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DIALECTICAL BEHAVIOR THERAPY APPLICATION EFFICACY IN THE
WORLD OF AN ATHLETE: ADDRESSING SPECIAL CONSIDERATIONS

BY

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Submitted to the Faculty of the Graduate School of
Eastern Kentucky University
in partial fulfillment of the requirements for the degree of

DOCTORATE OF PSYCHOLOGY

2024

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DEDICATION

This project is dedicated to the suffering athlete, with the aspiration that this will bring about new ways to encourage healing, understanding, and compassion.

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I'd like to thank Doctors Melinda Moore, Theresa Botts, Michael McClellan, and Jerry Palmer for their support through this creative process. Your patience, insights, and encouragement got me through this immense project. And thank you to all of your guidance throughout the course of my doctorate training. I consider myself deeply privileged to have learned from each of you.

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and stay focused on my academics. I am deeply privileged and honored to call you all my family. I love you all to the moon and back!

ABSTRACT

The current project aimed to analyze the potential that Dialectical Behavior Therapy Skills Training (DBT-ST) could have on the student-athlete population. The project necessitated a research exploration of both DBT and sports psychology treatment. This was accomplished by searching Eastern Kentucky University (EKU) Library's extensive databases, such as Academic Search Complete, PsycINFO, SportDISCUS, and Psycharticles. Considerations are discussed on athlete-specific concerns, such as stigma, athlete cultural views on mental health, eating disorders, coping through injury, and performance anxiety. Current sport psychology interventions are reviewed, and they are compared with the efficacy of DBT treatment literature. Similarities in sport psychology interventions and DBT-ST are drawn on to point future researchers towards studying DBT-ST and its effectiveness in treating athlete concerns. The research discussed is then used to create a framework for an adapted DBT skills training group for athletes.

Table of Contents

I.	Introduction	1
	a. Overview of Dialectical Behavior Therapy	4
	i. Effectiveness of Intervention	6
	ii. Treatment Adaptations	10
	1. DBT for Binge Eating Disorder	11
	2. DBT for Substance Use Disorders	12
	3. DBT for Posttraumatic Stress Disorder	14
	4. Radically Open DBT	14
	b. Overview of Sport Psychology	15
	i. History and Development	16
	ii. Education and Careers.....	18
	iii. Controversy in the field.....	19
	iv. Theoretical Background.....	20
	v. Common treatment modalities	20
	vi. Effectiveness of intervention.....	21
II.	Athlete Special Considerations	24
	a. Barriers and Stigma.....	25
	b. Injury.....	27
	c. Burnout	30

d. Suicide	32
e. Substance Abuse.....	34
f. Eating Disorders.....	37
g. Performance Anxiety	39
h. Athlete versus Jock Identities	42
III. DBT as an Intervention for Athletes	43
a. Mindfulness.....	45
b. Distress Tolerance	47
c. Interpersonal Effectiveness	50
d. Emotion Regulation	52
e. Therapeutic Style	55
IV. Suggestions for Adaptations to DBT for Athletes.....	59
V. References	67

LIST OF FIGURES

FIGURE	PAGE
1. Grounded theory of sport-injury-related growth.....	p. 30
2. Relapse Risk Among Athletes During Eating Disorder Recovery.....	p. 39

I. Introduction

Sport and Exercise Psychology is a subfield of psychology that was initially conceptualized by both physicians and psychologists over 100 years ago (Gould & Voelker, 2014). Since its conception, the field has seen many ups and downs in its development. There has been a controversy between the medical and psychological practitioners, debates on how to appropriately intervene when athletes experience mental problems and ruptures in the academic conversations of treatment of athletes in the mental-performance domains. Nevertheless, the field has seen a resurgence in the past decade, due in part to advocacy by elite athletes sharing their mental health struggles and increased interest in the student-practitioners across the country engaging in sport psychology specializations. As sport psychology becomes popular in the general population, it is crucial to have research that is unbiased, reliable, and accurate in reporting findings.

According to Kornspan (2012) during the 1980s sports psychology experienced rapid growth in application and education. This is the time when universities began to standardize the requirements that would allow psychology graduate students to specialize in sports performance enhancement. From there into the 21st century, there was an increased focus on identifying research questions that would help the field advance in the treatment and conceptualization of athlete mental health presentations. With the introduction of third-wave therapy modalities, sport psychology appeared to utilize mindfulness, acceptance, and imagery interventions heavily in their research (Josefsson et al., 2019; Röthlin & Birrer, 2020; Sappington & Longshore, 2015). While these interventions were found to be efficacious, the study designs were weak in nature,

had no control group, focused on treatment conceptualizations, and some were theoretical suppositions. Moreover, the primary intervention studied in performance enhancement is Psychological Skills Training (PST; Devonport et al., 2016). Weinberg and Gould within Devonport's study (2007) defined psychological skills training as a "systematic and consistent practice of mental or psychological skills to enhance performance, increase enjoyment, or achieving greater sport and physical activity self-satisfaction." Common skills used in PST are mindfulness, self-talk, imagery, relaxation, and goal setting (Gardner & Moore, 2012; Gilbert, 2011). However, a review of metaanalyses comparing other clinical interventions to PST yielded inefficacious and conceptually backward results (Devonport et al., 2016; Gardner & Moore, 2012; Gilbert et al., 2017; Goodman et al., 2014). Conceptually speaking, PST views a psychological problem in an athlete as something that must be controlled and reduced in the psyche (Gardner & Moore, 2012). Especially when considering performance anxiety and pre-competition anxiety, PST has been found to reinforce experiential avoidance, which in turn exacerbates anxiety symptoms (Goodman et al., 2014). Within Sappington and Longshore's (2015) metaanalysis of sport-based interventions, they reference Gardner and Moore's (2004; 2007; 2012) findings that this concern with PST can create an increased experience of negative emotionality. This is explained as the athlete's loss of focus on their task. They are training their minds to seek out and control their negative emotional states, and this is shown to exhaust their cognitive load, distracting them from the athletic task. Devonport et al. (2016) references the depletion effect to further support the explanation that PST is deleterious at worst and non-effective at best. Focusing one's energy on learning a skill, and then

focusing that same energy on carrying out the skill in vivo supports a depletion of cognitive resources, which is taking away from the goal of the intervention; enhanced performance in competition.

The interventions used in PST (thought stopping, imagery, self-talk) have been harnessed to treat athlete common presenting concerns, such as performance anxiety, injury, stigma, barriers to treatment, suicide, identity/adjustment, eating disorder, substance misuse, and burnout. Due to the extant literature outlining the shortcomings of PST in treating some of these common concerns, there have been some studies that compare PST to other treatment modalities (Devonport et al., 2016; Gardner & Moore, 2012; Gilbert et al., 2017; Goodman et al., 2014; Wegner 1994; Wenzlaff & Wegner 2000). For example, in Gardner and Moore's (2012) review of mindfulness-acceptance-commitment (MAC) treatments on athletes, they found that PST (self-talk, imagery, goal setting) did not affect competition performance. On the other hand, MAC interventions were found to be effective in helping athletes increase their dispositional flow (Gardner & Moore, 2012). Flow is characterized as the unconscious, automatic processing of athletic tasks (Rowland et al., 2021). This was due to the context of the intervention.

The MAC approach (Gardner & Moore, 2012) is meant to help the athlete develop a modified perspective of their thoughts and feelings, in stark contrast to the PST interventions, which focus on the athlete actively changing their cognitions. The use of mindfulness techniques specifically has been shown to help increase attention, flow, and tolerance of negative affect (Goodman et al., 2014). Additionally, Josefsson et al. (2019) determined that using MAC skills is effective in athlete populations due to

the focus on attention and acceptance skills. These two skill areas are in opposition to the PST framework, which focuses on control and change skills. Therefore, it seems that less cognitive energy is needed in the practice and implementation of MAC skills, allowing the athlete to internally accept their anxiety experiences while simultaneously being able to attend to their external performance. It is evident there is not a consensus on best practices when treating athletes, and new research utilizing different forms of treatment is warranted (Gardner & Moore, 2012; Goodman et al., 2014; Josefsson et al., 2019).

Therefore, this project will aim to encourage future research on DBT effectiveness with athlete populations. According to the APA Presidential Task Force on Evidence-based Practice (2006), if a population (athletes) has scant outcome research, it is permissible to implement treatments (DBT) that are effective in similar populations if proper adjustments are made regarding cultural considerations. I will systematically address the issues posited by the task force. This will be accomplished by analyzing current DBT and psychological skills training (PST) interventions, introducing athlete population special considerations, drawing out motifs between the two treatment modalities, and discussing the potential that DBT skills training could have in advancing sport psychology intervention. A discussion informed by the research cited throughout this doctoral specialization project is provided in the final section for practitioners, coaches, and athletic department staff to reference. The goal of this section is to increase awareness of athlete concerns, how DBT treatment can be effective with athletes, and educate athletic departments on ways to improve their responses to athlete mental health presentations.

Overview of Dialectical Behavior Therapy

Dialectical Behavior Therapy (DBT) is a form of Cognitive Behavior Therapy (CBT) created by Dr. Marsha Linehan in the early 1990s to address chronic suicidality (Linehan et al., 1991). This treatment was created following the biosocial theory of emotional dysregulation. A client's presenting concerns are understood by their biological and environmental background. If a client is predisposed to certain mental health disorders and the environment invalidates their experiences, then emotional dysregulation and disorder develop. DBT was quickly realized to be an effective treatment for borderline personality disorder (BPD) due to these clients coming from families with histories of personality disorder or trauma and experiencing invalidating environmental developmental periods (Linehan, 1993a, 1993b). BPD is characterized by consistent affective dysregulation, poor self-image, suicidal ideation, and unstable relationships. DBT addresses these concerns in a stepwise fashion because maladaptive behaviors must be stabilized before moving toward growth-oriented skills training. Therefore, life-threatening behaviors like suicidal and parasuicidal acts must be processed at the beginning of treatment, to stabilize and validate their pain. The next step is working through any therapy-interfering behaviors because change necessitates motivation and adherence to a treatment plan. Third, decreasing quality of life interfering behaviors (i.e., depression, substance abuse) through learning distress tolerance and emotional regulation skills is necessary to allow the client to finally move into the final stage of treatment; increasing adaptive behavioral coping skills (Linehan, 1993b; Linehan, Tutek, Heard, & Armstrong, 1994).

The full DBT packaged intervention includes individual therapy, therapist consultations, phone coaching, and group skills training (Chugani, 2015). The skills training components are mindfulness, distress tolerance, interpersonal effectiveness, and emotion regulation. Within each of these modules are multitudes of exercises and skills for clients to learn about and adopt. According to Cavicchioli et al. (2019), the mindfulness module is aimed at focusing on being in the present moment to experience whatever is happening with non-judgment, curiosity, and complete attention. Heard and Linehan (1994) qualified six skills within the mindfulness skill training: observing, describing, participating spontaneously, being nonjudgmental, being one mindful, and focusing on what is effective in context. The article goes on to describe distress tolerance, mentioning that the focus of these skills is to radically accept reality. It combines Zen practices of acceptance while instilling western ideas of willingness and intentionality. Emotion regulation skills focus on ways to prevent or curb extreme emotional states. Finally, interpersonal effectiveness skills sessions are primarily done through role plays, and it teaches clients how to assert their needs and how to change their social environment. The two latter skills are change-oriented, while the initial two are acceptance-based. The core framework of DBT is balancing acceptance with change, and the skills training component alone has been shown to achieve this stability with similar effectiveness to the full DBT package (Cavicchiolo et al., 2019; Pistorello et al., 2012; Soler et al., 2009; Valentine et al., 2015).

Effectiveness of Intervention

DBT has been studied in multiple populations and presentations, and the results showed that DBT can be generalized across many presentations that involve emotional dysregulation (Ben-Poreth et al., 2020; Berk et al., 2020; Cavicchioli et al. 2019; Lenz et al., 2014; Ritschel et al., 2015). Berk et al. (2020) studied the implementation of DBT for adolescents (DBT-A) in a community clinic to assess the feasibility of this treatment for suicidal and self-harming behaviors. The outcomes showed impressive support for the use of DBT-A in effectively decreasing symptoms of suicide, including attempts, non-suicidal self-injury, and ideations. Secondary symptom relief was also observed, including decreases in emotion dysregulation, depression, impulsivity, BPD symptoms, PTSD symptoms, and increases in reasons for living.

