

TRANSITION FROM COLLEGIATE TRACK & FIELD:
AN EXAMINATION OF VALUES AND COMMITMENT

by

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ABSTRACT

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This study provides a glimpse into psychological factors some of the 100,000 student-athletes who leave collegiate sport each year may face and adds to current understandings of ways to best serve collegiate student-athletes prior to their departure from collegiate sport. Drawing from the theories of Acceptance and Commitment Therapy and The Minnesota Theory of Work Adjustment, the study utilizes a population of former NCAA Division 1, 2, 3 and NAIA student-athletes to offer an in-depth look at the transition away from collegiate track and field. Mediation analysis was utilized to explore the interplay between commitment to values driven behavior, psychological wellbeing and the vocational construct Correspondence. Results are discussed from traditional and contemporary viewpoints, and limitations and suggestions for future research are provided.

*To the kids out there playing;
don't stop.*

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CHAPTER 1

INTRODUCTION

Problem Statement

With more than 100,000 collegiate student-athletes transitioning from competitive sport each year, an investigation into how values are associated with a healthy transition from collegiate sport revealed ways in which universities can prepare their student-athletes for their transition away from competitive sport. In 2016, the NCAA published a manual titled *Moving On: Athletes Making Healthy Transitions* (Reifsteck et al., 2016a), as a guide to prepare athletes for the transition away from collegiate sport. The approach took a strengths-based approach through communicating differences between health-related and competition-related physical activity, not pressuring injured athletes to compete, and modeling health-related physical activity. The model utilized the value of physical activity to prepare athletes to engage in exercise following competitive sport (Reifsteck et al., 2016b; Reifsteck et al., 2018).

While the model is theoretically based (Identity Theory, Burke et al., 2003; Self Determination Theory, Deci & Ryan, 1985), the *Moving On: Athletes Making Healthy Transitions* program was tested using only 13 participants (Reifsteck et al., 2016b; Reifsteck et al., 2018). As such, and without any further assessment from external sources, the validity of the program is in question. A theoretical orientation that may be appropriate to study the transition of student-athletes is Acceptance and Commitment Therapy (ACT). Though research focusing on values associated with a healthy transition from sport may be lacking, mindfulness based psychological approaches such as Acceptance and Commitment Therapy (ACT; pronounced as a word, not an acronym; Hayes & Wilson, 1994) provided a framework for understanding positive aspects associated with athlete transition. The theoretical model takes a strength-based approach

to understanding human functioning and focuses on the lived experience of the person as opposed to symptoms associated with a person's psychological functioning. For example, theoretical interventions target improvement in a person's ability to become present to help them change their relationship with unwanted thoughts or feelings as opposed to trying to change the thought itself.

ACT is a third wave behavioral therapy, which grew in popularity in the early 2000's, where early evidence for the effectiveness of the modality was supported across various aspects of psychological dysfunction (Hayes et al, 2006). The following dialogue provides theoretical underpinnings of ACT and evidence of its effectiveness. While ACT falls under the broader spectrum of cognitive-behavioral interventions, it is unlike other cognitive behavioral therapies, which focus on controlling negative thoughts to change the thought itself, and instead the modality of change within ACT is contingent on one's ability to modify their relationship with internal states such as thoughts and feelings, instead of attempting to alter the form or frequency of these events (Hayes, Strosahl, & Wilson, 2012).

ACT seeks to enhance quality of life through the increase of psychological flexibility. Operationalized as the ability to contact the present moment and changing or persisting in value driven behavior in any context of life. Psychological flexibility is achieved through utilizing any combination of the six core processes of change. The six core processes of change within ACT are acceptance, being present, self-as-context, cognitive defusion, valued living, and commitment to value driven behavior.

For example, an acceptance based intervention might encourage the shot putter to acknowledge the unwanted thought or emotion she is experiencing when she sees her rival throw a season's best mark and learn to accept the thought or emotion for what it is, not the fused

meaning that may be associated with it. An example of present moment awareness is the sprinter at the starting line of a 100-meter dash who is focused solely on the start of their race, not preoccupied thinking about a past false-start, or what may happen should he make a mistake. An example of self-as-context would be a coach demeaning an athlete following a mistake because that's what the coach thinks other coaches would do, which is an example of acting in alignment with a conceptualized self, the opposite of using self as context. Conversely, the coach could choose to confront their athlete in another manner more consistent with the coach's own personal values and would be portraying the construct of self as context. An example of cognitive defusion would be a collegiate cross-country runner who may believe his entire collegiate career will not be successful because he suffered a season ending injury during his debut season. While it may be true that the injury was detrimental in the short term, the student-athlete in this example is putting undue meaning on thoughts associated with the injury, which may prevent him from achieving his goal of athletic development. While a person may claim to value an object, ACT theory would suggest that while this person may think they value the new track spikes they received at the beginning of the season, the deeper value may be comradery as all the other athletes in their event group have the same style of shoe. An example of committed action is the student-athlete who endures hostile environmental conditions to compete for her team. While she may want to go on the warm dry bus when the weather is cold and rainy, the student-athlete may choose to stay out with her team as she may value accountability, leadership, or companionship.

