Recently Certified Athletic Trainers’ Perceptions of Education
Encounters With
Psychosocial Intervention and Referral Situations

by

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in
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ABSTRACT

Purpose of the Study: To examine recently Certified Athletic Trainers (ATs) professionally encountered situations and their perceptions of athletic training education in psychosocial intervention and referral (PSIR). This qualitative in-depth analysis looks at what professional psychosocial intervention and referral situations recently certified ATs have encountered, how recently certified ATs describe their training related to psychosocial intervention and referral, and if recently certified ATs feel they need more training at the pre-certification level or post-certification level and why?

Procedure: Interviews with seven ATs using a semi-structured interview guide. Data collection was coded; themes were developed from those codes to analyze data.

Findings: Four major themes emerged. Nothing beats real life experience; the recollection of ATs real life experiences with psychosocial intervention and referral. Encountering emotions; injury and non-injury related experiences the ATs have experienced. Desire for applied practice; educational suggestions, the importance, and ATs perceptions of what is needed when educating in PSIR for athletic trainers. When in doubt, refer out, to whom; identifies the concept behind the referral process and how ATs feel it can be taught and utilized in athletic training.

Implications: This research demonstrates the need for additional education about PSIR from recently certified AT’s.

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Introduction

Athletic Training

In June of 1990 the American Medical Association (AMA) officially recognized athletic training as an allied health field (Prentice, 2010). This distinction was necessary for athletic training to be formally recognized for education program accreditation by the American Medical Association-Committee on Allied Health Education and Accreditation (AMA-CAHEA). Shortly thereafter, the AMA-CAHEA was reorganized and the Commission on Accreditation of Allied Health Education Programs (CAAHEP) became the national accrediting body of athletic training. At this time, completing a CAAHEP-accredited entry-level program is the only way to receive Board of Certification, Inc. (BOC) for Athletic Trainers, Certification.

The National Athletic Trainers Association (NATA), founded in the 1950’s, is the national membership organization for the profession of athletic training. The Board of Certification, Inc. for Athletic Trainers (BOC), which was incorporated in 1989 provides a certification program for entry-level Athletic Trainers (ATs). The BOC establishes and regularly reviews both the standards for the practice of athletic training and the continuing education requirements for BOC Certified ATs via role delineation studies.

Starting in 2004, students were required to be enrolled in an accredited Athletic Training Education Program (ATEP) in order to be eligible to sit for the BOC examination (Stiller-Ostrowski & Ostrowski, 2009). The Committee on Accreditation of Athletic Training Education (CAATE) was developed in June of 2006 to become responsible for the accreditation of 350+ professional (entry-level) ATEP’s. Currently the BOC Role Delineation Study defines what encompasses the competencies of an entry level certified athletic trainer (ATC). One of the twelve domains required in athletic
training curriculums by CAATE (as identified in the BOC Role Delineation Study) is called Psychosocial Intervention and Referral (PSIR). Students in ATEPs have to pass competencies in twelve areas to qualify to sit for the BOC exam in hopes to become an ATC. Although there is no specific course mandated, the guidelines and proficiencies do call for subject matter and proficiency mastery in the area of PSIR (Harris, Demb & Pastore, 2005).

An article by Vaughan, King, and Cottrell (2004) evaluated ATs’ confidence in their psychosocial intervention and referral skills. Although some participants in the study reported taking a psychology course, they still did not feel confident with psychosocial interventions. This study confirms the need to investigate means of increased athletic trainer confidence with psychosocial intervention and referral skills.

According to Yang et al. (2010) athletic trainers need knowledge, skills and strategies to provide positive psychological support to assist athletes during rehabilitation. Specific training is required to better equip athletic trainers with the knowledge and skills for providing services beyond the prevention and care of athletic injuries. Stiller-Ostrowski and Ostrowski (2009) explored recently certified athletic trainers’ opinions of how well their undergraduate ATEPs prepared them to handle psychosocial intervention and referral. In their qualitative analysis Stiller-Ostrowski and Ostrowski found that ATs reported being underprepared in terms of providing counseling support to athletes, mental skills training (e.g. relaxation, centering, visualization and imagery), and knowing when and how to refer for psychological issues. Although this study identifies some suggestions for education in PSIR, and hopes that ATEP directors will consider implementing more training in psychosocial strategies into the
undergraduate curriculum, the study does not specify how and where this education could take place in the curriculum.

A recent electronic survey by Biviano (2010), determined the frequency with which athletic trainers addressed certain psychological issues related to injury and non-injury-related situations with their student-athletes', their comfort and competence level with these discussions, and referral patterns to other mental health professionals. This quantitative analysis found that ATs say they want additional training in psychosocial intervention and referral at “Extremely Interested” 29.4%, “Interested” 38.2% and “Somewhat Interested” 24.4%. ATs indicated at 30.5% “often” and 54.4% “sometimes” that they discussed emotional and behavioral problems with athletes related to injury. ATs believed it was their role to address injury and non-injury-related psychological issues with their athletes. ATs at 48.1% said they “Agree Completely” and 47.8% “Somewhat Agree” that it is their job to deal with psychosocial issues their student athletes encounter related to athletic injury. However, the percentages were different for non-athletic injuries at 15.2% “Agree Completely” and 55.4% “Somewhat Agree”. ATs in this study reported frequently encountering psychological issues both related to and unrelated to injury in their student-athletes’, the study suggests the need for increased educational competencies within PSIR during an ATs undergraduate athletic training education program or entry-level graduate athletic training education program. Unfortunately this study does not suggest how to implement such educational strategies into ATEP curriculums.

This study examines recently certified ATs professionally encountered situations and their perceptions of education and training in psychosocial intervention and referral.
This qualitative in-depth analysis looked at what professional psychosocial intervention and referral situations recently certified ATs have encountered, how recently certified ATs describe their training related to psychosocial intervention and referral, and if recently certified ATs feel they need more training at the pre-certification level or post-certification level and why? This research aims to create a better understanding of how recently certified ATs feel about psychosocial intervention and referral education, at what levels psychosocial intervention and referral education should be taught, how it should be taught pre- and post-certification, and what skills should be taught?
Psychology of Injury Models

According to the book *Psychological Bases of Sports Injuries* (1999), there has been a trend among researchers to dismiss the grief models that attempt to clarify the emotional responses to sport injury in favor of cognitive appraisal based models. Pargman’s (1999) research shows that grief models are inadequate in that they are based on terminally ill patients, with no account for an individual’s difference in injury response. This research also indicates that there have been limited attempts to test the cognitive appraisal models within the injury literature.

In *Foundations of Sport and Exercise Psychology* (2007), Weinberg and Gould state the importance that allied health professionals understanding the psychological reactions to activity injuries. Sports psychology specialists and athletic trainers have identified varied psychological reactions to injuries. Some people might view an injury as a disaster and others may see it as a way to get a break from grueling practices especially if they are not playing well.

Emotional responses to athletic injury, the five stage grief response process by Hardy and Crace (1990), follows Elizabeth Kubler Ross’s Death and Dying model. The five stage grief response to athletic injury is: 1) denial, 2) anger, 3) bargaining, 4) depression, 5) acceptance and reorganization. Weinberg and Gould (2007) feel sports psychologists now recommend that we view typical responses to injury in a more flexible and general way. Also, other reactions to injury might include identity loss, fear and anxiety, lack of confidence, and performance decrements. Furthermore, new psychological techniques also facilitate injury recovery processes and understanding the
psychology of injury is important for everyone involved in sport and exercise. A holistic approach to athletic injury is being recommended, one that supplements physical therapy with psychological strategies to facilitate recovery from athletic injuries and the first step is to understand the process of psychological rehab and recovery.

An article by Wagman and Khelifa, (1996), introduces readers to sport psychology research and current knowledge and practice concerning athletic injury. It is critical to the ultimate goal of recovery and return to competition that athletes are rehabilitated both physically and psychologically. Yet, most coaches, athletic trainers, and athletes lack both the knowledge and the skill concerning psychological rehabilitation. This article exemplifies the idea of how a sports medicine practitioner identifies psychological distress in an athlete who has sustained an injury and when they should refer an injured athlete to a sports psychologist. The article also shows how sports psychologists can utilize these techniques to help the injured athlete for return to competition.