Further support for the utilization of DBT to treat adolescent suicidal behavior/NSSI is found in a comparison of DBT-A versus enhanced usual care (EUC) (Mehlum et al., 2019). Their findings showed that the DBT-A group had more sustained reductions in suicidal symptoms/NSSI in comparison to EUC. DBT-A was mentioned to effectively treat symptoms of hopelessness which increased effective coping mechanisms for participants' suicidal behavior/NSSI. Pistorello et al. (2012) discovered that DBT was able to be implemented in suicidal college populations, with effective outcomes of functioning. There were significant reductions in SI/NSSI, depression, borderline personality symptomology, and drug use, and increases in social adjustment. The lower functioning students experience the most effective treatment results, indicating that DBT is successful in treating more serious mental illness presentations.

Kramer (2017) explored DBT skills training as a standalone treatment for borderline personality disorder. They found evidence for this hypothesis, due to the emphasis on the skills. The four skills components addressed both acceptance and change, and within this framework, the participants saw improvements in domains of autonomy and relatedness. Autonomy was increased through the skills practice of mindfulness, emotion regulation, and distress tolerance. Relatedness was strengthened through interpersonal effectiveness and emotion regulation. Bernheim et al. (2019) found that DBT treatment for BPD that focused on attachment style resolution produced reductions in interpersonal difficulties. The resolution of attachment style involved the use of the four DBT skills to accept the past and change the present. The dialectical bridge between acceptance and change skills allowed BPD clients to both feel validated in their experiences while also looking forward to how they could improve their current and future relationships (Bernheim et al., 2019).

This change is mainly spurred on by the therapist's attitude toward the client's therapy interfering behaviors. Lenz et al. (2014) cited the therapist's role of acting irreverent toward maladaptive coping skills as a cornerstone of drawing out dissonance in clients and then utilizing empathy, genuineness, and warmth to begin eliciting motivated change in their clients. Meaney-Tavares and Hasking (2013) adapted a DBT skills training group in a college counseling center to assess the feasibility of effectively treating BPD presentations in college populations. Their findings showed that an eight-week group was able to reduce symptoms of BPD. Additionally, the group experience helped normalize and validate the participants' views on treatment and diagnosis. Chugani (2015) gave an excellent review of the research on DBT and its adaptability

and flexibility. The findings explained that DBT skills training shows promising efficacy for implementation in college counseling centers. The use of strictly the skills training component has also been applied to eating disorder presentations as well.

Lenz et al. (2014) assessed the efficacy of DBT skills training as applied to the treatment of eating disorders. This study cited that DBT's orientation of addressing emotional dysregulation is the central piece of inciting change in participants. They found that through the implementation of the four skills clients were able to reduce their eating disorder symptomology and comorbid depression. This study adds to the growing body of literature positing DBT and its skill training component as a suitable treatment for a wide array of emotion dysregulation disorders.

Iverson et al. (2009) showed promising results for DBT treatment among female victims of domestic abuse. They cited the transactional theory, which posits that emotion dysregulation is the result of ongoing transactions between the individual's emotional vulnerability and invalidating social responses from others. This study utilized group DBT to address skill enhancement through the skills training component, client motivation, and social support. This study found support for reductions in depressive symptoms, hopelessness, and psychiatric distress while reporting gains in social adjustment.

A final note on the efficacy and efficiency of DBT treatment is illuminated in a comparison study of DBT skills training. Rizvi and Steffel (2014) had two groups of treatment. One was a mindfulness and emotion regulation group while the other was only teaching emotion regulation. College students who had general emotion regulation difficulties were randomly grouped into either group. The study showed that both

groups saw improvements in global functioning, affect, and emotion regulation. However, the emotion regulation group saw improvements resembling the mindfulness plus emotion regulation outcomes. Muhomba et al. (2017) assessed the use of the mindfulness and distress tolerance modules of DBT skills training in college populations with presenting concerns of suicidal ideation, NSSI, and substance abuse. Their findings portrayed improved emotion regulation, decreased maladaptive coping skills, and increased adaptive coping skills. These two pilot studies add to the impressive body of literature supporting the use of individual modules from the DBT skills training framework to treat general emotion dysregulation.

DBT has been studied across a variety of presentations and populations. The extant body of research has shown impressive generalizability to treat many symptoms and disorders involving emotional dysregulation. The full package DBT and DBT skills training have shown promising symptom improvement outcomes in eating disorders, substance abuse, suicidal behavior, borderline personality disorder, and trauma (Ben-Poreth et al., 2020; Berk et al., 2020; Cavicchioli et al., 2019; Lenz et al., 2014; Ritschel et al., 2015). Common symptom reductions in depression, hopelessness, emotion dysregulation, interpersonal conflicts, and maladaptive coping mechanisms. There is still a need for more research on the efficacy of using DBT skills training as a standalone treatment to address the disorders cited throughout this section (Valentine et al., 2015). However, the existing literature discussed throughout this section posits hopeful outcomes for future studies that compare the effectiveness of the DBT skills training component versus treatment as usual (TAU; Cavicchioli et al., 2019; Chugani, 2015; Valentine et al., 2015).

Treatment Adaptations

Since its inception, DBT has been studied extensively across cultures, presentations, and demographics. Indeed, it has been adapted to treat specific disorders, such as DBT for Binge Eating Disorder (DBT-BED), DBT for Substance Use Disorders (DBT-SUDs), DBT for Posttraumatic Stress Disorder (DBT-PTSD), DBT for adolescents, and Radically Open DBT (RO-DBT; Mehlum et al., 2019; Ritschel et al., 2015). This has led to impressive support for DBT's ability to be accommodated and modified to fit within various site frameworks. For instance, one meta-analysis found that using DBT skills training alone was successful in multiple presentations and populations, including binge eating, mood dysfunction, ADHD, incarcerated, and caretakers (Valentine et al., 2015). This general applicability has been credited to DBT's broad conceptualization of emotion dysregulation through the biosocial theory, a factor common in disorders such as PTSD, eating disorders, suicide, and substance abuse (Ben-Poreth et al., 2020; Berk et al., 2020; Cavicchioli et al. 2019; Lenz et al., 2014; Ritschel et al., 2015). These disorders involve commonalities evidenced by disruption of the environment, relationships, and/or brain functioning.

DBT for Binge Eating Disorder

Klein et al. (2013) found that the use of the DBT diary card had significant reductions in disordered eating patterns and a heightened awareness of participants' internal states. The DBT diary card was compared to an abbreviated group DBT-BED, and the diary card group was found to have better retention rates than the DBT-BED group, but the group was found to have larger effect sizes. This is potentially due to the

larger time commitment and deeper involvement in a DBT group when compared to the ease of completing a diary card each week in outpatient therapy.

Safer and Jo (2010) found that DBT-BED exhibited improved symptoms of depression in comparison to an active control group treatment at 12-month follow-up assessment. Additionally, the DBT-BED treatment group showed a reduction of restraint conditions with disordered eating, which the article attributed to the mindfulness skill. Restraint conditions in eating disorders are understood as maladaptive cognitive rules people create for themselves to refrain from consuming food. The participants who used mindfulness may have created a decrease in the emotionally charged rules they set for themselves while they were restricting their diet, thus indirectly aiding in detaching, and accepting their restrictive behaviors.

Ben-Porath et al. (2020) found that DBT-BED was able to address and reduce comorbid eating disorder presentations. They cited reductions in urges to binge and improved affect regulation. Lenz et al. (2014) discovered that using DBT skills training modules were effective in reducing disordered eating patterns and comorbid depressive symptomology.

Conviser et al. (2018) reviewed literature that addresses the effective treatment of eating disorders and concluded that behavioral interventions such as mindfulness, emotion regulation, and distress tolerance are best practice recommendations for addressing this population's specific problems. These studies' findings point to DBT's adaptability to effectively treat eating disorders, even if there is a comorbid presentation. Eating disorder diagnoses are conceptualized along behaviors and cognitions that focus on restriction, over-control, and emotional dysregulation. The use

of the skills training component helps address these concerns through using the facets of mindfulness to non-judgmentally address their eating disorder behaviors. In conjunction with emotion regulation and distress tolerance, these studies have shown that clients can both learn to effectively control their maladaptive behaviors, accept their urges when they come, and change how they respond to disordered patterns of dieting. The cornerstone of behaving dialectically is captured using DBT to treat this population.

DBT for Substance Use Disorders

Cavicchioli et al. (2019) looked at the skills training component of DBT and assessed changes in difficulties with emotional regulation (DER). The use of mindfulness showed improvements in coping with urges and this skill increased awareness of the clients' triggers. Distress tolerance measures showed increases in sobriety periods, which is due in part to the increased skills of sitting with uncomfortable urges and triggers. Emotion regulation gains included the ability to identify and change distressing emotions, and interpersonal effectiveness was used as a healthy replacement strategy. Additionally, the emphasis on harm reduction was found to be effective in decreasing relapse numbers. DBT conceptualizes a "slip up" as a lapse in sobriety, in comparison to other treatments viewing any return to use as a relapse. This concept, in conjunction with the skills training, allowed for increased dedication to relapse prevention and sustained sobriety. Carey et al. (2007) supports this notion of risk reduction planning. They performed a meta-analysis on college student drinking interventions that effectively addresses binge drinking. Their results showed that use of alcohol significantly declined over follow up intervals reaching six months, due to risk reduction interventions like DBT-SUDs. Moreover, Ford et al. (2018) found that brief

CBT for college students with a substance use disorder did not produce significant outcomes. However, this study noted that the use of modules, risk reduction, and motivational enhancement were found to produce desirable improvements in functioning. These three treatment facets are inherent in the DBT treatment framework.

Donohue et al. (2013) reviewed various treatments for substance abuse and mentioned that DBT-SUDs have the potential to effectively address athlete substance misuse through the skills training modules. They emphasized a focus on community support, relaxation skills, cue exposure, and contingency management. Furthermore, the study also mentioned that athletes respond well to structure, and they suggest that because DBT utilizes resource handouts, worksheets, and checklists, the athlete and practitioner can have a solid game plan in writing on how they will address the athlete's main substance abuse triggers. The athletic culture is hierarchical and heavily structured, so utilizing interventions that include these aspects will help the athlete adjust and stay motivated within the treatment. These considerations will be addressed in more depth later in this dissertation.

DBT for Posttraumatic Stress Disorder

Ritschel et al. (2015) found in their review that the DBT framework is adept at helping clients who have experienced severe trauma work through any suicidal ideation or non-suicidal self-injury at the onset of treatment. DBT's framework is specific about addressing life-threatening behaviors at the start of therapy before any other goals can be addressed. Therefore, clients with trauma must become stabilized if they are experiencing any life-threatening behaviors before they can move on to trauma treatment. This practice is efficacious at instilling hope and confidence in the client

early in treatment, allowing for increased retention rates. From here, DBT skills training is commenced, utilizing the skills to address quality-of-life interfering behaviors such as trauma symptoms of dissociation and intrusive memories.

Radically Open DBT

Ritschel et al. (2015) gave a helpful overview of RO-DBT and its ability to address clients who are excessively inhibitory in their behaviors and who place emphasis on avoiding mistakes at all costs. RO-DBT aims to decrease maladaptive behaviors related to emotional overcontrol, the rigidity of behavior, and negative affect. This is accomplished by utilizing the skill modules to increase awareness of environmental cues that do not fit their worldview, engage in self-reflection, challenge their response patterns, and respond with flexibility based on environmental feedback. This style of DBT will be discussed later as a potential treatment for the perfectionist athlete.

