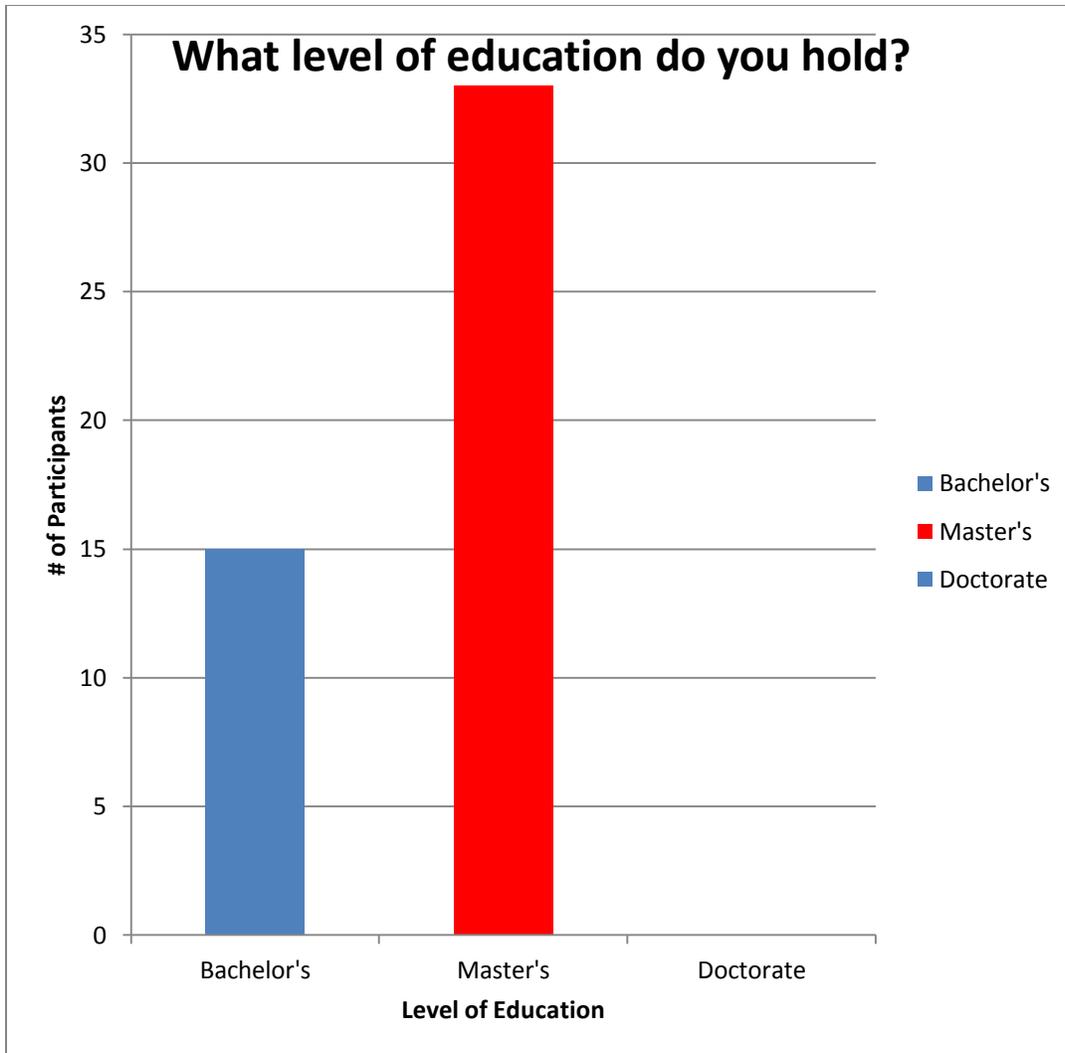


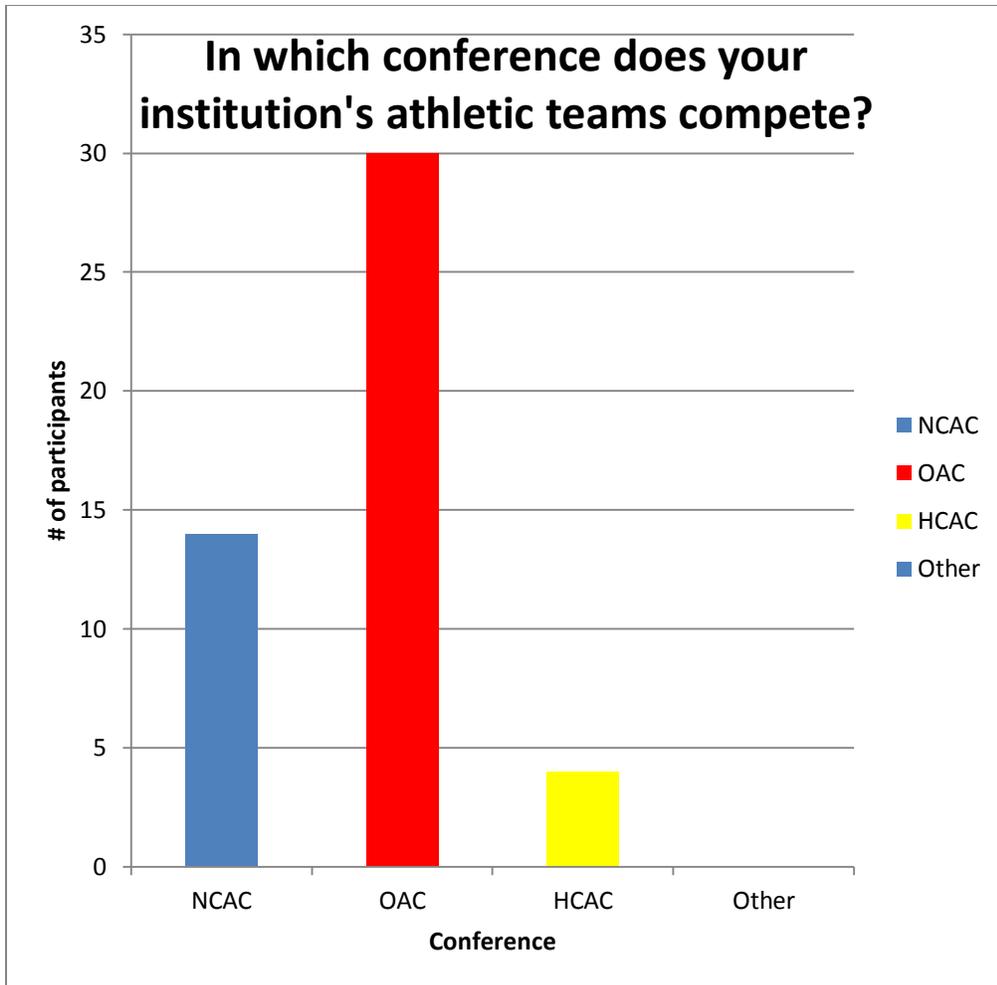