A study done by Bianco, Malo and Orlick (1999) identifies the three phases of injury and recovery of seriously injured and ill elite skiers. Each stage poses specific challenges to the athlete and thus often dictates different approaches to the psychology of recovery. The first phase is the injury and illness phase: in this phase a sports psychologist wants to help the athlete deal with the emotional upheaval that accompanies the onset of injury, so the clinician should focus on helping the athlete understand the injury. The second phase is the rehabilitation and recovery phase; the clinician should help the athlete sustain motivation and adherence to rehabilitation protocols. Goal setting and having athletes maintain a positive attitude is critical, especially is setbacks occur.
The third phase is the return to full activity phase; full recovery isn’t complete until the athlete can return to normal functioning within his or her sport, so maintaining rehabilitation techniques is vital for success.

*Arnheim’s Principles of Athletic Training* Prentice (2010), (though it illustrates the athlete’s psychological response to injury as the five stage model based on Kubler-Ross’s classic model of reactions to death and dying) talks about factors that can influence reactions to injury and rehabilitation are the athlete’s coping skills, past history of injury, social support, and personality traits. Regardless of the severity of the injury and the corresponding length of time required for rehabilitation, the injured athlete has to deal with a variety of emotions. There are differences in the length of rehabilitation and reaction to injury in regard to emotional response that an athlete might feel. For short-term injuries, emotions might include shock or relief. In a long term injury the athlete might feel fear and or anger. In a chronic injury the athlete might feel anger and frustration. In a career ending injury the athlete may feel isolation and the grief process (Prentice, 2010).

Several other psychological procedures and techniques facilitate the rehabilitation process. Weinberg and Gould (2007) suggest first, building rapport with the injured athlete; showing empathy is helpful, or just trying to understand how the injured athlete feels. To visit, or phone, show your concern for the person because often times the athlete might feel forgotten. Secondly, educate the athlete about the injury and recovery process. Just telling them what they might expect during the recovery process can help the athlete understand the injury in practical terms, and it might help to outline a specific recovery process. Thirdly, teach specific psychological and coping skills. The
most important skills are to learn goal setting, positive self talk, imagery visualization, and relaxation training. Setting short term and long term rehab goals, treatment times, and not going over the goal setting guidelines can decrease setbacks. Self-talking strategies can help counteract the lowered confidence that might follow injury. Have injured athletes learn to replace negative thoughts with realistic, positive ones. Athletes can use visualization and see themselves in game conditions to help facilitate thirst for return to competition. Fourthly, prepare the athlete to cope with setbacks because setbacks are normal so encourage the person to maintain a positive attitude for recovery. Informing the athlete in the beginning of rehab of setbacks can help them in coping with a setback. Also discussing their feelings with others can help with social support of the injured athlete. Fifth, foster social support from friends, family, teachers, coaches, athletic trainers and sports psychologists. Showing athletes that you care about them and their injury, just being there to listen or showing concern without judging them, and learning how others have recovered from similar injuries will help the coping process. Sixth, learning from other injured athletes can help athletes understand their injury and the rehab process, as well as helps them cope with the injury through the social support being given. Research conducted by Bianco (2001), as well as Green and Weinberg (2001), has shown that social support is critical for injured athletes.

Not only do psychological training and psychological factors affect injury recovery and emotional reactions to injury, they affect adherence protocols as well. A study done by Brewer et al. (2000) shows that self motivation was a significant predictor of home exercise compliance.
Athletic Training Education

The National Athletic Trainers Association (NATA) was formalized in the 1950s in an attempt to facilitate the reputation and professionalism of athletic training (Delforge & Behnke, 1999). Shortly after the NATA was founded athletic training education and certification were formalized and an initial curriculum model was approved by the NATA in 1959 (Sieler, 2010). It was not until 1969 that the NATA recognized the first official undergraduate programs in athletic training (Sieler, 2010). In an effort to further the process of program evaluation, a national certification examination was developed in the late 1960s and was administered for the first time in 1970 (Westphalen & McLean, 1978). Eventually, a revised universal athletic training curriculum was established in the mid-1970s producing a common body of knowledge for all Certified Athletic Trainers (AT); this prompted the NATA to form the Competencies in Athletic Training (Delforge & Behnke, 1999). The competencies represent the minimum requirements for entry-level athletic training education.

In June of 1990 the American Medical Association (AMA) officially recognized athletic training as an allied health field (Prentice, 2010). The distinction was necessary in order for athletic training to be formally recognized for education program accreditation by the American Medical Association-Committee on Allied Health Education and Accreditation (AMA-CAHEA) (Sieler, 2010). Shortly thereafter, the AMA-CAHEA was removed and the Commission on Accreditation of Allied Health Education Programs (CAAHEP) became the national accrediting body of athletic training (Sieler, 2010). At this time, completing a CAAHEP-accredited entry-level program is the only way to be able to take the Board of Certification for Athletic Trainers (BOC),
examination (Sieler, 2010). The NATA is the national membership organization for the profession of athletic training while the Board of Certification, Inc. (BOC), which was incorporated in 1989, provides a certification program for entry-level ATs. The BOC establishes and regularly reviews both the standards for the practice of athletic training and the continuing education requirements for BOC Certified ATs via role delineation studies.

In 2004 the BOC completed the latest Role Delineation Study, which defined the profession of athletic training. The panel determined that the roles of practicing ATC could be divided into six major areas, or performance domains: 1) prevention of athletic injuries; 2) clinical evaluation and diagnosis; 3) immediate care of injuries; 4) treatment, rehabilitation, and reconditioning of athletic injuries; 5) organization and administration; and 6) professional responsibilities. Significant portions of Athletic Training Education Programs (ATEPs) are based on preparing athletic training students to become proficient practitioners through classroom, laboratory, and clinical experiences (NATA-ED, 2006). Beginning in 2004, students are required to be enrolled in accredited ATEPs in order to be eligible to sit for the BOC examination (Stiller-Ostrowski & Ostrowski, 2009). The standards and content guidelines of athletic training were further revised and an *Athletic Training Educational Competencies* manual was originally created in 1983 for undergraduate ATEPs acquired competency based curriculum. In 1997, the leadership of the National Athletic Trainers Association (NATA) established the Education Council to dictate the course of educational preparation for the student athletic trainer (Starkey, 1997). Twelve domains of education were established by the Education Council for an entry-level athletic training student to learn competencies that should be taught within
accredited educational programs. The twelve domains include (1) risk management, (2) pathology of injuries, (3) orthopedic assessment and evaluation, (4) acute care of injury and illness, (5) pharmacology, (6) therapeutic modalities, (7) therapeutic exercise, (8) general medical conditions and disabilities, (9) nutritional aspects of injury and illness, (10) psychosocial intervention and referral, (11) health care administration, and (12) professional development and responsibilities (Prentice, 2006).

Currently the fourth edition of the Athletic Training Educational Competencies manual exists (NATA, 2006). According to Seiler (2010) clinical proficiencies are based on the BOC Role Delineation Study areas which athletic training students may encounter in the field of athletic training. However, the study also shows that not all educational competencies and proficiencies are stressed to the same degree.

A study done by Stiller-Ostrowski and Ostrowski (2009) shows one area which appears to receive little attention, the Psychosocial Intervention and Referral content area. This area includes and may not be limited to "communication skills, motivation and adherence strategies, social support and basic counseling skills (e.g. emotional response to injury), mental skills training (e.g. imagery, relaxation), and potential referral situations.

Defining Psychosocial Intervention and Referral

Psychosocial will be defined as issues or situations "involving both psychological and social aspects" (Mensch & Miller, 2008). Taylor (2008) assessed psychosocial intervention as the act of assessing a patient’s mental, social, and/or emotional health, and educating him or her with means of achieving better health. An intervention may be needed when a patient exhibits signs which may indicate a compromised level of
sociocultural, mental, emotional, or psychological health. The act of facilitating an appointment between the patient and mental health professionals is called psychosocial referral. Athletic trainers often refer to and work with various certified or licensed mental health professionals such as a licensed psychologist, dietician, and/or psychiatrist to assist with a patient’s treatment and recovery.