DBT and the four skills that are included within its intervention package show impressive generalizability to many population presentations that involve emotional dysregulation. It is adaptable, compatible, and compartmentalized to address the concerns of so many different mental health concerns. This treatment's framework gives room for genuineness and warmth, while also instilling motivation and critical thinking within the client. It embodies the ideal of balancing what a person can and cannot control and encourages the development of acceptance and change skills. Through lived and clinical experience, the author of the present article believes that DBT skills training components could be of great application to athletes and their common concerns. Athletes struggle constantly with coping with injuries, competition

anxiety, mood dysfunction, and eating disorder (Pinkerton et al., 1989; Bird et al., 2018). Studies have addressed these exact common concerns, except that their population was not focused on the athlete population (Safer & Jo, 2010; Lenz et al., 2014; Ritschel et al., 2015).

Overview of Sport Psychology

Sport Psychology is a relatively new field in terms of modern establishments in psychology. This field was born in the late 1800s by medical practitioners who believed interfacing with injured athletes on how they work through their recovery could be beneficial. Across the field's 100-year history, there have been many changes to the scope and direction of what sport psychology duties entail. This field was formed from disagreements, splits in professional organizations, and debates to this day on what sport psychology should truly be in its essence. It is these differing outlooks in the sport psychology arena that makes the profession seem vague for new clinicians looking at their professional options. The purpose of this section is to guide the reader through the history, educational requirements, theoretical backgrounds, treatment models, and controversies that make sport psychology what it is today and what propels the field into the future.

History and Development

Gould and Voelker (2014) recanted an excellent overview of distinct temporal periods over the last 100 years portraying the development of sport psychology. They mention that the idea of a mind-body connection has been discussed since the ancient Greek Olympics. The philosophers of the time postulated that to be an elite athlete one must attend to both their physical and mental abilities. The central point of this

perspective recognizes the effect a weak mind or body can have on athletic performance, and this proves true still, as it has been observed in many athletes in modern times. The first ever literature produced that related to athletic performance and the mind was conducted by Phillippe Tissie, a French physician, and Edward Scripture, an American psychologist. Their studies were focused on analyzing changes in the mental states of cyclists, and reaction times in fencers and runners, respectively.

The 1920s and 1930s are determined to be the developmental years of sport psychology as a specialty, mainly propelled by Coleman Griffith. Griffith established the first sport psychology research clinic in America at the University of Illinois (Gallucci, 2014). Griffith was able to create the first program to train students in systemic research in sport psychology. Griffith wrote the first-ever books on psychology and sport as well. These contributions granted him the title of the father of sport psychology (Gallucci, 2014). As the field entered the 1940s the application of sport psychology content began to be sought out (Gould and Voelker, 2014).

Franklin Henry, a professor at the University of California at Berkeley established a lasting research laboratory, and proteges eventually took Henry's model and set up similar labs across the U.S., focusing on social psychology and its impact on performance. David Tracy and Dorothy Hazeltine Yates were two psychologists that focused their studies on the application and intervention potential of sport psychology. Tracy was able to teach relaxation skills, confidence-building techniques, autosuggestion, and hypnosis to the St. Louis Browns Major League Baseball team. This garnered sizeable publicity for the budding field and began the long (and continuing) process of normalizing mental health in an athletic setting. Yates was a

woman pioneer in sport psychology. She used positive affirmations and relaxation skills to see how it affected boxing athletes, and the results spoke for themselves. With the field consistently gaining the interest of the academic population, the 1960s and 1970s saw the creation of the first academic journals and societies dedicated to the progression of sport psychology.

The International Journal of Sport Psychology (ISSP) was the first journal dedicated to sport psychology. This journal's genesis sparked the creation of similar communities worldwide, with a special note from the European Federation of Sport Psychology (FEPSAC). FEPSAC was founded out of disagreements the European community had with some of ISSP's perspectives and guidelines; therefore, they branched off and created a new society. This is one of many disagreements in the sport psychology community, and they will be addressed later in this section. Sport psychology was now firmly established as a branch on the psychology tree, and the following decades showed impressive and promising growth.

To this point, the U.S. Olympic Committee hired its first-ever resident sport psychologist in the 1970s, and this clinician traveled with Team U.S.A. to the Olympic games. Multitudes of journals devoted to sport psychology research were being established. The Association for Applied Sport Psychology (AASP) was established in 1986, and they offered a credential to clinicians who wished to work with teams as a psychological consultant. To this day it is the largest sport psychology organization in the world. The APA created a division within their structure that was intended to create a sport psychologist community for the association; division 47. These establishments are in place today, and contemporary sport and exercise psychology is growing with

every passing year. There are graduate courses, detailed curriculum plans, applied research, and specialization tracts that propel this division of psychology forward. Topics studied are exercise motivation/adherence, the role of physical activity in mental health, and the psychology of injuries. While it is still a challenge to be a full-time sport psychologist, the field still has plenty of growing to do, and the increasing interest and support it has gotten over the years seem to be a good prognosis for what the future holds.

Education and Careers

According to the APA division 47 website, the path to getting a sport psychology degree is not straightforward (apadivisions.org). The site is very vague in its distinctions of what it takes to get a sport psychology qualification. Overall, it posits that full-time work in sport psychology is not feasible in the current climate. The parameters of a sport psychology credential appear to be more in the hands of the AASP because according to their website there are steps to take to join their association (appliedsportpsychology.org). The apadivisions.org site references the AASP, stating that gaining a credential from this professional organization is an acceptable sign that a clinician is specializing in sport psychology. Amongst routine application paperwork, the AASP requires an applicant to have documented 400 hours of mentored sport psychology experience. Two hundred of those hours must be in direct contact with the competitive sports population (appliedsportpsychology.org). Due to the uncertainty of the job market, it appears the best option for clinicians interested in practicing sport psychology is to get their doctorate in psychology and then actively seek out opportunities that allow them to work closely with athlete populations, such as a college

counseling center or private practice. While working in one of those settings, the clinician can establish mentorship and begin working toward their AASP credential to increase their competence working with athletes.

Controversy in the field

Since its inception, the practice of sport psychology is so much more than those two words. There have been large disagreements within the organizations created to promote sport psychology, and these disagreements have created splits and rifts in professional organizations that further specified the field. For example, Wrisber and Dzikus (2016) noted that there have been many times when professionals in sport psychology have disagreed. There have been debates over whether licensing is necessary, whether sport psychology should be strictly research-based or clinically based, and how sport psychology research should be done. The enduring debate is the research versus practice discussion. There have been multiple moments in the progression of sport psychology about concerns that the research of the field was being left behind for the clinical utilities. In the opposing vein, there have been many professionals who call attention to the fact that research needs to be done differently, because it is some clinicians' perspective that the researchers in sport psychology do not do enough qualitative investigation before standardizing their studies in a controlled environment. Nevertheless, there are always the few who bring to light the importance of collaboration and compromise between the two sides of sport psychology, and that remains the best option for intelligent advancement.

Theoretical Background

Sport psychology practice has its roots in cognitive-behavioral theory and acceptance and commitment therapy (Gallucci, 2014; Rothlin, 2020). The interventions administered in sport psychology attempt to consider an athlete's total experience, considering factors such as team dynamics, coaching styles, athlete's individual response to coaching/team style/bond, athlete's past experiences, athlete's current life stressors, etc. The conceptualization of an athlete and their struggles has also been routinely viewed through the CBT/ACT lens. The athlete's problems are explored from an interactionist model, implying that the athlete and their environment influence one another, and this creates maladaptive patterns in responding to competition stress.

Common treatment modalities

There are three treatment modalities mentioned throughout the sport psychology literature: psychological skills training, mindfulness, acceptance, and commitment treatment, and self-talk. The main intervention that has been produced from the cognitive behavior view in sport psychology is called PST (Rothlin, 2020). PST uses skills such as emotional regulation, imagery, self-talk, and goal setting to help the athlete change their internal experience to help them perform with a more focused mind. On the other hand, skills such as mindfulness, acceptance, and flow-state are practiced from the ACT perspective (Arthur-Cameselle & Curcio, 2018). This outlook speaks to the idea that regardless of athlete's internal experiences, they can practice these skills to help them detach from their internal states to focus better on the competition or task at hand.

Effectiveness of intervention

The most common use treatment modality across the sport psychology field is PST, which focuses on changing one's internal states to view performance in an adaptive way (Gardner & Moore, 2012). Despite this modality being the standard by which sport psychologists are trained, the outcome literature on PST effectiveness is contradictory and inconclusive (Devonport et al., 2016). PST is a combination of various change skills, including relaxation, imagery, goal setting, and self-talk (Gardner & Moore, 2012). According to Gardner and Moore's (2012) review of PST and MAC interventions, the PST skills used were found to not affect the athlete's performance. In comparison, the MAC interventions showed increases in dispositional flow. The study goes on to iterate that there is a depletion effect in play if an athlete uses PST skills. They are trying to actively change their internal states while simultaneously focusing on an athletic task. This orientation to metacognitions reduces their mental capacities to attend to the goal of their performance, and in turn, they can experience further dysregulation and cognitive rigidity (Goodman et al., 2014; Sappington & Longshore, 2015).

This is in support of a growing opinion in the research that alternate interventions need to be considered since PST appears to not be an effective treatment for athlete mental distress and performance enhancement. For instance, Josefsson et al. (2019) compared MAC and PST interventions to assess outcomes of sport-related mindfulness and perceived performance. They found that the MAC condition had significant improvements in mindfulness and perceived performance. The athletes in this condition were able to accept negative states with more ease and refocus their

attention on the athletic task at hand. It appeared that the PST intervention focused on skills that required control over their emotional states in competition, and this produced a counter-effect on the outcome variables. There was increased distress and attentional focus on participants' negative states. It appears that striving to change rather than accept their negative emotional moments increased their negative views of their own performance. The study concluded that intervention in sports should be focused on attention, acceptance, and emotion regulation instead of emotional control. Gilbert et al. (2017) further supported this evidence in their findings. They noted that PST skills had mostly nonsignificant outcomes for athletes, however, it was found that athletes almost exclusively used relaxation and distress tolerance skills to address performance concerns.

Another heavily studied intervention within the PST skill set is self-talk. Van Raalte et al. (2017) operationalized self-talk as being the thought content that athletes experience in and out of competition. There is System 1 self-talk which is comprised of automatic appraisals of an external or internal event. Next is System 2 self-talk, which uses intentional thought, working memory, and simulation processing to adopt helpful cognitive scripts for competition. System 2 is intervention focused, with the goal being to incorporate these scripts into their natural thought process during competition. Unfortunately, this intervention has mixed results. Walter and Alfermann (2019) studied the effects of self-talk on competitive anxiety and found no effects on cognitive state anxiety. This is the anxiety that tends to spike during in-game processes, and if this anxiety is a clinical concern, self-talk interventions are not effective. Gardner and

Moore (2012) discovered that self-talk, along with other PST practices, did not affect competition performance.

It appears that PST as a standalone treatment is unacceptable as a best practice guideline in sport psychology (Cimini et al., 2015). Studies show support for PST facets only when they are combined in treatment with skills such as mindfulness, emotional regulation, and distress tolerance (Henriksen et al., 2019; Rowland et al., 2021; Sappington & Longshore, 2015). In conclusion, with the literature of both DBT and sport intervention discussed at length, it appears that DBT skills training has the potential to be adapted to address athletes and their presenting concerns more effectively than PST. The modules of DBT address skills of emotion regulation, interpersonal effectiveness, distress tolerance, and mindfulness. Each of these skills has been mentioned across the PST literature, with robust support for these factors eliciting positive change in athletes in comparison to PST skills. The following section will discuss athletes common presenting concerns and then use the treatment discrepancies previously discussed to make an argument that DBT skills training should be studied with athlete groups to determine if this treatment is a feasible addition to sport psychology interventions.

II. Athlete Special Consideration

As the field of sport psychology progressed, researchers became interested in what factors differentiated the athlete population from the non-athlete population. This type of consideration research was focused on college campuses, comparing student-athletes with non-athlete students. Along with adjusting to college academia, student-athletes are tasked with keeping up with multiple schedules, extensive time demands,

pressures to achieve across multiple contexts, healing from injuries, and dealing with conflicts between themselves and their coaches and/or peers (Sudano et al., 2017). It is due to the factors that the student-athlete population has been considered a clinical sub-culture within a university (Henriksen et al., 2019). These various considerations can contribute to athlete burnout, and their exasperation has been shown to lead to concerning mental health issues, such as depression, eating disorders, and substance abuse (Bird et al., 2018).