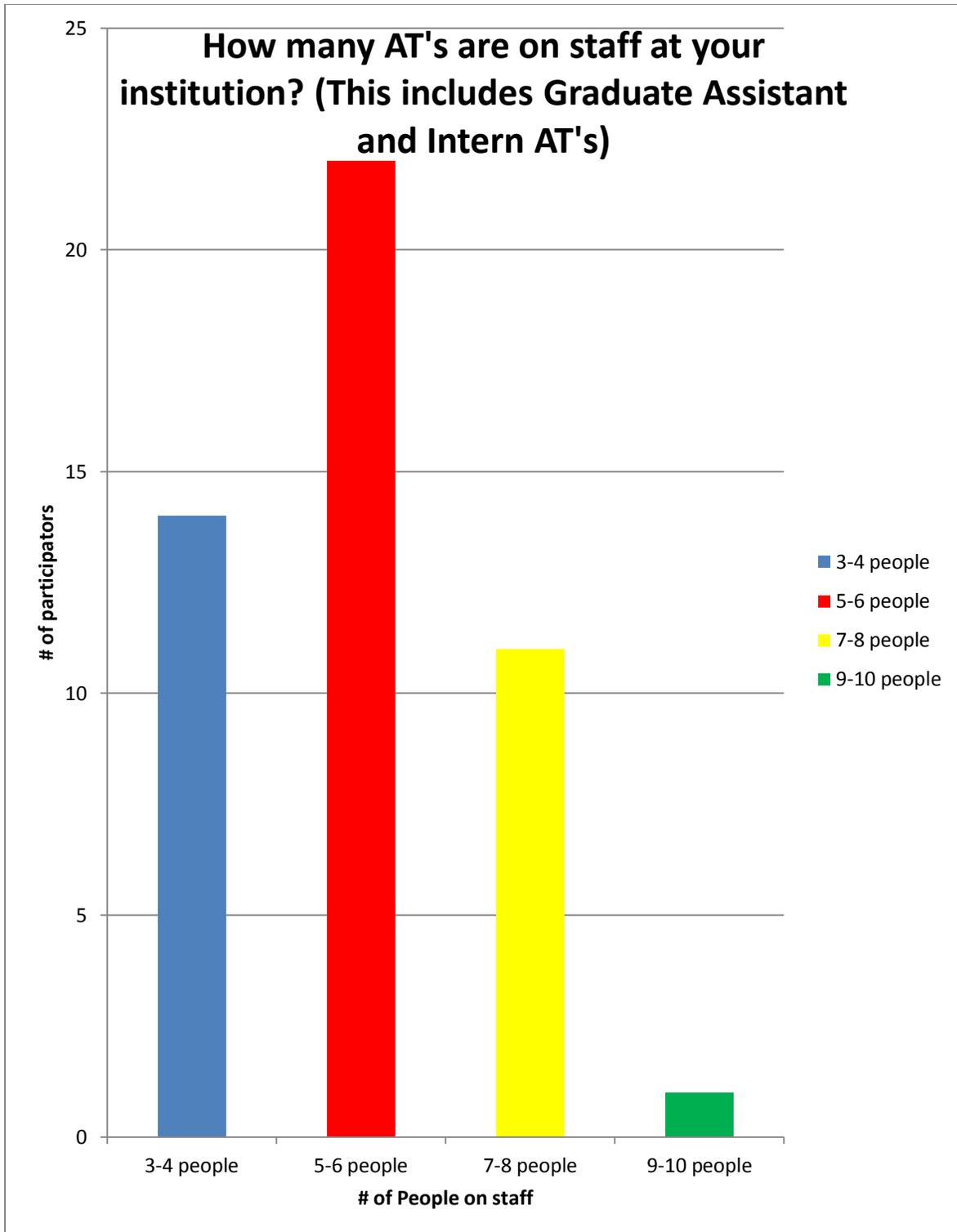