**Role of Athletic Trainer in Psychosocial Intervention and Referral**

Athletic trainers are put into a category called sports medicine, which refers to a broad field of medical practice related to physical activity and sport. Arnheim’s *Principles of Athletic Training* Prentice (2006) shows that the field of sports medicine encompasses under its umbrella a number of more specialized aspects of dealing with the physically active or athletic populations that may be classified as relating to either performance enhancement or injury care and management. Arnheim shows the areas of specialization that are primarily concerned with performance enhancement include: exercise physiology, biomechanics, *sports psychology*, sports nutrition, and strength and conditioning. Other areas of specialization that focus more on injury care and management specific to the athlete are the practice of medicine, *athletic training*, sports physical therapy, sports message therapy, sports dentistry, orthopathic medicine, orthotists/prosthetists, and chiropractic (Prentice, 2010). Arnheim states, “The athletic trainer must be knowledgeable and competent in a variety of specialties encompassed under the umbrella of “sports medicine” if he or she is to be effective in preventing and treating injuries to the athlete” (Prentice, 2006, p. 12). Accredited ATEP curricula require students to learn psychology and or sports psychology as deemed by the Education Council.
Of all the professionals charged with injury prevention and health care provision for the athlete, perhaps none is more intimately involved than the certified athletic trainer (ATC) (Prentice, 1991). The ATC is the one individual who deals with the athlete throughout the period of rehabilitation, from the time of the initial injury until the complete, unrestricted return to practice or competition (Prentice, 1991). The ATC is most directly responsible for all phases of health care in an athletic environment, including prevention of injuries, providing initial first aid and injury management, evaluating injuries, and designing and supervising a timely and effective rehabilitation program for the safe return of the athlete to activity (Prentice, 2010). Athletic trainers are often the first to assist or counsel patients with psychosocial issues such as disordered eating, depression, and/or substance abuse (Taylor, 2008). When patients exhibit signs of sociocultural, mental, emotional, or psychological problems, athletic trainers must be able to recognize the problem, intervene, and refer to the appropriate and qualified mental health professional (Taylor, 2008).

Athletic trainers utilize different techniques for athletes and their sociological response to injury. Following injury, particularly one that requires long term rehabilitation, athletes may have problems adjusting socially and my feel alienated from the rest of the team (Johnston & Carroll, 1998). Athletes who can remain involved with the team, however, feel less isolated and less guilty about not being able to help the team (Hedgpeth & Gieck, 2004). Social support is important because when an athlete is injured, he or she needs support from teammates and coaches to prevent feelings of negative self worth and loss of identity (Prentice, 2006). The athletic trainer’s role in providing social support is that encompasses the following: 1.) be a good listener, the AT
must learn to listen to the athlete beyond the complaints and listen for fear, anger, depression, or anxiety that the athlete might be feeling; 2.) be aware of body language, in that showing interest into the athlete’s problems will go a long way toward gaining the athlete’s confidence and respect; 3.) project a caring image so the relationship between the athletic trainer and the athlete can be a personal one, and so the AT must establish rapport and show a sense of genuine concern and caring for the athlete; 4.) find out what the problem is, allow the athlete to provide as much information about his or her injury as possible to determine direction of rehabilitation; 5.) explain the injury to the athlete, in most cases providing the athlete with the simplest explanation acceptable is best; 6.) manage the stress of injury because stress can be a deterrent to engaging in rehabilitation, so techniques such as relaxation, imagery, cognitive restructuring, and thought stopping, may lessen the athlete’s stressful reaction to injury; and 7.) help the athlete return to competition, the AT can help the athlete make a decision to return based on facts and not clouded by emotions, so the AT can be of great help when the athlete is unwilling to continue participating in his or her sport (Prentice, 2006).

Prentice (2010) concludes the psychology of sports rehabilitation must include establishing rapport, a sense of cooperation, exercise rehabilitation as an education process, and competitive confidence. Goal setting incorporates a multitude of other motivating factors that intuitively appear to increase the odds of compliance by reducing the stress associated with injury rehabilitation. Mental training techniques are appropriate for athletes in the process of healing and rehabilitating a serious injury and illness; athletic trainers and therapists can help athletes to positively respond to their injuries via specific mental training techniques. Suggested techniques given by Prentice (2006) and
Pargman (1999) include quieting the anxious mind (i.e. meditation, progressive relaxation technique), cognitive restructuring (i.e. refuting irrational thoughts, thought stopping, imagery), improving the healing process, and techniques for coping with pain (i.e. tension reduction, attention diversion, altering the pain sensation).

Under the clinical evaluation and diagnosis section of *Arnheim’s Principles of Athletic Training*, Prentice (2010) states that athletic trainers should refer athletes to support services if needed. The athletic trainer must be familiar with and should have access to a variety of personal, school and community health service agencies, including community based psychological and social support services available to the athlete. With assistance and direction from these agencies, the athletic trainer together with the athlete should be able to formulate a plan for appropriate intervention following injury. Athletic trainers are key individuals in the athletic environment; as part of a proactive model in dealing with stress, so athletic trainers must be involved in a significant way. Weinberg and Gould (2007) ask if it is the sports psychologist’s or athletic trainer’s responsibility to learn and administer these procedures as appropriate.

**Research on Psychosocial Intervention and Referral in Athletic Training**

Managing and or recovering from injury requires more than physical treatment. “In ongoing efforts to keep athletes practicing and competing, psychosocial interventions may be the most valuable tool since 1 ½ inch tape (Ray & Weise-Bjornstal, 1999). Injured athletes have identified ATs effective communication skills as extremely important for establishing rapport with them. This rapport ensures prompt reporting of injuries and compliance with rehabilitation (Stiller- Ostrowski, Gould & Covass, 2009).
Although ATs are not psychologists, they have ways of helping an athlete deal with the onslaught of emotions experienced in college and after injury (Harris, 2003).

Do ATs perceive themselves as competent in the psychology of injury and rehabilitation? A study done by, Covassin, O'Neil and Pero (2000) identifies ATs knowledge in psychosocial intervention where 90% of the 137 surveyed say they counsel athletes in regards to injury related problems, but 60% reported that they were not adequately trained in either counseling or sports psychology (Covassin, et al., 2000). Another question indicated 20% of the ATs are utilizing these techniques without any formal instruction or training (Covassin, et al., 2000).

Davis, Misasi, Morin and Stockman’s (1996) study shows athletic trainers assume several roles and responsibilities over the years, but perhaps there is no more important role than that of a counselor. Most athletic trainers surveyed reported that they were predominantly counseling in the areas of injury prevention, injury rehabilitation, and nutrition, and felt academically prepared to do so. Athletic trainers typically maintain unique relationships with student-athletes in that they work closely with the student-athletes from the time they become injured to the day they return to participation.

Whether or not ATs are trained or legally/ethically permitted to care for an athlete/patient suffering from a psychosocial disorder, ATs are often asked and expected to counsel athletes/patients through these issues (Mensch, & Miller, 2007).

Cramer and Perna (2000) suggest counseling is a part of ATs knowledge and practice, but feel ATs may require structured educational training in the counseling of psychological aspects of athletic injury. Results of the study indicate; 1.) psychological distress is prospectively associated with the incidence of athletic injury, and prolonged
psychological distress, specifically depression, may occur after athletic injury; 2.)
psychological factors may also either hinder or facilitate rehabilitation adherence,
compliance, and recovery; 3.) psychological distress may persist even after physical
recovery has been completed; 4.) psychosocial factors related to injury occurrence and
injury recovery may be overlooked by ATs, but knowledge of these factors and
appropriate use of referral sources may enhance the effectiveness of ATs; and 5.) ATs
may benefit from structured educational experiences specific to the National Athletic
Trainers' Association psychology/counseling competency. A national survey of 75% of
all ATs indicated that they do not have access to a sport psychologist. While ATs are
taught to refer out psych-social concerns, most of them don’t have access to a
psychologist. So the training doesn’t really address the realities of the profession. Thus it
would be advantageous for ATs to gain adequate training in the recognition, evaluation,
and treatment of psychological factors associated with athletic injury.

A qualitative analysis by Moulton, Molstad and Turner (1997) looked at eleven
Division 1 ATs and their views on their role in counseling collegiate athletes. The ATs
felt that their roles went beyond the care and prevention of athletic injuries, yet they did
not necessarily feel qualified to counsel athletes. Most ATs were familiar with on-campus
student support services to which student athletes with personal issues could be referred
for assistance, but none had access to a sport psychologist.

Barefield and McCallister (1997) used a quantitative study of athletes identifying
the degree to which athletes actually received each of eight types of social support. The
study identified the types of social support athletes need or expects to receive from ATs
and student athletic trainers. This study shows athletes in Division 1 universities, do get
some sort of social support from not only certified staff members but also from athletic
training students. Athletes also expected to receive social support from their ATs in the
rehabilitation setting. This study was limited to only one school with eighty-five surveys
done by athletes about their perception of what their ATs and student athletic trainers are
doing.