Moreover, even when athletes experience these mental health concerns, they do not communicate them effectively, and their coaches and athletic trainers are not trained to identify signs of mental disorders. Indeed, it is due to the athletic culture of “mental toughness” in which athletes do not report their psychological distress for fear of losing playing time or appearing weak to teammates and coaching staff (Bullock, 2020; Chow et al., 2021). It is due to these compounding factors that student-athletes account for only eight percent of the college population that seeks mental healthcare (Bullock, 2020). This section will discuss the barriers, stigma, and mental health concerns that have been identified to be particularly prevalent in the athlete domain, as an introduction to the clinical considerations of athlete treatment.

Barriers and Stigma

Student-athletes experience help-seeking barriers due to lack of time, stigma, distrust of the mental health field, lack of knowledge of resources, appearing weak, and internalization of disorder (Bird et al., 2018; Chow et al., 2021). Those athletes who are suffering from mental health issues are on a constantly moving schedule. They have daily obligations such as weightlifting, sports practice, class attendance, and homework

completion, and they must find time to eat between these activities. Sport-specific stressors that contribute to athlete mental health outcomes include performance pressure, injury, the athletic culture of mental toughness, and team conflict (Bird et al., 2018; Sudano et al., 2017). General stressors that encompass the athlete's daily lives are rigid schedules, lack of free time, increased self-responsibility, and adjustment issues (Bird et al., 2018; Donohue et al., 2013). It is common practice within the athletic culture for student-athletes to disclose their mental health concerns to teammates, athletic trainers, and coaches (Bird et al., 2018; Brown & Fletcher, 2017).

The combination of these compounding stressors, athlete culture, and stigma tends to discourage athletes from seeking help outside their sports support system. It is important to note the effects that stigma, by self and others, has on athletes' help-seeking behavior. Bird et al. (2018) found that if there was a perceived stigma towards help-seeking behaviors by others (i.e., coaches, teammates), the athlete would show increases in self-stigma, and subsequently not communicate their needs. This study also found that there was a higher amount of distrust toward mental health care due in part to the minority populations in sports contexts.

Minority populations have been more stigmatized by the views of the mental healthcare field throughout history, and this consideration has shown to be influential within college sports. There is more representation of minority cultures within the sports context, and this factored into the other barriers, especially the culture of mental toughness. This mindset propagated by athletic culture causes a reduction in protective factors for student-athletes' mental health literacy and outcomes (Bullock, 2020). Indeed, psychological concerns in the athlete community have been historically

underreported due to these exact considerations, which have led to increased disorders in substance use, body dysmorphia, eating disorders, performance anxiety, and suicide (Anchuri et al., 2020; Arthur-Cameselle & Curcio, 2018; Rowland et al., 2021).

Additionally, there have been sex differences in help-seeking attitudes within sports (Donohue et al., 2021). Male athletes showed to have less favorable perspectives on seeking psychological help compared to female athletes. In Brown and Fletcher's (2017) metaanalysis on the efficacy of sport psychology interventions on athletes, they found within the literature a gap in sex difference studies. Most outcome studies included samples that were predominantly male. This gap, if left unaddressed, has poor implications on the outcomes of PST treatments beyond male athlete populations.

In conclusion stigma, lack of resource knowledge, athletic cultural considerations, and external and internal stressors are the main reasons found to explain student-athlete barriers to treatment. Arthur-Cameselle and Curcio (2018) noted that remediation of mental health stressors starts with communication between on-campus psychological services and the athletic department to ensure resources are being shared openly, with an emphasis on encouraging collaboration and consultation. The way to reveal and normalize athlete mental health struggles must begin with the encouragement of open conversation about signs, symptoms, and stressors that can cause mental health problems to arise.

Injury

Coping through injury has been cited frequently in sport psychology literature as being one of the most commonly dysregulating times for an athlete (Clement et al., 2013; Pinkerton et al., 1989; Rice et al., 2016). Clement et al. (2013) reported that the

top three responses to athlete injury are stress/anxiety, anger, and treatment adherence concerns. It was explained that athletic trainers address physical injury, but there is no protocol in place during the rehabilitation process to monitor the athlete's mental appraisals of their injury. The studies previously cited in this section produced findings that supported the introduction of injury protocols that incorporate psychological screeners, information, and referrals for athletes. According to Schwab et al., (2012), it should not be a suggestion, but an imperative that psychological health be treated alongside physical therapy for an injury. It was stated that if harmful thought patterns were left unaddressed during physical recovery the athlete would self-isolate, develop negative attitudes, and lose motivation for treatment. Their mental capacities are exacerbated due to the psychological distress that comes with rehabilitation. This process of incorporating mental healthcare into recovery would help normalize and validate athletes who may be experiencing psychological distress during their time spent in physical therapy.

Athletes tend to struggle with treatment motivation and adherence during physical treatment, due to compounding factors that include rumination about the injury event, appraisal of future performance, hopelessness/helplessness, depression, anger, and negative attitudes about their experience (Clement et al., 2013; Schwab et al., 2012). When these factors are left unrecognized by the athletic trainers and athletes, there tends to be a pattern of developing negative thoughts, feelings, and behaviors oriented toward their recovery process (Rice et al., 2016). This pattern then demotivates the athlete to work on their healing process, and both their physical and mental recovery suffers. Nevertheless, there have been few outcome studies produced that focus on best-

practice treatment recommendations for the injured athlete (Rice et al., 2016). Clement et al. (2013) noted that athletes who generally have a positive outlook, adhere to treatment recommendations, utilize their social support, and set realistic goals were found to have a better adjustment to their injury process. The athletic training facility can set its athletes up for success by adopting a conceptual framework for rehabilitation in a way that models the research of Roy-Davis et al. (2017) and Sudano et al. (2017).

These studies produced concepts of implementing a rehabilitation protocol that was centered around collaboration between professionals and emphasis on a growth-oriented perspective on the rehabilitation process. Skills that were suggested to be introduced to athletes were distress tolerance, social support, emotion regulation, cognitive reappraisal, and mindfulness (Roy-Davis et al., 2017; Schwab et al., 2012). Coping with an injury tends to orient athletes to a rigid perspective on recovery, including the unidimensional belief that if they focus on making their physical therapy appointments, everything else will fall into place. Athletes with this mindset quickly encounter burnout of treatment as they are not considering the multidimensional aspects that go into a physical recovery from injury (Roy-Davis et al., 2017; Sudano et al., 2017).

To prevent this and encourage growth, Roy-Davis and colleagues (2017) set up a conceptual framework for a holistic, strength-based approach to athlete injury recovery. They cited external and internal resources that were posited to ensure an athlete experiences growth through how they perceive their injury. Additionally, the researchers included internal strain that is universal for athletes working through injury recovery. It follows the cognitive theory of behavior, stating that the athlete is

constantly producing thought content, and the perception of the athlete produces either negative or positive feelings about their situation. This combination has a significant influence on their behavioral response to their injury, and it is emphasized that a positive outlook, facilitative response, and utilization of external and internal coping resources are necessary for productive injury rehabilitation. See figure 1 below for a flow chart on the conceptual framework explained here, referred to as the “grounded theory of sport-injury-related growth” (Roy-Davis et al., 2017).

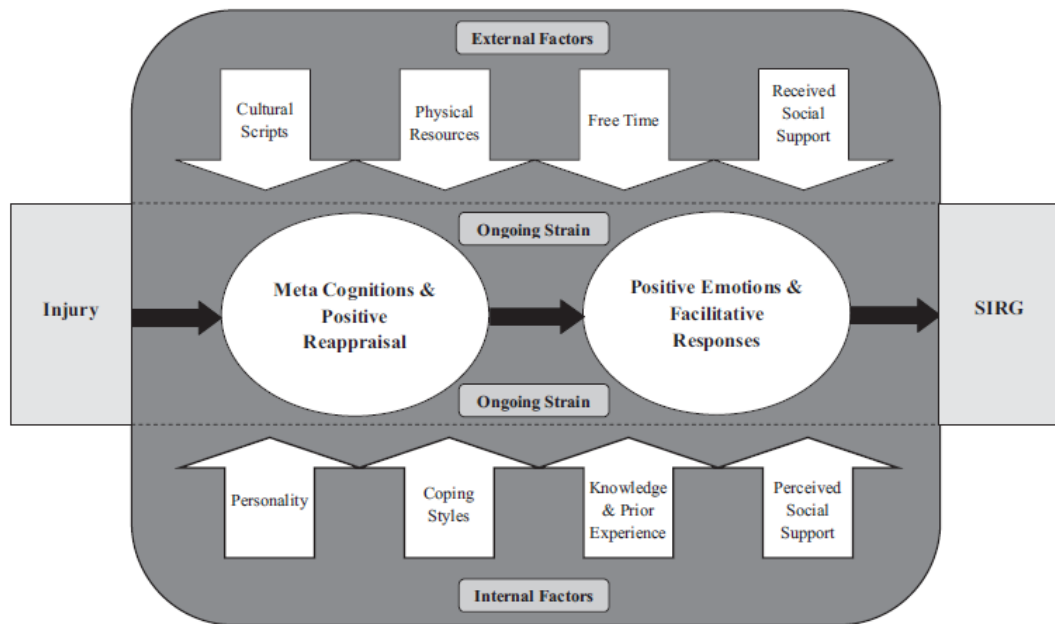


Figure 1 – Grounded theory of sport-injury-related growth: Roy-Davis, Wadey, and Evans, 2017.

Burnout

Raedeke et al. (2002) defined burnout in sport as “a withdrawal from sport noted by a reduced sense of accomplishment, devaluation/resentment of sport, and physical/psychological exhaustion.” Burnout is conceptually a multidimensional concern, and it encompasses affective, behavioral, cognitive, physical, and motivational

domains of functioning (Schaufeli & Buunk, 2003). Athletes who are rated as being perfectionistic and experience a lack of reward from their sport are at greater risk of burnout experiences (Garinger et al., 2018). The trait of perfectionism tends to seep into all realms of functioning, including the above domains of concern. There is a pervasive loss of pleasure in their training, increased apathy toward their motivation, and heightened emotional distress (Garinger et al., 2018; Goodger et al., 2007). There were found to be five factors that Goodger et al. (2007) found to influence burnout potential in athletes: motivation, coping with adversity, response to training and recovery, role of significant others, and identity. Motivation incorporated enjoyment, motivation, and perceived control. Enjoyment and intrinsic motivation were found to be protective factors in burnout progression, while motivation and extrinsic values were deemed risk factors for developing burnout symptoms. Coping with adversity was measured through anxiety, perceived stress, and coping abilities. Anxiety and perceived stress had positive associations with burnout, especially trait anxiety. Inversely, coping skill acquisition was found to be negatively associated with burnout. As previously discussed, a positive mental-health profile has good implications for reducing burnout. Mood disturbances and negative outlooks increased burnout potential. The role of social support was found to be slightly protective, depending on the language being imparted to the athletes. There was an increase in burnout symptoms if the support system stressed pressure to perform. Finally, the athlete's identity was suggested to have implications on burnout development, but the results were inconclusive.

Beyond the literature that examined protective/risk factors, there has been little research that assesses successful treatment options for burnout in athletes. Gabana et al.

(2019) tried to address this gap by implementing a gratitude workshop with a group of student-athletes. The athletes attended a one-time, 90-minute psychoeducation group on gratitude. The participants learned about gratitude and practiced it during the session. Findings from a 1-month follow-up showed that there was an increase in state gratitude, sport satisfaction and perceived social support. A reduction in psychological distress was observed as steadily decreasing over the time points in the study. These qualitative findings show initial support for the use of gratitude as a skill for athletes to use to combat burnout and increase satisfaction with their environment. It seemed that the intervention may need to be practiced routinely to maintain the desired effects since there was a return to baseline for some of the positive coping factors. Therefore, it is clear that there is a gap in the literature on addressing burnout in athletes, and there is a need to fill this gap by assessing various outcomes utilizing different evidence-based treatment methods.