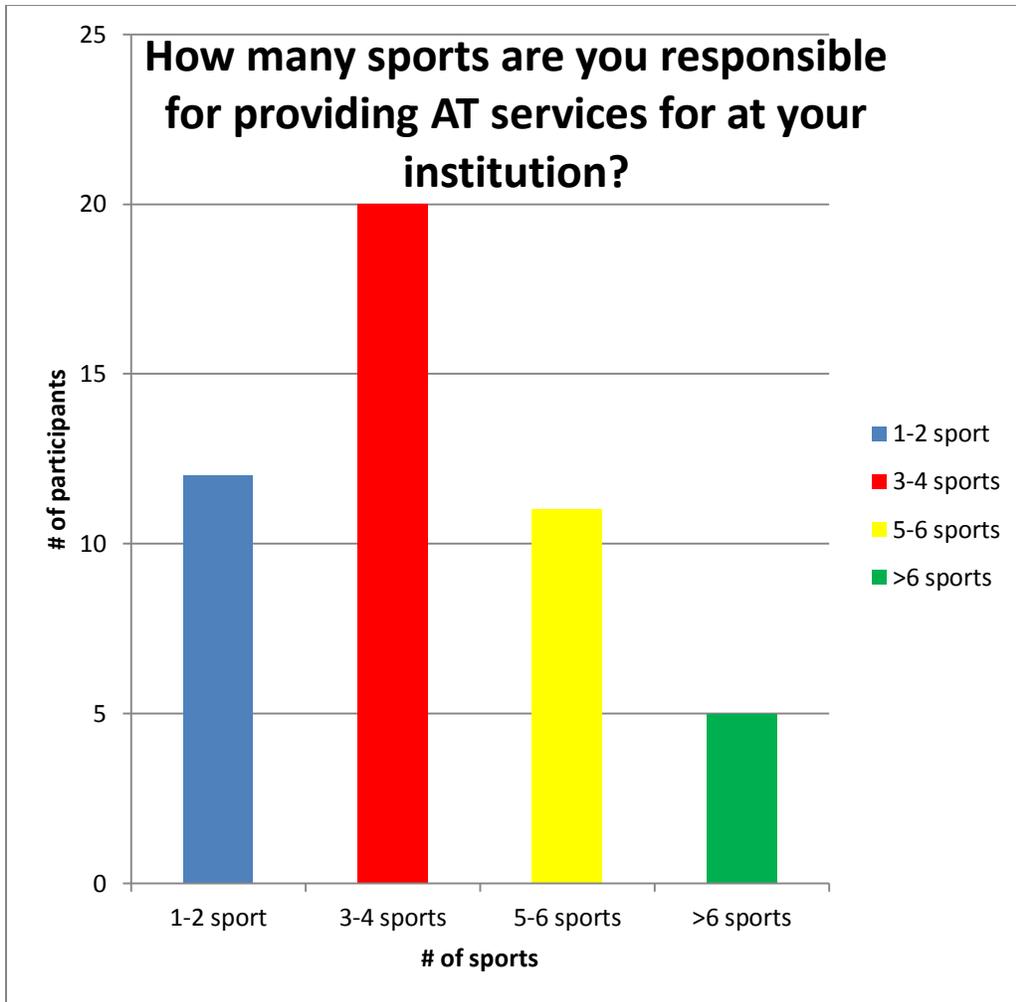












Appendix F