A study done by Hamson-Utley, Martin & Walters (2008) of physical therapists
(PTs) and ATs, shows perceptions of ATs when compared to PTs and how they both deal
with psychological issues of athletes in rehabilitation of their injuries. Mental imagery,
positive self talk, controlling pain and goal setting were the primary skills of ATs and
PTs when dealing with athletes' injury rehab process. The article clearly shows the
breakdown in the educational process of student athletic trainers in what they should be
receiving from their ATEP:

The accreditation of athletic training education programs by the Commission on Accreditation of
Allied Health Education Programs and, more recently, the Commission on Accreditation of
Athletic Training Education, provides academic programs with a set of psychosocial intervention
and referral competencies; these ensure that students are receiving instruction and evaluation on
the psychological aspects of sport injury. More specifically, one of the educational competencies
requires the student to describe the basic principles of mental preparation, relaxation, visualization
and desensitization techniques. To reiterate, it is clearly within the professional and educational
preparation of the athletic training student to possess knowledge of mental imagery and other
psychological skills geared to aid in the rehabilitation of injured athletes. What may be missing,
however, is the practical experience of implementing the mental skills with athletes who are

Continued education for practitioners and continued research on the effectiveness
of such techniques eventually may help ATs and injured athletes to simultaneously
manage the mental trauma associated with physical injury.

A study done by Harris, Demb and Pastore (2005) looked at the perceptions of
athletic training students towards a course addressing psychological issues in
rehabilitation. The article stated; “Although no specific course is mandated, the new
guidelines and proficiencies do call for subject matter and proficiency mastery in the area of psychosocial intervention and "referral" (Harris, et al., 2005 p. 8). Results of the study indicate the value of the course seemed to be supported by the interview results; overall, it seemed that the respondents (students) became more empathetic practitioners. The study does include suggestions for future research in that it may provide validation for a course designed to address psychosocial intervention and referral by replicating the study using a larger sample size.

Recent research conducted by Schilling and Combs (2011) measured the level of importance clinical ATs assign to competencies in the Athletic Training Educational Competencies document (4th edition) that pertain most to clinical settings. Schilling and Combs (2011) explore the relationship between demographic factors and the importance level clinical ATs assign to these competencies, and additional competencies suggested by clinical ATs. This study sent 3,693 surveys to certified NATA members and of those, 554 were returned to the researcher. The highest ratings of perceived importance came from competencies listed in three content areas including: Conditioning and Rehabilitation Exercise, Orthopedic Clinical Examination and Diagnosis, and Therapeutic Modalities. The lowest importance ratings came from competencies in the Psychosocial Intervention and Referral and Health Care Administration content areas; although the lowest level of importance given to a competency by the participants in this study was between somewhat important and important on the importance rating scale.

An article by Vaughan, King, and Cottrell (2004) evaluated ATs' confidence in their psychosocial intervention and referral skills. The study surveyed ATs and their experiences with student athletes and eating disorders. Virtually all athletic trainers
(91%) had dealt with a female athlete with an eating disorder, only (27%) felt confident identifying a female athlete with an eating disorder, and only (38%) felt confident asking an athlete if she had an eating disorder. Although some participants in the study reported taking a psychology course, they still did not feel confident with psychosocial interventions. This study confirms the need to investigate means of increased athletic trainer confidence with psychosocial intervention and referral skills.

A follow up study was done by Taylor (2008) examining the teaching effects of a standardized patient (SP) teaching lesson on the confidence and anxiety levels of athletic training students related to assessment and/or referral of patients with psychosocial (sociocultural, mental, emotional, or psychological) issues such as eating disorders, substance abuse, and/or depression. An evaluation encounter feedback form questioner shows athletic training students felt more comfortable with their ability to intervene and refer patients with psychosocial issues after receiving the SP teaching lesson.

Stiller-Ostrowski and Ostrowski (2009) explored recently certified athletic trainers opinions of how well their undergraduate ATEPs prepared them to handle psychosocial intervention and referral. ATs in this study reported being underprepared in terms of providing counseling support to athletes, mental skills training (e.g. relaxation, centering, visualization and imagery), and knowing when and how to refer for psychological issues through qualitative analysis. Although this study identifies some suggestions for education in PSIR and hopes that ATEP directors will consider implementing more training in psychosocial strategies into the undergraduate curriculum, the study does not discuss specifically how and where this education could take place in the curriculum. Recent research by Biviano (2010) determined the frequency with which
athletic trainers address certain psychological issues related to injury and non-injury-related psychological issues with their student-athletes, their comfort and competence level with these discussions, and referral patterns to other mental health professionals through an electronic survey. More than half (n=170, 55.7%) of all subjects had one or two psychology classes, and 34.1% had three or four classes and 99.1% at least a general psychology course in their undergraduate education. ATs indicated at 30.5% often and 54.4% sometimes that they discussed emotional and behavioral problems with athletes related to injury. ATs believed it was their role to address injury and non-injury-related psychological issues with athletes. Also, 48.1% of ATs said they Agree Completely and 47.8% Somewhat Agree that it is their role as an AT to deal with psychosocial issues their athletes encounter related to athletic injury (much lower for non-athletic injury at 15.2% and 55.4% for completely and somewhat agree). ATs say they want additional training at extremely interested 29.4%, interested 38.2% and somewhat interested 24.4%. Although ATs reported frequently encountering psychological issues both related to and unrelated to injury in their student-athletes this study suggests the need for increased educational competencies within psychology during an AT’s undergraduate athletic training education program or entry-level graduate athletic training education program but does not show how to implement the educational strategies in these programs.

Summary

Athletic trainers need not only knowledge but also skills and strategies to provide positive psychological support to assist athletes in rehabilitation. Specific training is required to better equip athletic trainers with the knowledge and skills for providing
services beyond the prevention and care of athletic injuries (Yang, et al 2010). Recent research looked at: 1.) ATs perceived importance of psychosocial intervention and referral competencies (Schilling & Combs 2011); 2.) ATs’ thoughts about ATEP preparation- ATs felt underprepared when dealing with psychosocial intervention and referral (Stiller Ostrowski & Ostrowski, 2009); and 3.) ATs’ comfort and confidence in psychosocial intervention and referral-where ATs felt they want additional training at extremely interested 29.4%, interested 38.2%, and somewhat interested 24.4%, in receiving additional training for dealing with psychosocial intervention and referral (Biviano, 2010).

This research study examines recently Certified Athletic Trainers professionally encountered situations and their perceptions of athletic training education and training in psychosocial intervention and referral. This qualitative in depth analysis looks at what professional psychosocial intervention and referral situations recently certified ATs have encountered, how recently certified ATs describe their training related to psychosocial intervention and referral, and if recently certified ATs feel they need more training at the pre-certification level or post certification level and why?
Methodology

Design of the Investigation

A qualitative method was chosen for this study because of the nature of its inductive approach, its focus on specific situations or people, and its emphasis on words rather than numbers (Maxwell, 2005). The qualitative research method used a phenomenological approach that explores an understanding of the subject's reality however he or she so perceives. The phenomenological approach investigates a group's perception of reality as members construct it.

Phenomenology studies the structure of various types of experiences ranging from perception, thought, memory, imagination, emotion, desire and volition to bodily awareness, embodied action, and social activity (Smith, 2011). Qualitative research is predominantly appropriate for five particular research purposes: understanding meaning for participants of situations and of their personal accounts of their experiences; understanding the context of participant accounts as well as the influence of this context on participant actions; identifying unforeseen phenomena and influences; “generating new grounded theories about the latter”; and understanding the process behind actions and developing causal explanations (Maxwell, 2005).

This study examined recently certified athletic trainers’ (ATs) professionally encountered situations and their perceptions of education and training in psychosocial intervention and referral (PSIR). This qualitative in-depth analysis looked at what professional psychosocial intervention and referral situations recently certified ATs have encountered, how recently certified ATs describe their training related to psychosocial
intervention and referral, and if recently certified ATs feel they need more training at the pre-certification level or post-certification level and why?

**Population**

The research protocol aimed to first find recently certified ATs whom have graduated from an accredited athletic training education program (ATEP). Since 2004 is when PSIR domain was added into curriculums, interviews were conducted with ATs post 2004 who should have received training in PSIR about their experiences with and perceptions of education in PSIR. The participants include ATs throughout the United States. Interviews were conducted with seven recently certified athletic trainers. The study utilized semi-structured interviews with each individual AT drawn from convenience, snowball sample of the researcher’s personal network of ATs. Two interviews came from the California collegiate Division II setting, two came from the California Community College clinical setting, one came from a Division I clinical setting in New Hampshire, one from a California Secondary School clinical setting, and one AT represented a professional sports team in Arizona. The average of years certified for these practicing ATs was 4.5 years, with three ATs being certified for 6 years, one for 5, and three with 3 years of clinical experience. The level of education that six of the ATs attained was a Master's degree and one attaining a Bachelor's degree.