Suicide

Self-harm and suicidal ideation have been extensively studied in multitudes of populations and presentations, but what about the realm of sport? As with previous sports literature, this area of research contains mixed results and a lack of outcome studies. Miller and Hoffman (2009) noted this discrepancy in their review of the literature. They stated that when it comes to sport and suicide, certain populations are at increased or decreased risk for suicidal behaviors, depending on the type of sport, individual dispositions, and the athlete sample studied. With this in mind, it is clear that there needs to be more research on outcomes and the prevalence of athlete suicide concerns. Moreover, Anhcuri et al. (2020) assessed the prevalence of suicidal ideation,

NSSI, and suicide attempts among college student-athletes. They were seeking evidence for or against the findings that athlete identity is a protective factor against suicidal behaviors. Certain risk factors that propel suicide behavior, such as binge drinking, were noted to be higher in athlete populations in this study. This in combination with poor social connections was found to be a significant predictor of suicidal behaviors in student-athletes. It is feasible that when stressful life events occur (e.g., relationship fallouts, partner breakups), the athletes have less of a support system to rely on if they are experiencing social difficulties with their teammates. This lack of support combined with the homogeneity of the athlete's social group has been strongly linked to suicide risk in the population (Anchuri et al., 2020). It appears that social support is a strong predictor of suicidal behavior, with higher perceptions of support being linked to decreased suicidal ideation and lower perceptions of support linked to increased suicidal ideation. Additionally, there have been studies that examined cultural and gender considerations in athlete suicide.

Lester (2017) studied a large body of high school athletes to determine if sport participation was a protective factor against suicidal behaviors. They surveyed more than 100,000 participants from a breadth of cultural considerations. Overall, it was found that sports participation served as a robust protective factor in students across gender. However, there were cultural considerations found to be significant. It was found that African-, Asian-, and Hispanic- American females were found to be unique in that they did not benefit psychologically from sports participation. The research observed these populations had a higher risk for suicidal behaviors than their other peers. This has implications for high school counselors and faculty. They must be aware

of these risks and remain vigilant of these populations for signs of psychological distress. Gunn and Lester (2014) sought to understand if there were sport-type differences in suicidal tendencies. In general, it was discovered that sports involvement was a protective factor against suicide. However, sport type, gender, and cultural factors were found to affect suicide risk. There was an interaction effect between sport type and gender when assessing suicide risk. Males were more likely to experience suicidal ideation if they were members of cheerleading/dance teams, and less likely to experience suicidal ideation if they participated in basketball and soccer. Females were more likely to engage in suicidal behaviors if they participated in a wrestling program, while they were less likely to experience suicidal ideation if they played baseball/softball. Ethnicity differences were also observed. Multiple minority groups were found to have increased risk for suicide if they engaged in certain sports; Black females who swam, Asian males who played baseball or volleyball, Asian females who played football/soccer, Hispanic males who were on the cheer or dance team, Hispanic females who participated in field hockey, and native American females who ran track. It is important to note that generally ethnic minorities are at heightened risk of racial stereotyping, exclusion, and bias from the dominant culture, which could potentially mean that these populations are exemplifying this research (Gunn & Lester, 2014). Nonetheless, this research calls attention to the necessity for counseling centers and athletic departments to ensure they have the resources to effectively recognize suicidal markers. This will help increase awareness and proper referral in athlete suicide intervention.

Substance Abuse

The use of alcohol and illicit substances has been noted to be of particular concern for athlete populations (Cimini et al., 2015; Pinkerton et al., 1989). The athlete who engages in binge drinking once per week is twice as likely to experience injuries compared to those who do not consume alcohol (Cimini et al., 2015). Additionally, it has been observed that this rate of alcohol use has implications of missed practices, playing while intoxicated, and heightened aggression while participating in the competition.

Furthermore, Turrisi et al. (2007) reported that student-athletes endorsed higher rates of binge drinking, availability of alcohol, approval of alcohol use, and receive more opportunities to use alcohol than their nonathlete peers. Moreover, student-athletes were more likely to experience negative effects of substance use, including sexual assault, rape, interpersonal problems, driving under the influence (DUI), and death (Donohue et al., 2013). This research also mentioned that secondary stressors such as school, adjustment issues, anxiety, and dysfunctional thought patterns contributed to the maladaptive coping mechanism of binge drinking in athlete populations.

Orsini et al. (2018) examined polysubstance use among first-year college athletes. They found that all three National College Athletic Association (NCAA) divisions drank at similar frequencies as their non-athlete cohort (78-83%). The study went on to examine multiple facets of collegiate athletes, including NCAA division (I, II, or III), gender, in/out of season, substances used, and ethnicity. The results showed that overall, division III athletes were involved in the highest frequency of

polysubstance use, with the combination of white, male, division III, and out-of-season being at the highest risk for polysubstance abuse. The most common drugs used together were alcohol and tobacco or alcohol and marijuana. When gender and ethnicity were assessed, males were three times more likely to engage in polysubstance use than females, and Black student-athletes were the least likely population to engage in any type of polysubstance use. The status of in/out of season had a strong impact on the prevalence of drug use, with findings that polysubstance abuse was twice as likely to occur out of season. In-season use was significantly lower, and this was a partial protective factor in athlete substance misuse. These findings have strong implications for effective psychoeducation and screening for substance abuse in athlete populations.

The harm-reduction approach was posited as a useful resource to increase substance misuse literacy for athletes (Cimini et al., 2015). The treatments that were found to be effective in the reduction of risk were largely self-empowering. The use of mindfulness, developing discrepancies, empathy, rolling with resistance, and supporting self-efficacy were noted as being particularly useful in helping individual athletes come to terms with their levels of substance use. Donohue et al. (2013) suggested the use of DBT-SUDs be utilized as a potential intervention for athletes with substance misuse concerns, noting the harm-reduction component and interpersonal effectiveness modules as crucial to the athlete's treatment. The athlete's social support can suffer during intense emotional experiences, especially when substance overuse is involved, and previous studies have shown that one of the most important protective factors for athlete mental health treatment is interpersonal relationship maintenance (Brown & Fletcher, 2017; Conviser et al., 2018; Donohue et al., 2013).

Considering the LGBTQAI+ population, Kroshus and Davoren (2016) assessed rates of mental health concerns and substance use in sexual minority student-athletes. They discovered that sexual minority female athletes had better mental health outcomes than their nonathlete counterparts. Team support and in-group belongingness were found to be the protective factors for this group. Additionally, sexual minority males experienced poorer mental health outcomes due to their sexual identity status (gay, lesbian, bisexual, unsure) which in turn showed increased use of substances. The male athletic culture contains heavy influences from traditional masculinity, and the research explained that there may be an effect in which sexual minority males self-select out of sports due to the culture of male athletics drawing many values from traditional masculinity. Additionally, it is due to this unaccepting culture that was shown to produce more negative mental health outcomes for males in the study. Nevertheless, the sexual minority designation in athletes and nonathletes was found to have an overall effect on their mental health outcomes, so while the female group was found to be better adjusted, they still experienced negative mental health concerns due to their sexual identity. Finally, the results displayed that involvement in sports served as a protective factor when compared to the general college population.

Eating Disorders

Disordered eating patterns in athlete populations is a unique subgroup when presenting with concerning diet behaviors (Arthur-Cameselle and Curcio, 2018). The prevalence of eating disorders among athletes is greater than that of nonathletes, with ranges from 6-45% in females and 0-19% in males, and these rates have been reported to be increasing in the athlete population (Conviser et al., 2018). These results are due

to student-athletes experiencing sport-specific weight pressures, such as routine team weigh-ins, revealing uniforms, coach critiques, performance pressure, injuries, and changes in coaches. Non-athlete students are not subjected to these routines, especially the required nature of some of the athlete sport-specific stressors. Eating disorder patterns in athlete populations are difficult to identify in the athletes experiencing the disorder and the faculty that surrounds them. Overtraining has been evidenced as a sign of a developing eating disorder, along with diet restrictions (Conviser et al., 2018). This is difficult for coaches and trainers to parse out as a concern, due to athlete culture emphasizing working hard and being mentally tough, while actively deterring language and actions that are viewed as physically or mentally weak (Bird et al., 2018; Bullock, 2020).

This type of language leaves a lasting impact on athletes, and any mental health concerns they may have, especially eating disorders, have been observed to be underreported, leading to a steady increase in symptom severity (Bullock, 2020; Chow et al., 2021; Conviser et al., 2018). Conviser and colleagues created a conceptualization of athlete eating disorder relapse and recovery, shown in figure 2 below. Eating disorders involve symptoms of emotional dysregulation, poor body image, and rigid thought patterns (Ben-Porath et al., 2020; Conviser et al., 2018). The figure depicts the danger and difficulty of treating eating disorders in athletes. When an eating disorder is recognized in an athlete, treatment tends to necessitate decreases in training as they recover. This factor is shown to be a large motivation factor for athletes, as they are usually intrinsically motivated to heal to return to full athletic functioning (Arthur-Cameselle et al., 2018). As the athlete begins to slowly return to their regular schedule,

they encounter experiences of inefficacy due to the phased return to full functioning. This creates negative thought patterns, including doubt about their future in sports, which furthers their psychological distress. This exacerbation of mental health symptoms then leads to the risk of a return to disordered eating as the athlete struggles to find an effective way to cope (Conviser et al., 2018). This cycle places emphasis on the necessity to provide both physical and psychological care for an athlete who deals with an eating disorder (Mack et al., 2021; Sudano et al., 2017).



Figure 2 - Relapse Risk Among Athletes During Eating Disorder Recovery: Conviser, Tierney, and Nickols, 2018.

Performance Anxiety

Athletes are constantly in transition throughout their week. They shift from practice to class, sometimes back to practice, then to homework, eating, socializing, competition, and sleep (Fogaca, 2021). Adjusting to such a busy schedule has been cited as creating difficulties with the athlete's mental status, and outcomes of this maladjustment have led to depression, substance abuse, anxiety, and eating disorders (Harley et al., 2008; Orsini et al., 2018). Performance anxiety can be activated in numerous ways, including the domains of situation, task, and disposition (Rowland et al., 2021). Situational contexts like preperformance, practice, team meetings, and team cohesion elicit significant anxiety problems (Martin et al., 2009; Rowland et al., 2021). Task contexts involve the act of carrying out sport-specific actions, such as working through an injury, engaging in competition events, and running through drills (Josefsson et al., 2019; Van Raalte et al., 2017). The dispositional domain includes individual considerations, such as athlete personality, affect, mood, and worldview (Clement et al., 2013; Goodman et al., 2014).

There have been factors found across these domains that put athletes at increased risk for maladaptive anxiety experiences in sports. These factors tend to be produced by environments that place excessive importance on avoiding mistakes and maintaining self-control (Ritschel et al., 2015). The athlete culture places heavy value on these two facets, and the messaging about these perfectionistic goals tends to be adopted by the athletes. This loss of control is viewed when coping with an injury. Athletes must adjust to a sudden change in their training regimen, and they decrease their competitive exercises. Instead, they turn their attention to attending physical

therapy to work on their recovery from injury (Roy-Davis et al., 2017). This decrease in training has been correlated with increased anxiety over their future performance, lack of control over the situation, and burnout (Bird et al., 2018; Clement et al., 2013; Hussey et al., 2020). Dispositions that tend to be oriented toward negative attitudes, negative affect, and avoidance of treatment show increased anxiety experiences around their sport participation (Clement et al., 2013).