A convenient sample of participants was selected starting with the researcher's personal network of ATs. Snowball sampling was used to gain access to individuals deemed necessary for this research (see appendix F). Snowball sampling may be the only way to reach an elusive population or to engage people about a sensitive subject (Lindloff, & Taylor, 2002 pp. 124). All research of individuals and school affiliation is
completely confidential. Pseudonyms were given in place of ATs as follows: AT 1, AT 2, etc. All data was collected and was stored away safely locked in a file cabinet.

Athletic training switched from an hourly-based internship process to an accreditation process through an ATEP to obtain the Board of Certification’s (BOC) certification in 2004. The rational behind the selection of the recently certified ATs since 2004 is because of their recent involvement with undergraduate ATEP curriculum and their entry-level experience in the field of athletic training. The recently certified ATs’ experiences and reflections provide the main source of data. This source is very valuable gathering information about education in psychosocial intervention and referral because the ATEPs process of education in becoming an ATC is fairly new.

Data Analysis

After obtaining Institutional Review Board approval, possible participants (using snowball sampling) were contacted via phone (Appendix B) or email script (Appendix C). Once the connection had been established through phone or email script, the researcher met in person to read and sign an informed consent form to verify their participation in this study and to establish rapport. Rapport is important for the connection between the researcher and participant; it provides the participant to give their full participation. Rapport can be established quickly through the snowball sampling method. The participants filled out a demographic questioner (see appendix D) that included questions about current level of work, the sports they work, highest level of education, how many years certified, number of years they have worked at that school or level, and any course work they remember having in psychosocial intervention and referral.
Once the demographic sheet was completed the interview process began. The most common form of interview is the person-to-person encounter in which one person elicits information from another (Merriam, 2009). Interviewing is necessary when we cannot observe behavior, feelings, or how people interpret the world around them (Merriam, 2009). A qualitative semi structured interview guide was used for this study and utilized the semi-structured interview format (see appendix E). Interviews started with a general question about experiences with psychosocial intervention and referral. As certain topics were discussed it led into the interview questions. The interview guide included a mix of more and less structured interview questions. Specific data was necessary for the research from all respondents, and the largest part of interview was guided by a list of questions or issues that were explored. Interviews conducted took approximately fifteen to forty-five minutes. Central interview questions were used to identify recently certified athletic trainers' experiences with, and perceptions of education in psychosocial intervention and referral. Secondary questions were used to find out perceptions of the recently certified ATs about psychosocial intervention and referral education. Follow-up probe questions were used to extract further information if the participant did not bring up certain issues themselves. All interviews were tape recorded to ensure the collection of rich data.

During the interviews the researcher kept a notebook of all notes documented during the interview and the transcription of the tape recordings was kept. Taking notes provided a way to keep track of the interpretations during multiple interviews. Without memos, it would be difficult to keep the lines of communication open between researchers or to retrace the process by which the researchers arrived at their final
findings (Corbin, & Strauss, 2008). Maxwell (2005) states that, "Memos are one of the most important techniques you have for developing your own ideas; you should therefore think of memos as a way to help you understand your topic, setting, or study, not just as a way of recording and presenting an understanding you've already reached" (p. 12). Memos were taken on participant body language, researcher reactions and general thoughts during the interview.

Interview recordings were numbered according to order of interview and identified only by pseudonyms of AT1, AT2, etc, with the only key in the researcher’s possession. The researcher then listened to each individual interview recording prior to transcription to hear it again for the first time. The researcher then transcribed each individual interview via audio playback. Analysis of the memos was important for the researcher during transcription where the voice became muffled or words became hard to understand. Once the interviews had been transcribed the researcher read through the data multiple times to develop codes. Coding is not to count things but to fracture the data and rearrange them into categories that facilitate comparison between things in the same category and that aid in the development of theoretical concepts (Maxwell, 2005). Once codes were developed the researcher went back over transcripts to code the data. Following transcription the data had been coded and read through multiple times with key data and quotes pulled out in development of themes. The researcher utilized peer review where each committee member analyzed the transcripts in the development of the codes and again for the themes that helped establish trustworthiness in the research.

Transcripts of the interview were emailed to participants for review as member checks in which the participants' views and the participants themselves were justly
portrayed. Collecting information using a variety of sources is one aspect of triangulation that was used to gain a broader and more secure understanding of the issues investigated. Triangulation allowed a better assessment of the generality of the explanations that the researcher developed.

**Discussion of the Results**

The purpose of this study was to examine recently certified athletic trainers (ATs) professionally encountered situations and their perceptions of athletic training education and training in psychosocial intervention and referral (PSIR). Specifically ATs were asked about their experiences with, education in, and perceptions of educational training in psychosocial intervention and referral. The ATs’ responses were coded and those codes were then developed into four main themes. The themes developed are: *Nothing beats real life experiences, encountering emotions, desire for applied practice, when in doubt refer out, to whom?* All the participants (n=7) in this study reported having some sort of experience with psychosocial intervention and referral.

**Nothing Beats Real Life Experiences**

Nothing beats real life experience, a theme that was developed through the interview process of the recollection of ATs real life experiences with psychosocial intervention and referral. The transcribed data shows ATs highlighted the perception of nothing beats real life experience when dealing with PSIR situations. These experiences which ATs recalled for this theme include their educational experience with PSIR in undergraduate studies, common perceptions of what these ATs felt going from undergraduate curriculum studies straight to the clinical work setting, as well as
identifying the confidence these ATs have when dealing with PSIR in their current work setting.

A study done by Stiller-Ostrowski and Ostrowski (2009) examined recently certified athletic trainers' opinions of how well their undergraduate athletic training education programs (ATEPs) prepared them to handle PSIR. The (2009) study shows that ATs felt underprepared to provide counseling support to athletes. This study has opposing views to the (2009) study indicating although some ATs do not feel prepared in dealing with PSIR situations other ATs feel comfortable and confident in their abilities to handle PSIR situations. Also, some ATs in this study felt that they react on psychosocial issues based on their own personal life experiences that they have had being an athlete themselves, not based on any classes they have taken as AT1 put it:

I don’t feel prepared at all, I feel like I am reacting with a sort of understanding of it, I feel like my responsibility is more based on my own experiences in athletics and being an athlete myself. I don’t feel like we are prepared at all for it, it’s really not based on any classes that I have taken, I am reacting to my own experiences.

Few of the ATs in this study reported having an athletic history of playing sports, so some will have had a situation from their past that may resemble an athlete's current situation. For that, nothing beats the real life experience when ATs do not receive a course or do not receive in depth education and analysis on PSIR in curricula. The ATs portrayed that their life experiences allow them to identify similar situations that they have been through to try and help current athletes in their clinical setting.

There were a few ATs in this study that reported feeling prepared from their ATEPs and felt comfortable in handling PSIR situations, but other ATs who felt the same way described their experience in a more specific manner, feeling comfortable with
injury related psychosocial issues more than non-injury related psychosocial issues with athletes. The ATs who felt somewhat comfortable with PSIR described from their real life experience with the non-injury related issues as AT2 put it; “More foreign because there could be underlying issues that one might not see that ultimately creates a psychological issue.” Although some ATs in the current study do not feel prepared in PSIR, all the ATs in this study report having experience and exposure with injury and non-injury related psychological issues similar to the Biviano (2010) study that showed ATs frequently encountering psychological issues both related to and unrelated to injury in their student-athletes.

The data from this research shows that most of the ATs reported similar educational experiences with coursework in ATEPs as general psychology, sports psychology, nutrition classes, and general medication classes that may have touched basics of PSIR but maybe not gone into depth. The current study found similar results to the research conducted by Donahue (2009) that suggests ATs felt their preparation in PSIR could have been better. Most ATs in this study reported having minimal classroom educational experiences with PSIR. ATs educational experiences on multiple occasions were described as; curricula merely touching on PSIR in general class and/or part of a lectures. As AT2 stated, “I feel like we don’t get a whole curriculum of that. It’s more touched on than gone into depth.” Another AT actually reflects on where they might have had the PSIR education as AT6 states, “Kind of in a little bit in organization and administration classes and some of those gen med classes we would touch on these (PSIR) things.” These experiences contribute to the current research on PSIR education from the Stiller-Ostrowski, Gould, and Covassin (2009) study which indicates although
the National Athletic Trainers' Association Education Council standards require formal instruction in PSIR, they provide no suggestions or requirements regarding how such competencies must be taught. Results of the current study also reiterate the Stiller-Ostrowski, Gould, and Covassin (2009), Vaughan, King, and Cottrell (2004), Drummond, Velasquez, Cross and Jones (2005), Stiller-Ostrowski and Ostrowski (2009) studies that ATs did not have any formal required education in PSIR in undergraduate studies.

Most ATs in this study reported having exposure with PSIR where their training came from on the job experiences and how they have picked it up through the years. ATs felt their experience with PSIR came from exposure during undergraduate studies though observation of their program's policies and procedures process on psychosocial situations and that their Academic Clinical Instructors (ACI) were able to discuss certain aspects of psychosocial situations that came, as AT7 states, "We did talk about it. Our clinical instructors talked about it with us. A lot of those cases were kept private because it was such a sensitive topic. Observe, see how our clinical instructors handled it." Although not all ATs in this study had this type of incident occur in their academic setting, there were a few that had this experience in which they felt, looking back on it, was very helpful and beneficial when they were able to observe and talk about those situations inside the PSIR domain. A study by Ostrowski and Utley (2010) shows that the philosophy of athletic training education has been that knowledge and techniques be instructed not only through lecture but also through practical experiences so one may learn how to effectively implement the new knowledge and techniques. In some circumstances a few ATs in this study reported spending time with the ACIs talking about the situations that had
happened with an athlete or just being in the right place at the right time observing the situation and identifying the procedure that took place following the athletes' inquiry. This academic educational experience is not the typical classroom type of learning of listening to lecture and taking notes. As an AT, I consider the athletic training room to be a classroom that serves as an educational setting for student athletes and student athletic trainers to learn. These instances of ATs reporting learning about PSIR from ACls in the athletic training room is education in the form of real life hands on experiences, being that these observations now became their experience as AT2 quotes:

My training is basically with injury related has come a lot from on the job and how I have picked it up. A lot of it is what you observe, and how you take what you observe and put it into your own practice and how you incorporate into what you do in the situations that you have. Observe as much as you can, all of the sudden that becomes your experience.

**Encountering Emotions**

The theme encountering emotions stems from injury and non-injury related experiences the ATs have experienced. Experiences varied for the ATs, and these ATs described emotions that they have seen in the field and as students that ranged from fear, frustration, anger, and depression. The injury related psychosocial issues that ATs reported experiencing included shoulder, knee, and head injuries (concussions). The non-injury related psychosocial experiences ATs reported also varied from attempted suicide, diabetes, alcohol abuse, steroid abuse, sudden cardiac death, domestic violence, to cancer. The current study adds new insight to the Ostrowski and Utley (2010) study about the exact nature of what recently certified ATs have been exposed to in regards to injury and non-injury related psychosocial issues in various clinical settings. ATs have encountered emotions that stem from injury related issues as AT1 puts it:
I have an athlete who’s not coming into therapy because she had a lateral release done, she won’t bend her knee, she won’t put it in terminal extension, it’s stuck in a flexion contracture right now because she is terrified to move it. She is scared that something will rip or break.

The experiences differed from each AT when encountering emotions for injury related psychological issues. Most ATs reported seeing some sort of psychological emotional reaction from athletes who have sustained an injury during their season. On a couple occasions ATs described encountering athletes injuries as season ending injuries and the frustration and anger that comes along with not being able to help the team as AT3 put it:

Their fear of not being able to play in that game and their last game if they are a sophomore, concussion athletes, which we have seen a few during football season and quite a few during baseball and softball season this year, the athletes are scared, they are frustrated, they are disappointed.

Some of the non-injury related experiences reported by ATs were surprising because of the extreme nature of the non-injury related psychosocial event that happened. The ATs experience with these events did not always have to deal with the athlete the situation involved, rather those athletes around what happened to the athlete, as AT6 experienced one of those events you hope to never have to go through as an AT but was very educational when seeing it first hand:

I was at my undergrad and we had a guy die with sudden cardiac death, kind of just passed away right there on the sidelines, You’d be in the training room and you would see a guy going into the head athletic trainers office and you can see him kind of tear up and you can kind of see something start to happen and you kind of know what it was about.

In this circumstance this AT got a first hand look encountering emotions when having an athlete, a teammate, a friend die and how it affected all those around them emotionally. Another instance with an AT as an athlete, their teammate’s parents were killed in a domestic violence incident. This AT’s experience was very tragic and emotional, not only
for them but for the whole team. AT5 expressed how their certified athletic trainer helped their team, and really felt that the AT whom was working for their team helped create a life changing moment for them:

That was kind of my "ah ha" moment, was like oh my god, I could be so much more, like our ATC, so much more than just fixing our knees and icing us after practice. Our ATC had such a huge impact in all of our lives and just being there for this person I was like I can really make a difference in these athletes' lives.

Although each AT's experience in this study was different, ATs were able to revisit their situations descriptively adding rich detail to what those situations entailed. The experiences that the ATs' encounter can only help them get better at dealing with psychological situations through the exposure as AT2 noted, "The first time you deal with a suicide attempt is just as serious as the tenth time you deal with it, but the tenth time you are way more comfortable dealing with the situation of how to go about helping that person."

An experience that AT1 had as a student athletic trainer encountering the emotions and attitudes of a softball team who had a teammate diagnosed with cancer showed this AT what it was like on how the dynamics of the team changed. This AT felt that the team became tougher, and didn't complain about little injuries, and that they played through pain because they felt obligated to for their teammate.

Most ATs in this study encountered various emotions in regards to injury related and non-injury related psychological situations. Although some ATs experiences dealt with more extreme situations, it seems that all ATs that dealt with one of these psychological situations would now be able to identify a change in emotions from their athletes. Depending on the clinical setting, some ATs will see athletes on a daily basis and can identify a change in emotions as AT2 puts it, "With an injury I am with them
several hours of the day generally so I get to, I know there moves, I know when they’re frustrated, I know when their angry, I know when they’re depressed, and frustrated.”

With the results of this study showing ATs being around athletes on a daily basis, it is advantageous to have athletic training students be aware of different emotions that may arise from every type of situation that may arise whether it is injury related like a concussion or non injury related as death in the family. Most of the ATs’ experiences were from when they were students, which could be said that the situations they encountered at that time has helped shape the way they deal with present athletes psychologically as acting clinicians.

**Desire for Applied Practice**

ATs in the current study describe their desire for applied practice in psychosocial intervention and referral throughout the interview process. This theme was developed as educational suggestions, the importance, and ATs’ perceptions of what is needed when educating in PSIR for athletic trainers. Recent research done by Seiler (2010) assumed that a course in PSIR had not been implemented because ATEP directors state there is lack of space in their programs to institute an additional course in this area. ATs in this research suggest not necessarily adding another class, but build on the information from the classes provided, and or stay on the topic for longer as AT1 states, “I would’ve liked to stay on that longer, and talked about the reality of what you actually see on the field when those things comes to light, you know the behavioral part the denial part, not just that denial exists.” Although creating another course for curricula may be difficult, one AT felt that PSIR could be set up as a two part class, one half of the course being about
the injury related psychological issues and situations, and the other half of the class as the non injury related psychological issues.

ATs also gave specific suggestions about teaching effective communication, and to create a plan of action for psychosocial situations similar to the results of the Stiller Ostrowski-Ostrowski (2009) study. ATs feel that talking about a psychosocial incident after the situation has gone through and the process that happens inside the athletic training room may be beneficial in educating students, which reiterates a study by Taylor (2008) concluding that realistic experiences are needed in athletic training education, especially in the area of psychosocial intervention and referral. AT5 feels, 

It should be talked about after the fact. You know hey, this is what happened with so and so and this is the situation, this is the process for it, I referred them. They were having these issues, I didn’t think I could handle it; this is who I referred them to, now here is what is going to happen. So you at least know.

Few ATs in this study received this type of educational experience as stated in previous themes. The data shows some ATEPs are currently educating students after situations happen in the athletic training room, but it is ultimately up to the clinician to help students be successful in learning PSIR information after those situations occur.