This avoidance aspect is especially detrimental to athletes improving their anxiety symptoms, and in turn, their performance suffers (Goodman et al., 2014). The experiential avoidance of their anxieties is shown to exacerbate athletes' mental capacities, and their ability to enter flow states during their competitions is decreased (Hussey et al., 2020). The avoidance of the anxiety inevitably spikes competition anxiety due to the deliberate, conscious efforts of the athlete to push them out of their mind (Rowland et al., 2021). This attempt to control their thoughts has the inverse effect, in which the athletes experience rumination during their practice and competition, and their performance suffers (Hussey et al., 2020). There is a cycling process happening when the athlete struggles to control their anxiety. As they are attending to their automatic thoughts, they experience a spike in anxiety. They then attempt to control this anxiety by trying to reframe these ideas. This control aspect has the inverse effect on their anxiety; it depletes their mental capacity to focus on their task, and instead, they end up increasing their distress (Hussey et al., 2020). This distress has been observed to create a "choking" effect in some athletes. Choking is defined as "an acute and considerable decrease in skill execution and performance when self-expected standards are normally achievable, which is the result of increased anxiety

under perceived pressure (Hussey et al., 2020).” Anxiety in combination with attention creates a distressing experience of worrying about the execution of a sport-task while simultaneously trying to produce this behavior. Consequently, it has been shown that interventions focusing on recognizing and accepting cognitions during competition elicit improvements in competition anxiety and decrease choking behaviors (Gardner & Moore 2012; Hussey et al., 2020).

Furthermore, the interventions that involve non-judgment, acceptance, and mindful observance of athletes’ thought content produced decreases in experiential avoidance of their anxieties (Dehghani et al., 2018; Gardner & Moore, 2012). This practice of modifying their relationship with their cognitions instead of attempting to control their internal experiences opened mental space to acknowledge their thoughts while still maintaining their focus on the sport-related task (Liang et al., 2021).

Athlete versus Jock Identities

A final factor to consider in athlete psychological intervention is a focus on athlete identity. Miller and Hoffman (2009) investigated discrepancies between student-athlete identity and jock identity to assess risk factors of athlete mental well-being. Student-athlete identity was associated with values of teamwork, collectivistic achievement, prosocial attitudes, and an emphasis on academic and performance success. Jock identity was cited as involving dominant, traditionally masculine values such as risk-taking, self-promotion, glory-seeking, and delinquency. Moreover, jock identities had a deemphasis on their academic duties, and this slacking behavior was cited as obtaining special treatment for jocks, including excuses from homework and classes. The jock identity was observed more frequently in high-profile, high-contact

sports that placed a clear emphasis on masculine values and imagery (Miller et al., 2006). Similarities between these two identity types centered around the importance of winning and achievement in sport (Miller 2009).

Traditional masculine values that the jock identity encapsulated displayed predictable, poor mental health outcomes, including an increased risk of suicide. While previous studies have shown participation in athletics to be a protective factor against negative mental health outcomes, the intense individualism and stigmatized views of mental health that jocks embody were discussed as being potential risk factors that contributed to the increased risk of suicide (Anchuri et al., 2020; Miller & Hoffman, 2009). Consequently, the acquired means for suicidal behavior is increased in the jock identity population due to their risk-taking behaviors, aggressive demeanors, and substance use (Miller & Hoffman, 2009). The concerning risk factors that accompany this identity are not able to be acknowledged through objective psychological screening processes, due to the vastly different personalities presented within any sport. This fact has implications for increasing education about how to identify an athlete that may be struggling mentally, and subsequently introduce different strategies to help ameliorate the individual's problems.

III. DBT as an intervention for athletes

This project thus far has laid out previous literature overviewing the scopes of DBT, Sport Psychology interventions (i.e., PST), and athlete-specific psychological considerations. DBT has been shown to robustly treat a broad scope of disorders, due in large part to its effective biosocial conceptualization of emotional dysregulation. To date, there has been an assortment of studies that analyzed mood, anxiety, trauma,

personality, and substance use disorders using aspects of the DBT protocol, especially the skills training components (Lenz et al., 2014; Rizvi & Steffel, 2014; Valentine et al., 2015). The results of these studies showed impressive generalizability of DBT to various populations, cultures, and presenting concerns. Sport psychology's interventions tactics to treat athlete concerns such as eating disorders, substance abuse, performance anxiety, suicide, burnout, and injury have produced mixed to ineffective results (Devonport et al., 2016; Gardner & Moore, 2012; Goodman et al., 2014; Josefsson et al., 2019). The literature on sport psychology intervention consistently relies on PST interventions such as goal setting, imagery, relaxation, self-talk, and physiological arousal regulation (Röthlin & Birrer, 2020). Additionally, research focusing on mindfulness, acceptance, and commitment (MAC) treatment has become a new intervention area of interest to help address the ambivalent results produced by PST interventions (Dehghani et al., 2018; Gardner & Moore, 2012; Josefsson et al., 2019; Sappington & Longshore, 2015).

There appears to be a dynamic shift among the sport intervention literature to a directed focus on the change/acceptance model of distress tolerance in athletes. This change/acceptance outlook on emotional dysregulation is a core factor in targeting the presenting concerns of clients as they engage in DBT. The common mental health concerns cited in athlete population research are paralleled in the DBT literature (eating disorders, substance abuse, suicide, anxiety). The APA stated that if there is a population with insignificant effective outcome research, then it is permissible to utilize an evidence-based treatment that is effective in treating similar populations and concerns (APA, 2006). The remainder of this research project will strive to argue that

DBT would be an effective treatment for the athlete population and their presenting concerns, following the aforementioned APA guidelines. This will be accomplished by arguing that DBT would be an appropriate and effective treatment for athletes due to the intervention's skills training components and therapeutic style. Following the analysis of the literature, recommendations for adapting DBT for athlete treatment are presented.

Mindfulness

Of the four DBT skills, mindfulness has been the most studied component with athletes. This acceptance-based practice is based on the eastern philosophy known as Zen (Heard & Linehan, 1994). The skill involves attending to the present moment with openness, curiosity, and non-judgement. This skill is central to DBT skills training as it is included throughout the other three skills. The six steps to practicing DBT mindfulness are attending to the present moment while observing, describing, participating spontaneously, being nonjudgmental, focusing on one thing in the moment, and focusing on what is effective in a situation. These skills comprise the practice of mindfulness, and they continue to be used as participants progress through the modules of distress tolerance, interpersonal effectiveness, and emotion regulation.

Athletes tend to struggle with being mindful of their day-to-day experiences because their schedules are incredibly busy. It was found that emotionally distressed athletes try to cope in maladaptive ways, including substance use, social isolation, and disordered eating (Donohue et al., 2013; Lochbaum et al., 2022; Orsini et al., 2018). When considering the stigma of help-seeking behaviors in sports, the practical approach mindfulness embodies is effective in addressing athlete mental health (Dehghani et al., 2018; Goodman et al., 2014). Additionally, mindfulness has been shown to help

enhance athlete performance due to the practice emphasizing awareness and acceptance of unhelpful thought experiences. This treatment perspective was more effective because of the framework mindfulness helped athletes adopt. There was no pressure to actively cope with the stressors, instead, the athletes were encouraged to use mindfulness to modify their relationship with their negative thoughts (Gardner & Moore, 2012). This modification of perspective was in direct contrast to the use of the mindfulness framework in PST, in which it was used to both recognize and change the unhelpful cognitions. Hussey et al., (2020) supported this finding, citing mindfulness as an effective way to increase acceptance coping while simultaneously replacing active and avoidant coping. The use of mindfulness is less cognitively taxing than control-focused skills, which allowed for more mental attention to be reserved for attending to performance-related tasks (Dehghani et al., 2018; Gardner & Moore, 2012; Rowland et al., 2021). As previously mentioned in this section, mindfulness is used in all four modules of DBT skills training. This was displayed by the findings that increased mindfulness had a positive effect on the ability to tolerate negative affect (Goodman et al., 2014). If mindfulness is routinely practiced, the athlete's cognitive experience is changed to a more adaptable and flexible worldview, one in which they can subconsciously respond to internal anxieties without losing focus on their performance goals in the moment.

The resounding finding from this literature review on the outcomes of mindfulness coping in athlete populations is that there is a general shift in the participant's relationship with their maladaptive coping mechanisms. They can recognize and accept their thoughts, "letting them be" instead of attempting to avoid or

change them in the moment (Josefsson et al., 2019). This practice of allowing thoughts to come and go with acceptance and nonjudgment also drastically reduces pre-competition anxiety, which has been cited as one of the most frequent mental difficulties athletes encounter (Dehghani et al., 2018; Fogaca, 2021; Hussey et al., 2020; Liang et al., 2021). The ultimate goal of athletes during competition is to maintain flow state (Rowland et al., 2021). This involves an unconscious level of processing and planning during competition to be ready for the next move, play, pass, etc. This flow state is most often cited with mindfulness as a helpful tool for athletes to utilize. The more they practice the state of mindfulness, the easier it becomes for them to enter their flow state during competition, which significantly correlates to improved performance (Gardner & Moore, 2012; Goodman et al., 2014; Rowland et al., 2021; Sappington & Longshore, 2015). While the following three DBT skills are not referenced as much as mindfulness in the sport psychology literature, there are still important implications to draw from the available studies. Since mindfulness is widely accepted and utilized in the field of athlete intervention, packaging these four skills together in the DBT framework displays helpful future directions for research on athlete intervention.

Distress Tolerance

Heard & Linehan (1994) stated that the skill of distress tolerance is the second of the acceptance skills in DBT. This skill is focused around radically accepting and persevering through negative affective states (Heard & Linehan, 1994; Thomas & Brausch, 2022). Practices such as TIPP (temperature, intense exercise, progressive muscle relaxation, paced breathing), distraction, pros and cons list, and mindful awareness of thoughts (Linehan, 2015). Some of these skills are useful in moments of

extreme emotional dysregulation, such as the TIPP skills. They are focused on changing the distressed person's body chemistry rapidly to help stabilize the brain. Other skills are more focused on radical acceptance of environment and thought, such as the awareness of thought skills. There are many different options of skills to teach, and they can be tailored to each presenting athlete on a case-by-case or group-by-group basis.

Distress tolerance skills have been studied in conjunction with mindfulness interventions, with promising results. For example, one study focused on student-athletes diagnosed with an eating disorder, and it was found that engaging in distress tolerance activities alongside mindful awareness of their dysregulated thoughts and behaviors resulted in increased awareness of problem behaviors along with an increased ability to cope with stressful cognitions, situations, and feelings (Conviser et al., 2018). Skills focusing on tolerating and accepting difficult experiences in the context of a student-athlete have been suggested as important interventions to be studied throughout the present body of sport intervention literature (Donohue et al., 2013). The rate of substance misuse to cope in athlete populations is at a higher rate than in the general college population (Turrisi et al., 2007). The findings of Donohue et al. (2013) suggested that athletes who struggled with substance use can harness skills within distress tolerance to effectively recognize their triggers and decide what skills to implement when these urges to use arise. Practices of distraction activities, paced breathing, and gratitude are suggested to be tools to use when athletes are feeling helpless to their dependence on substances (Donohue et al., 2013; Gabana et al., 2019).

According to Gabana et al. (2019), the use of gratitude exercises when athletes experience psychological distress could be an efficacious tool to address concerns of

anxiety, helplessness, and depressive symptoms. They found that over time, if an athlete persisted in their gratitude practice, there were outcome effects of decreased perceptions of stress, burnout, and increased perceptions of social support. Liang et al. (2021) reported promising findings on progressive muscle relaxation (PMR) concerning athletic performance. Their study discovered that athletes who practiced PMR reported increased levels of self-confidence and athletic performance. Furthermore, they produced findings of decreased state/trait anxiety and somatic anxiety. These findings have been corroborated through follow-up studies that focus on distress tolerance, especially with performance anxiety. Rowland et al. (2021) suggested using CBT interventions that are utilized in DBT protocols as well (Linehan, 2015). They cited cognitive reframing, mindfulness, paced breathing, and PMR were effective skills for athletes to use in moments of distress. The mindfulness piece is a large component of the distress tolerance component of DBT skills training (Linehan 2015).