Donahue (2009) suggests the importance of placing students in a number of clinical sites for adequate practice in the athletic training content areas. Also the (2009) study concludes program directors and clinical coordinators should place students at sites where they will have the opportunity for practicing competencies and proficiencies. This study provides elaboration from the Donahue (2009) study in that ATs suggest sites that can help students with competencies and proficiencies. The ATs feel clinical rotations at undergraduate ATEPs with psychosocial allied health professional references may also
help students gain an understanding of the process athletes may go through during psychosocial situations that these professionals may see as AT6 sees it.

If it was a clinical rotation, instead of working with a, I mean I spent 2 months with a doctor, working with his family practice office or maybe if you worked with a nutritionist or a sports psychologist in that setting you kind of get a feel for what exactly goes on, how many different things, the broad spectrum of issues that they can treat. To be able to know what else is available as a resource to you as a health care professional.

ATs feel allied health professional clinical rotations could include nutritionists, sports psychologists, and or counselors. These clinical rotations were suggested by ATs to be part of a current rotation, not a whole rotation, but a few days with one or all of these allied health professionals may benefit students’ knowledge base and confidence in dealing with psychosocial situations. ATs in this study feel that PSIR education is just as important as all the other education that is given and should be emphasized more in educational curriculums as AT4 states, “I think it should be taught and is a very important part of athletic training. I think this is as big of a topic as any.” Adding a clinical rotation with allied health professionals could be implemented with the right resources and would not be detrimental to already impacted curricula.

A study done by Cuppett (2001) analyzed self-perceived continuing education needs for ATs. Suggestions of the (2001) study include, if continuing education is to improve or enhance performance, it must be related to practice; it has to build on previous education; address the professional’s entire scope of practice; improve performance, and update knowledge. Building off of the Cuppett (2001) study, this study provides specific ideas in continuing education for practicing ATs. The suggestions include potential utilization of sports psychologists, counselors, and or nutritionists to hold seminars in and on psychosocial situations that they have dealt with in the athletic
population as AT6 states, "Something that is like a BOC CEU provider that we could go
and just listen to psychologists or psychiatrists speak on different topics and kind of get a
feel for, trends or kinds of things to identify at risk individuals."

Schillings' and Combs' (2011) study measured the level of importance clinical
ATs assign to competencies in the Athletic Training Educational Competencies and
showed ATs feel the lowest importance ratings came from competencies in the
Psychosocial Intervention and Referral domain. Contrary to the Schillings and Combs
study (2011) study, the current study indicates not only that ATs feel that the education in
undergraduate studies is important, but in post certification education as well.

Similar to the Stiller Ostrowski- Ostrowski (2009) study other suggestions from
this study include possible case study work, working in groups during courses that aid in
identifying, intervening, and or referring different psychosocial situations that have
occurred in the field as AT2 feels:

Maybe not a whole course as a continuing education but you can do aspects
of it how they dealt with it, now use the positives and negatives that came
along with that situation. So you could do more case study work and take
aspects of it. The more you get involved with it, there are so many things
as an athletic trainer that you lose because you don’t use those things
everyday.

Also, one AT suggested that a class on PSIR can and should be implemented as
educational coursework in graduate programs for ATs practicing athletic training while
pursuing their master’s degree.

The ATs desire for applied practice is a very important part of this research
because it describes what active ATs feel is missing in the education aspect of
psychosocial intervention and referral not only in undergraduate ATEPs but also in
continuing education for certified ATs. The considerations from the ATs can only benefit
the way PSIR education is taught to ultimately benefit athletes whom sustain psychosocial issues in all settings.

**When in Doubt Refer out... To whom?**

Painting a portrait of this theme, an AT was taught in his/hers undergraduate curriculum, when in doubt refer out, a great concept that may go overlooked. AT5 states during the interview process felt that his/hers curriculum educated that if the psychosocial intervention is outside your scope of practice then you need to refer, “We learned about it in a lecture, I was told to refer. Okay, who do I refer to?” Hence the theme when in doubt refer out, to whom? Many of the ATs interviewed had the same response when it came to referring athletes with psychological issues, whom do I refer too? The data shows that ATs find this course of action inadequate or not really doable in the real world.

The current study helps reiterate research by Stiller-Ostrowski and Ostrowski (2009) that suggests that ATs feel unprepared in knowing when and how to refer athletes to other healthcare professionals. ATs in this study reported similar findings showing ATs would identify psychosocial situations that are outside their scope of practice but would not know who or what health care professional they should refer their athlete to.

As AT5 comments:

How do you deal with something like that? How do you deal with an eating disorder? How do you deal with someone who had depression, or is an addict, or has an alcohol problem? And so many times I think it happens and the students are just sheltered from that because of confidentiality or you’re not ready, so I think it just needs to be talked about more, not necessarily involved. All that we learn is refer, it’s not in our scope of practice, refer, its not in our scope of practice, refer. You get out in the real world and you’re like, who do I refer to?

For referral ATs suggest having an action plan in place for situations that may arise for clinically practicing athletic trainers. This may or may not include maps to referral sites,
pamphlets, contact information, and or referral cards in the event that a psychosocial situation happened. ATs feel this information should be inside the Emergency Action Plan (EAP) or the policies and procedures manual for each clinical setting to aid in the process of a psychosocial event that may occur as AT2 articulates:

Have an emergency action plan for psychological issues set up in your policies and procedures manual that everybody is aware of not just that it's in there but in case something happens that your covered and that its actually functional and usable.

The referral process is a very important part of athletic training whether it is orthopedic, general medical or psychological. Education on the referral process of when and who to refer too is advantageous for all athletic trainers and even more advantageous to those ATs who don’t have the same resources as schools with less money. Differences in the clinical settings for athletic trainers in this study were only descriptions about Collegiate and professional settings that may have an increased outlets and people on staff who can help with PSIR situations whereas an athletic trainer at a high school might not have the same resources, AT6 states: “You are kind of on you own at the high school you don’t necessarily have that support system and that could be difficult.” Spending time on the referral process and “who to refer to” could be implemented in the organization and administration class of undergraduate curricula if it has not been already, as well as having a first hand opportunity to meet other allied health care professionals if a clinical rotation with other allied health care professionals was implemented as well.

Analyzing the themes in the research illustrates each theme building off of each other. Nothing beats real life experience really captures ATs experience, comfort and confidence with PSIR. Leading into encountering emotions, which describes situations
ATs have encountered with PSIR and their experiences with those situations. The ATs experiences with PSIR as students and clinicians follows up with their desire for applied practice, which identifies the importance and the need for education in PSIR including suggestions for education in undergraduate and post certification levels of athletic training. More importantly, the theme when in doubt refer out, to whom identifies ATs’ experiences with, and suggestions for education with the referral process section of PSIR. The theme when in doubt refer out, to whom really captures the essence of this research being that the referral process is a very important step in getting athletes the right help, ATs not knowing when and who to refer to was a major result of this research.

**Implications**

The purpose of this study was to examine recently Certified Athletic Trainers professionally encountered situations and their perceptions of athletic training education and training in psychosocial intervention and referral. ATs reported experiencing various psychosocial situations in regards to injury and non-injury related issues requiring intervention and or referral inside their athletic training programs as well as their clinical setting. Some ATs felt more comfortable and confident in their abilities coming out of undergrad where others did not. No matter what the confidence level, all ATs had some sort of experience with psychosocial intervention and referral in their undergraduate curricula, which shows some curriculums are stressing the importance of PSIR education more than others.

The research suggests ATs feel students should have education and training in regards to PSIR situations. Also ATs felt this education should be taught at the undergraduate and post certification level. Some ATs feel ATEP curricula should stay on
PSIR content in the classroom longer, have ACIs discuss situations that may have come up in the past in regards to psychosocial situations inside the athletic training room, as well as supplementing part of their clinical rotations with a site for psychosocial referral professionals such as a nutritionist, sports psychologist, and or a counselor. Even though some ATs in this study reported having ACIs discuss situations with them in regards to PSIR situations, these ATs stressed the importance of having that educational opportunity. Although it may not be advantageous for ATEPs to add another course due to an already impacted curriculum, an AT also suggested a 2-part course stressing injury related and non-injury related PSIR content and the strategies behind dealing with the various situations with athletes.

The ATs in this study felt continuing education in PSIR is just as important as other topics of discussion and review. ATs feel that keeping up with the current trends in PSIR can help ATs add to their “toolbox” of clinical practice strategies when helping athletes in this area. ATs in this study suggest continuing education that utilizes case study work emphasizing strategies on how individual cases handled a certain PSIR situation. This may include having various allied health professionals (i.e. sports psychologists, nutritionist, etc.) lead group discussions and case studies for advanced education. Other suggestions for continuing education include role-playing with mini-groups of ATs that utilize critical thinking on handling various PSIR situations. It would be advantageous for the National Athletic Trainers Associations (NATA) to promote PSIR continuing education being that research suggest ATs feel underprepared in this area.
More importantly the research findings suggest ATEPs educate students on, "understanding the referral process", in the domain PSIR. ATs in this study felt underprepared with the referral process about not knowing where or who to refer psychosocial situations too. ATs suggest the referral process information should be inside the policies and procedures manual, and or emergency action plan to be recognized as an important standard of care to know when, where and who they can refer an athlete too for psychosocial situations that may arise. This research suggests that it would be advantageous for ATEPs to educate on the referral part of psychosocial intervention and could be taught in the organization and administration class if it does not emphasize this course content already.

This research is important because ATEPs can utilize the suggestions when implementing PSIR education without adding additional coursework to their programs. The research suggestions could also aid the National Athletic Trainers Association's Education Counsel's standards regarding PSIR competencies and how they should be taught without adding another course. Although it would be advantageous for ATEPs to add additional subject matter to their programs in PSIR to benefit students when going straight into the clinical setting, it may be difficult due to an already impacted course filled program. It has been suggested that the philosophy of athletic training educations, knowledge and techniques should be instructed not only through lecture but also through practical experiences so one may learn how to effectively implement the new knowledge and techniques (Ostrowski & Utley 2010). The current research provides new innovative ideas for ATEP curricula and continuing education in an ongoing effort to increase education in the Psychosocial Intervention and Referral domain of athletic training.
Future research considerations could include conducting as a similar study with a change of demographics looking at an isolated level of employment (i.e. interviewing just high school certified athletic trainers) to get an accurate measure of what each level requires for psychosocial intervention and referral. Other research considerations could include case study work on PSIR situations to help aid in the procedural efforts with psychosocial situations and how professionals handled those situations. On-going in depth analysis of recently certified ATs perceptions of their education in PSIR can only benefit future curricular developments for this domain. Continued qualitative and quantitative research can aid in educational strategies for ATEP curriculums and continuing education for ATs in the PSIR domain.
Bibliography


Greetings:

I have reviewed your research application to the IRB and am happy to report that it is approved as is without the need for revision.

Carol Hall will be sending you a formal notification of approval in the very near future. In the meantime you are free to pursue your research.

Best of luck with your project.

Duane
Appendix B
Informed Consent

You are invited to participate in a qualitative study to examine recently certified ATCs perceptions of ATEP education and training in psychosocial intervention and referral. This study is being conducted Jeremy Vandegriff, a Certified ATC at Santa Rosa Junior College and a Master's degree candidate at Sonoma State University (SSU), under the guidance of Dr. Steven Winter, Professor of Kinesiology and ATC. I hope to create a better understanding of how recently certified ATCs feel about psychosocial intervention and referral education: in particular, at what levels psychosocial intervention and referral education should be taught and what specific skills ATCs would like to be taught. You were selected as a possible participant in this study because you are a currently employed ATC who earned her/his certification after 2004, when the National Athletic Training Certification standards changed.

If you decide to participate, I will be conducting one interview with you to learn about your experiences with psychosocial intervention and your perceptions of psychosocial intervention and referral education. The interview may take thirty to sixty minutes. After transcription of the interviews, you will have the opportunity to read the transcripts and make any corrections or clarification and/or withdraw portions or all of the interview.

I cannot guarantee or promise that you will receive any benefits from this study.

Any information that is obtained in connection with this study and that can be identified with you will remain completely confidential. If you give your permission by signing this document, I plan to submit this study for publication.

Your decision whether or not to participate will not prejudice your future relations with Sonoma State University. If you decide to participate, you are free to withdraw your consent and to discontinue participation at any time without prejudice.

If you have any questions, please ask me. My name is Jeremy Vandegriff and I can be reached at , or my faculty advisor at SSU, Dr. Steven Winter at or email by.

You will be given a copy of this form to keep. YOU ARE MAKING A DECISION WHETHER OR NOT TO PARTICIPATE. YOUR SIGNATURE INDICATES THAT YOU HAVE DECIDED TO PARTICIPATE HAVING READ THE INFORMATION PROVIDED ABOVE.

__________________________________________________________________________  __________
Signature of participant                          Date

__________________________________________________________________________  __________
Signature of principal investigator  Date
Hello, my name is Jeremy Vandegriff and I am a Certified Athletic Trainer currently seeking his master’s degree at Sonoma State University. I was referred to you from___________ about possibly utilizing your knowledge in Athletic Training for my master’s thesis. I am doing a qualitative study using an interview which may take anywhere from 30 minutes to 1 hour. Your participation would be completely voluntary and held to the strictest levels of confidentiality. Your name and school affiliation will not be used in this study. Your participation would include the interview as well as signing an informed consent form. This research proposal is aimed at examining recently certified ATs professionally encountered situations and your perceptions of education and training in psychosocial intervention and referral. Would you like to be a part of this study?

If yes- what is the best way in contacting you again for arranging a time to meet for the interview?

If no- Do you know of any recently certified athletic trainers who may want to be a part of this research?

Thank you for your time.
Appendix D

Email Script

Hello, my name is Jeremy Vandegriff and I am a Certified Athletic Trainer currently seeking his master’s degree at Sonoma State University. I was referred to you from____________ about possibly utilizing your knowledge in Athletic Training for my master’s thesis. I am doing a qualitative study using an interview which may take anywhere from 30 minutes to 1 hour. Your participation would be completely voluntary and held to the strictest levels of confidentiality. Your name and school affiliation will not be used in this study. Your participation would include the interview as well as signing an informed consent form. This research proposal is aimed at examining recently certified ATs professionally encountered situations and your perceptions of education and training in psychosocial intervention and referral. Would you like to be a part of this study? If so, can I contact you about arranging a time when we could meet so I can interview you? If not, thank you for your time. If you know of someone who may be interested in being part of this research feel free to forward.

Thank you

Jeremy Vandegriff ATC
Appendix E

Demographic Information Sheet (to be filled out at interview)

Recently certified Athletic Trainers (ATs) certified after 2004 date.

1.) Division level in which you work? Please circle one.

- Professional
- NCAA Division 1
- Division 2
- NAIA
- Community College
- Secondary School
- Clinical industrial

2.) The current sports the AT works with?

3.) How many years have you been certified?

4.) What is your highest level of education?

- PhD
- MEd
- MA/MS
- BA/BS

5.) Have you taken any coursework in psychosocial intervention and referral?

   If yes- Can you list and describe the course-

   __________________________________________________________

   __________________________________________________________
Appendix F

Interview questions

1.) What are the situations you have encountered in the profession with psychosocial intervention and referral?

   Follow up probe questions:
   
   a.) Injury related psychological issues. (ie. fears of, emotions of, self doubt, depression, frustration, stress from, lack of motivation from, denial of)
   b.) Non-injury related emotional, psychological, or behavioral issues. (ie. Disordered eating, depression, anxiety, alcohol abuse, family issues, exercise addiction, violence/anger problems, physical abuse.)

2.) How prepared do you feel in psychosocial intervention and referral?

   Follow up probe questions:
   
   a.) Injury related psychological issues
   b.) Non-injury related emotional, psychological, or behavioral issues.

3.) Can you describe your educational training in psychosocial intervention and referral?

   Follow up probe questions:
   
   a.) Injury related psychological issues.
   b.) Non-injury related emotional, psychological, or behavioral issues.

4.) Can you describe any experience as an athletic training student inside the athletic training room, involving psychosocial intervention and referral?

   a.) Injury related psychological issues.
   b) Non injury related emotional, psychological, or behavioral issues.
5.) How would you have wanted to be educated or trained in psychosocial intervention and referral?
   a.) Injury related
   b.) Non-injury related

6.) Do you feel that this education and training should be taught at the undergraduate level?
   a.) What do you feel is missing in the coursework or clinical practice that would have helped you with real life situations you have encountered in Athletic Training Education Program’s? Why?

7.) Do you feel that this education and training should be taught at the pre-certification level and or continuing education coursework after certification? Why?
   a.) What type of continuing education would help you with real life situations you have encountered Post Certification? Why?

8.) Do you have a referral process?
   a.) If yes-
      What is your referral process and how do you determine when to refer?
   b.) If no-
      Do feel like there should be a referral process? Why?
Appendix G

Purposive Snowball Algorithm