There is a skill called “IMPROVE the moment” in the protocol, which embodies various distraction techniques for clients to use in moments of extreme emotional distress. One of these skills is an imagery exercise in which clients envision a peaceful, safe space in their heads when experiencing stress. Schwab et al., (2012) found that the use of imagery with injured athletes helped them envision the rehabilitation process while incorporating calming images simultaneously. This practice produced decreased feelings of helplessness while increasing the athlete’s motivation to cope with their injury. This intervention yielded results of shortened time spent out of play. Lochbaum et al. (2022) reported further support for the use of distress tolerance skills, noting

improved performance when athletes engaged in distraction, mindfulness, and TIPP skills.

The articles for this literature review show hopeful implications for future investigation into collegiate athlete intervention. Indeed, Muhomba et al. (2017) reported that interventions in college populations that employed two of the four DBT skills modules (mindfulness and distress tolerance) exhibited large effect sizes in the reduction of emotionally dysregulated college students. As previously discussed, PST has exhibited lackluster outcomes, but within these studies, there are chunks of data in support of PST (Devonport et al., 2016; Gardner & Moore, 2012; Gilbert et al., 2017; Goodman et al., 2014). However, the interventions found to be the most effective within these and other sport treatment studies are coping skills used in DBT (Gilbert et al., 2017; Henriksen et al., 2019; Josefsson et al., 2019; Rowland et al., 2021). By practicing mental skills that assist the athlete in modifying their relationship with distress, it appears that addressing sports mental health concerns could be improved through the distress tolerance DBT skills training module.

Interpersonal Effectiveness

Athletic involvement contains some form of interpersonal interaction through practices, team meetings, team bonding experiences, and the general social interactions shared throughout an athlete's career. It has been commonly reported that social relationships are one of the most significant contributors to athlete mental health outcomes (Anchuri et al., 2020; Donohue et al., 2013). According to Heard and Linehan (1994), the interpersonal effectiveness skill in DBT is one of two change skills, and it is focused on the adoption of the assertive communication style through role plays to

increase the client's probability of effecting and changing their relational environment. The domains of communication used in DBT are objective, relationship, and self-respect effectiveness. These skills teach the participant how to effectively understand and clarify what they want to ask, how to act in a way that maintains positive relationships, and how to behave in a way that maintains individual self-efficacy (Linehan, 2015).

Athletes are in many contexts that require them to communicate their needs, give feedback, and advocate for themselves and others. In athlete culture, the individual's or team's needs can be overshadowed by authority figures, such as the coaching staff (Chow et al., 2021). Furthermore, the stigma of appearing weak if they communicate mental health concerns has been well documented to exacerbate athlete mental health concerns. While a supportive social network has been discussed to have positive implications for athlete well-being, the inverse results in increased risk of negative psychological health outcomes, such as athlete suicide, self-isolation, and depression. (Anchuri et al., 2020; Arthur-Cameselle & Curcio, 2018; Fogaca, 2021). According to Brown and Fletcher (2017), there is a need for future research in sport psychology to assess the usefulness of social interventions in the field to be used in combination with psychological and psychosocial treatments.

The interpersonal effectiveness module of DBT utilizes social interventions through the in-session practice of interpersonal communication styles, and this is continued in the homework assigned to clients (Linehan, 2015). They are to behaviorally activate themselves to practice these interpersonal skills with friends, family, and eventually in various social situations. Moreover, athletes that are coping

with injury have exhibited the most improvement when their treatment includes social support, effective communication, and emotion regulation (Conviser et al., 2018).

Another aspect of interpersonal effectiveness interventions that have been shown to be crucial to effective improvement in performance is accurate assessment and encouragement of motivation for treatment (Donohue et al., 2013). The intervention that has been successful in improving athlete functioning is a type of motivational interviewing that utilizes an athlete's support system to reinforce adaptive coping skills while working with the athlete individually to identify goals that focus on the problem area presented by the athlete (academic, relational, personal).

A few other studies that have examined interpersonal interventions in athletes focused on preretirement planning and team-building exercises (Lavallee, 2019; Martin et al., 2009). Both studies involved interventions that utilized DBT skills of objective, relational, and self-respect effectiveness in various ways. Lavallee (2019) addressed athletes' cognitive dissonance around the reality of impending retirement. The DBT interpersonal skills could be used to address this ambivalence by working to identify their goals and define ways in which they can continue competing while simultaneously planning for retirement. The use of self-respect and relational effectiveness is highlighted in this study. The researchers noted that athletes who were able to identify what would be lost and gained in retirement allowed them to gain perspective over their future, and the gains were highlighted with the athlete as a strength-based outlook. Martin et al. (2009) found that team-building exercises that utilized goal setting and sequential treatments, such as DBT skills training, exhibited increased sport satisfaction and attitude in athletes (Heard & Linehan, 1994). The increases in these factors have

implications that interpersonal effectiveness may help combat burnout in athletes (Goodger et al., 2007).

Emotion Regulation

According to Heard and Linehan (1994), emotion regulation skills are used to teach the client how to prevent and modulate extreme emotional experiences. This is the second change skill in the DBT skills training protocol. Most skills utilized in DBT are transferred from other behavior therapies, including CBT, ABA, and ACT. The work in this module is centered around learning to differentiate emotional states, obtain skills that reduce negative affect, and learn skills to increase positive emotions. According to Linehan 2015, there are a plethora of skills to learn, such as learning ways to describe emotions, problem-solving, and mindfulness of current emotions. Mindfulness skills are crucial to introduce first in the skills training progression since this tool is interwoven throughout all other components of DBT skills training (Dehghani et al., 2018; Linehan, 2015).

Klein et al. (2013) found that an eating disorder intervention using DBT diary cards produced results of improved emotional awareness and increased emotion regulation capacity. These findings were replicated and reinforced in athlete populations that presented with general emotional dysregulation and distress (Josefsson et al., 2019). The study implemented a MAC intervention for emotion regulation, and the findings showed an improved ability to accept affective experiences while maintaining mindful attention to the competitive task. This MAC intervention showed decreased affective reactivity, reduced stress, and improved performance on cognitive tasks while experiencing affective dysregulation. It has been reviewed in this article that eating

disorders are especially prominent in athlete populations and affect regulation has been cited as being the core difficulty in this population (Ben-Porath et al., 2020). Since DBT skills training encapsulates four skills that all are centered around conceptually addressing emotion dysregulation, athletes that engage in disordered eating may benefit from this intervention (Conviser et al., 2018; Lenz et al., 2014).

Competition anxiety is well-documented as being a pervasive and consistent concern in athlete populations (Liang et al., 2021). This symptomology can induce athletic choking, loss of focus in competition, maladaptive self-image, and a variety of other depressive and anxious presentations (Clement et al., 2013; Dehghani et al., 2018; Hussey et al., 2020). Athletes must learn effective emotion regulation skills to address their anxieties. This involves careful assessment of their thoughts, feeling identification, Socratic questioning, and learning the PLEASE skill (Lavalley, 2019; Linehan, 2015). There are five skills within PLEASE: treat physical illness, balance eating, avoid mood-altering substances, balance sleep, and get exercise. This skill may prove to be especially effective for athletes, who respond well to structured and directive interventions (Pinkerton et al., 1989). The DBT emotion regulation skill training is focused on mastery of emotion recognition, and then implementing a plan with emotion regulation skills to decrease maladaptive coping skills and replace these with adaptive coping skills (Muhomba et al., 2017; Rizvi & Steffel, 2014). These findings have been observed in the general college population, and this gives good reason for the need to study emotion regulation in student-athlete populations specifically, due to the impressive, documented ability for DBT protocols to be widely generalizable (Chugani, 2015).

The DBT skills training components exhibit promising implications in their ability to address student-athlete special considerations. Each skill is aimed at addressing various emotional dysregulation presentations, such as eating disorders, substance abuse, suicide, anxiety, and trauma (Bird et al., 2018). The athlete intervention literature has cited the need for increased studies focusing on treatment modalities that are focused on addressing the relationship with athlete's emotional experience, and the current research produced data that points away from PST modalities (Brown & Fletcher, 2017; Devonport et al., 2019; Donohue et al., 2021; Gardner & Moore, 2012; Miller & Hoffman, 2009).

The field of sport psychology is actively seeking novel treatments for athlete concerns, with a specific focus on third-wave behavioral therapies and mindfulness interventions (Gardner & Moore, 2012; Josefsson et al., 2019; Sappington & Longshore, 2015). DBT's framework and skills appear to be an effective fit for athlete's special concerns due to a focus on addressing emotion dysregulation, which is the core of athlete-presenting concerns, and protocols that are objective and straightforward. Future research should test the efficacy of DBT's style and its goodness of fit for athletes, while looking at the outcomes the skills training components have on athlete mental health and performance.

Therapeutic Style

Heard and Linehan (1994) elaborated on the DBT therapists' style in treating their clients. The "what" of DBT has been qualified as the various skills discussed throughout this document, and the "how" of the DBT treatment framework is equal in importance to a successful prognosis and alliance between therapist and client. The

therapeutic style of the DBT therapist harnesses two communicative styles. The first is reciprocal communication, in which the therapist is warm, genuine, self-disclosing, and responsive to the client. This establishes rapport and models healthy communication for the client. The second communicative style is irreverent in nature, characterized by impertinence, crudeness, and inappropriateness (Heard & Linehan, 1994; Lenz et al., 2014). This style is utilized to introduce new perspectives, especially when there is a need to challenge maladaptive behaviors. It is important to note that this irreverence is meant to be offbeat in tone and context, not sarcastic or disrespectful. The combined features of these two communication styles allow for a supportive, empathetic, and straightforward therapeutic experience.

These two communication styles aim to produce motivation for change in clients, and this intrinsically encourages skill growth. There are specific interpersonal strategies that a DBT therapist uses to further instill motivation in their clients. Specifically, cheerleading is used to validate clients when they are struggling with perspective. This tool is meant to be used to strictly affirm a client's strengths. Therapists must be careful how they use this skill because cheerleading can lead to over-validation, which can create expectations in clients that are unrealistic. Indeed, Mack et al. (2021) found this to be true in motivating athletes. They reiterated the importance of validating what is valid and being careful to not over-praise a client. The DBT framework juxtaposes clients' skill deficits with their motivation for change. The logic of this perspective posits that a client needs motivation if they are going to address their skill deficits in treatment. Without this motivation, there can be no skill progression. Therefore, DBT's components are set up to help address these factors,

building upon motivation during individual and group sessions by simultaneously educating them on emotion regulation skills. The framework uses the client's goals to showcase the usefulness of the skills ingrained in DBT.

Motivation enhancement and skills training are inherent parts of the DBT model (Heard & Linehan, 1994). In a study on athlete culture and treatment considerations, Henriksen et al. (2019) explained that it is vital to apply interventions that are population specific and sensitized to their culture. Athletes' interpersonal style would be a good fit for DBT due to athlete culture emphasizing motivation to improve, skills-based training in sports, straightforwardness, and goal-directed thinking (Arthur-Cameselle & Curcio, 2018; Pinkerton, et al., 1989). Moreover, Donohue et al., (2013) found motivational enhancement training resulted in an increased desire to learn healthy replacement coping skills so they could more effectively strive for athletic improvement. This motivation intervention was successful because it addressed athletes' dissonance between their maladaptive substance use and physical athletic goals.

The combination of compassion and confrontation was utilized with this sample to effectively produce a change in the athlete's coping skills and motivation. A study assessing the motivation of injured athletes found that the use of mindfulness produced increased resolve to work on their injury rehabilitation (Schwab et al., 2012). This skill was evidenced to keep the athlete grounded in the present moment and to change or persist in behavior if it was deemed to serve the athlete's values in recovery. The mindfulness intervention appeared to encourage internalized motivation as the athletes practiced noticing without judgment their experiences as they went through physical

therapy. Furthermore, studies that assessed athlete motivation for psychological performance enhancement repeatedly cited the skill of mindfulness, relaxation, and emotion regulation as effective interventions that motivated and built confidence (Donohue et al., 2013; Pinkerton et al., 1989). The implementation of DBT encourages motivation enhancement that is internalized by clientele. This propelled further self-inquiry to challenge typical, maladaptive, response patterns (Ritschel et al., 2015). Additionally, the motivational interventions produced heightened awareness of environmental cues that do not fit the individual's beliefs of how the world works. Finally, the practice of being radically open and non-judgmental allowed clients to respond with these latter two factors in mind, eliciting a flexible and effective response to their environment. These outcomes and framework of therapeutic intervention have implications for the potential to change a rigidly perfectionistic athlete and their unhelpful patterns of thought.

DBT has been extensively studied across many presenting concerns and populations. It has been utilized and adapted across cultures, producing impressive outcome measures (Davarani, & Heydarinasab, 2019; Üstündağ Budak & Özeke Kocabas, 2019). Nevertheless, this treatment modality has not been studied within athlete populations. However, there have been many studies with athletes that individually use skills from the DBT framework, namely mindfulness, distress tolerance, interpersonal effectiveness, and emotion regulation (Dehghani et al., 2018; Josefsson et al., 2019; Lochbaum et al., 2022). This literature review has laid out an argument that DBT would be an effective treatment modality to implement with athletes, citing studies that produced outcomes of improved athletic functioning when

athletes utilize any of the DBT skills in comparison to other treatments. This outcome has been most salient when interventions of mindfulness, distress tolerance, and emotion regulation are compared to PST, the widely accepted best practice standard for athlete intervention (Gardner & Moore, 2012; Goodman et al., 2014; Josefsson et al., 2018). Equally important is the research discussed that conceptually points toward DBT's therapist style being an excellent match for athlete populations. The therapist should embody a persona of warmth, genuineness, and responsiveness, but also carefully engage the client by challenging, confronting, and crudely addressing any maladaptive dissonance in their outlook (Heard & Linehan, 1994). This style aligns directly with the athletic cultural values of being straightforward, pragmatic, goal-directed, and intrinsically motivated to improve their performance (Arthur-Cameselle & Curcio, 2018; Pinkerton et al., 1989; Schenk & Miltenberger, 2019). The following section will put forth a framework for effectively delivering DBT skills training to athlete populations.

IV. Suggestions for Adaptations to DBT for Athletes

This Doctoral Project has strived to argue that DBT would be an effective intervention when used with athletes. From the literature reviewed, there have been repeating motifs that appeared across the research phase of this study, and those motifs will be accumulated in this final discussion to create recommendations for what could be an effective DBT treatment setup for athlete populations. The research routinely appeared to favor group settings for athletes needing mental health treatment. They come from a background that is always focused on collaboration through teamwork, so the treatment format for the DBT intervention should be set up in a group setting

(Arthur-Cameselle & Curcio, 2018; Donohue et al., 2021). Most of the studies reviewed and presented in this paper found that the presenting concerns of athletes were effectively treated in a group setting, where the facilitator was able to encourage group growth through shared experience. Moreover, the athlete's common concerns have all been treated effectively in group settings.

Eating disorders, substance abuse, anxiety, burnout, stigma, injury, and identity concerns have all improved in functioning through group work and DBT skills training across an impressive count of studies. It should be noted that suicide was left off this list, and athletes with a main presenting concern of suicidality should be carefully considered for individual therapy before entering group settings. In screening for group members, utilization of the CAMS SSF A can be used as a robust screener for possible suicide concerns. Furthermore, it will be up to the individual care teams to determine which groups they would like to offer. This will determine the presenting concerns that are encountered in the group meetings. The athlete culture tends to respond well to the observed improvement in fellow athletes who have similar struggles, and this is self-motivating to athletes who are in similar difficulties (Martin et al., 2009).

Additionally, the type of group offered for athletes should be considered psychoeducational and skills-building in outlook. Due to the stigmatization of getting mental health help in sports, this group format should enhance the member's understanding of mental health in sports. This potentially has the capacity to decrease stigma and increase understanding of the effect mental health has on athletes. The group format and therapeutic style are meant to help set up an environment where athletes can learn how to be supportive of their individual and teammate's mental and physical

health. The beginning of the group can be focused on learning by discussing the group topic, learning about one another's experiences with their struggles, and sharing any potential solutions that have already worked well for individuals. The facilitator(s) should be guiding this discussion, stopping to process anything that is deemed remarkable to instill motivation and understanding in the athletes. This portion of the group also will help normalize sharing mental health experiences in the context of sport, whether it be performance enhancement or insight improvement. The latter part of the group should intertwine the beginning of the group and then utilize this to motivate the athletes to learn the DBT coping skills in the second part of the group. The combination of education and experiential learning helps address the "how", "what", and "why" of mental health intervention in sports on a routine, weekly basis for the athletes. Athletes also respond well to metaphor-based learning, due to the nature of the sport. It is repetition- and strength-based behavioral learning, and DBT intervention views mental health treatment in a similar way (Arthur-Cameselle, 2018; Clement et al., 2013; Lavalley, 2019). It will do the facilitator(s) well to understand this connection, as motivating reluctant athletes will be key in helping the group and individuals grow from this experience.

Groups should be led by two psychological practitioners with a strong background in DBT skills training groups. Personal experience in athlete intervention or athletic participation is certainly a strength in a facilitator focused on athlete populations, but it is not imperative. What is crucial for an athlete group counselor to possess is an understanding of athlete culture, an understanding of athlete motivation, a collaborative mindset, and a cultural humility to learn from the group. Additionally, the

therapeutic style of DBT therapists is important to keep in mind for the facilitators. This style fits very well with athlete culture, and therefore would serve a group leader well to embody. Being goal-directed, strength-based in perspective, supportive, and straightforward with the group members should help maximize the group buy-in and participation, due to athlete culture adopting most of these values. Namely, goal-directed and straightforwardness are cited in the literature as being core values of athletes in general (Pinkerton et al., 1989). As always, the group leaders should always consider the individual group members as well and adjust their stylistic approach as needed to meet the overall group presentation.

A unique consideration for adapting the DBT skills training protocol when considering athlete populations is how to include coaches in a manner that will enhance the treatment goals of the group members. This may prove a challenge to incorporate, due to the stigma of including mental health in the scope of athletic training. There are many factors to consider that are beyond the scope of this project when including coaches in the skills training protocol, so this discussion will simply lay out the potential benefit and various modalities to include coaching/athletic staff in athlete's treatment progression.

The research discussed in this project makes it clear that athletes' mental health outcomes saw significant improvement when their coaches were involved in the treatment plan (Bird et al., 2018; Rice et al., 2016). Additionally, athletes who had positive relationships with their coaches had overall better mental health outcomes in general. The stronger relationships were marked by athletes feeling comfortable bringing concerns or differing opinions to the attention of their coach, and the coach's

responses that were facilitative and collaborative were shown to have the best outcomes on athletes' help-seeking behavior (Anchuri et al., 2020). Therefore, it is pertinent to include a form of review of sessions with the coaches on a weekly basis. Keeping what was discussed by the athletes should always be confidential, but the educational material and specific coping skills practiced should be communicated between the group clinicians and coaching staff. This could be accomplished by sending out a weekly email bulletin that highlights the material planned for the group, with an emphasis on relaying the “what”, “why”, and “how” of that material in the context of how the coaches can embody and encourage healthy psychological performance in their athletes on a general scale (Sudano et al., 2017). This also continues to help work on destigmatizing mental health in athletics and broadens the scope of this DBT skills training program to help further address the systemic issues in help-seeking behavior with athletics. Another possibility is meeting with any coaches in person or via teleconference to discuss the topics of the week. This course is more involved than a simple email, and the time constraints of an athletic coach across contexts should be carefully considered by clinicians before adopting this format.

Besides these considerations for adapting DBT for athletes, the main difference in the skills training protocol will be shifting the focus of each skill to detailing how they can be practiced in the sports context, and most importantly how they can help benefit the struggling athlete. The use of mindfulness has already been thoroughly documented to have beneficial outcomes on athletes' mental health and performance. The focus of this skill in the athlete group would be to learn how to implement mindfulness into their daily and competition routines to maximize their ability to be

fully present in the current moment. Athletes have a lot to focus on throughout their week, so a practice of being able to allow distractions and worries that are outside of the present to fade away will benefit them when it is time for competition. Mindfulness has been linked directly to increases in flow state during competition and practice, which is a huge factor in performance enhancement (Dehghani et al., 2018). The practice of mindfulness in athletes will be framed as the ability to shift perspective during difficult time periods (injury, anxiety, life adjustment), focus their attention on the present task without judgment, increase their ability to be cognitively flexible, and adapt to external forces in their sport (Gardner & Moore, 2012). All these benefits ultimately decrease the cognitive load an athlete has when they have unwanted pressures on their mind. They will be better able to allow these pressures to simply be with them in the moment, compared to dragging them down and away from accomplishing their goals.

Distress tolerance should be framed to the athletes as the ability to be aware of what presses them, and to be able to handle this in game-time situations. This practice can be incorporated into their pre-competition routine, such as utilizing deep breathing, progressive muscle relaxation, or positive statements to bring themselves into the current moment and focus on what they can control (Liang et al., 2021). This skill in practice should help athletes increase their confidence in dealing with adversity when it arises and simultaneously decrease distress when they feel overwhelmed in the future (Schwab et al., 2012). These skills build competence in coping with the pressures of being an athlete and they are relatively easy to incorporate into daily practice. For example, athletes dealing with repeated injuries that routinely practice distress tolerance

skills can increase their resiliency in their recovery process, which aids in the motivation to get better to rejoin the competition.

Interpersonal effectiveness within the sport context seems like the one skill that needs to be tweaked in the DBT skills training. Utilization of the DEARMAN skills will still be helpful to educate athletes about increasing their ability to advocate for themselves, but the main focus on interpersonal effectiveness for athletes will be on how to be a supportive and collaborative teammate. This skill in the athletic context appears to be focused on team cohesion and understanding individual differences in teammates (Donohue et al., 2013). Psychoeducation on interpersonal psychology and relational interventions may be the most beneficial aspect to include and adapt for the athlete population. In the literature review, most of the interpersonal studies focused on the fact that the better cohesion and understanding a team had, there was decreased burnout and increased motivation and satisfaction factors observed. Therefore, teaching members of the group how to effectively problem solve and how to communicate in a respectful manner could be incredibly helpful. Moreover, this module could sharpen the practice of communicating needs, even when it seems hard or scary for an athlete. With all this in mind, enhancing interpersonal effectiveness can pave the way for healthy adjustment in post-athletic life, increase motivation, decrease burnout, and increase team support/cohesion/satisfaction (Fogaca, 2021; Iverson et al., 2009).

The final skill in DBT training is emotion regulation. This skill encapsulates the other skills to work towards a balanced world- and self-concept. The practice applied to athletes is to focus on using these skills to help them notice when they are emotionally dysregulated, and then how to help themselves/others. The ability to emotionally

regulate can be enticing for athlete populations because it is the ultimate skill to help focus on what is important and set aside what is unhelpful to them (Josefsson et al., 2019). The education piece for emotion regulation is to teach the athletes that the awareness of self, and how the internal and external environment affect them is learnable. Even better, learning about this can empower them to change certain aspects of their experience to enhance performance and their mental state in competition. The ability to self-regulate emotions has been shown in sports research to decrease distractions during competition, which leads to improved performance, an increased understanding of self, and an understanding of the interactions mental health has on sports. The practice of this skill can help athletes learn to decrease their reactivity to emotionally alarming states and replace this with appropriate regulatory responses. Additionally, this skill has values that align heavily with athletic culture, specifically the PLEASE skill. This involves the physiological regulation of sleep, diet, exercise, and substance use. Many athletes hear these values emitted by their coaching staff, so this could be a way to further solidify the importance of physiological regulation to help performance and mental health.

These suggestions are conceptual and theoretical in scope, as no studies have been conducted that utilize DBT protocols with athletes. However, it is the purpose of this document to inspire conversation and research in the field around the utility that DBT could have on treating athlete and enhancing performance. It is important to note the arguments made here were inspired by a student-practitioner's interest in athlete treatment, and the conclusions have been surmised through extensive research and

inductive reasoning to come to adaptation suggestions for the use of DBT treatment with athlete special considerations.

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