ACT theory suggests that values driven committed action is positively correlated with greater psychological flexibility, though specific values that are present within this significantly positive relationship have not been examined. One way to address this gap is to utilize

individual vocational values within the framework of the Minnesota Theory of Work Adjustment (Dawis & Lofquist, 1984).

The Minnesota Theory of Work Adjustment (TWA) provides a framework for examining person-environment fit, where strong correspondence between the person and his/her environment generally leads to greater job satisfaction (Brown & Lent, 2014). TWA emphasizes the vocational fit between the person and environment (PE- fit) where a person's satisfaction may be predicted by their adjustment to their workplace along with personal characteristics (Dawis & Lofquist, 1984; Dawis, 1991). Originally geared toward work transitions, TWA also includes a framework to predict the match between the person and the environment (Eggerth, 2008) where greater fit is characterized by individual needs being met with the reinforcers or rewards of the environment (Brown & Lent, 2014).

While the *Moving On* program sought to understand the lived experience of the athlete transitioning away from competitive sport at the collegiate level, *Moving On* lacked the theoretical framework for conceptualizing the environment that surrounds student-athletes while in college and afterward when entering their next phase of life. Combining the emphasis of values driven committed action directed at increasing quality of life with the utility of the person-environment fit, the utilization of both ACT and TWA theory allowed for a deeper conceptualization. Together, the theories were utilized to examine the interplay between values, satisfaction, committed action and quality of life when examining values associated with those who have completed a healthy transition away from collegiate sport.

The examination of student-athletes moving out of sport and into the workforce is important given the sheer number of lives such a transition may affect. Firstly, by exploring what values are most typically held by those who have made a healthy transition away from

sport, universities may be able to use such understanding to impact current student-athletes prior to graduation by providing resources and trainings to aid in a healthy transition. Another reason why such research is important lies in the mental health of student-athletes. Researchers suggest that elite athletes are at a higher risk of mental health disorders than the general population (Rice et al., 2016). A university interested in more fully understanding their students and the demands they have would be following best practice by examining the culture of athletics and how these environments may be impacting student-athletes and those around them. Through exploring the values and their correspondence with workplace demands, this study provides seminal understanding into the intersection of student-athlete transition and well-being.

When athletes are physically, mentally, and emotionally healthy they are better able to perform at a high level athletically, academically, and socially (Van Raalte et al., 2015). In a review of sport psychology literature, Rice et al. (2016) found that data from various samples assessing mental health concerns indicated that elite athletes are at a higher risk of mental health disorders such as depression and anxiety compared to the general population. Cox et al. (2017) found that the rate of depression among current NCAA student-athletes has now surpassed the national average for non-athletes (33%). Though just 8.7% of graduated student-athletes report clinical levels of depression, this finding remains higher than the national average endorsed by the general population (6.7% general population, NIMH 2017). Weigland et al. (2013) examined the relationship between symptoms of depression in recently graduated student-athletes compared to student-athletes who are still competing and reported that current student-athletes report significantly higher levels of depression.

Despite there being a significant difference in the rate of depression among graduated student-athletes and current student-athletes, current literature has struggled to indicate what

factors may be contributing to the difference in depression rates among current student-athletes and student-athletes who have graduated. A clear majority of current literature focuses on various elements of psychological dysfunction to characterize an unhealthy transition from sport, whereas one measure of a healthy transition is the absence symptoms meeting criteria for clinical mental health disorders. For this study, a healthy transition was operationalized as the lack of mental health concerns that significantly interfere with social, occupational, or other important areas of life for at least two years after leaving university life as a student-athlete. There are roughly 490,00 student-athletes competing across three division levels (NCAA, 2018a). With more than 100,000 student-athletes retiring from competitive sport each year, an investigation into how values are associated with a healthy transition from collegiate sport was explored in order to shed light on ways in which universities can prepare their student-athletes for their transition away from competitive sport.

Theoretical Context

Examining athlete transition away from collegiate sport has been approached in various ways. There is literature examining models to guide athlete transition from collegiate sport to the workforce (Taylor & Ogilvie, 1994), and several review articles describing athletes' career transitions (Ballie & Danish, 1992; Wylleman, Alfermann, & Lavalle, 2004). Research has focused on Athlete Identity (Brewer et al 1993; Reifsteck et al., 2013), and how this construct has assisted and interfered with the transition away from sport. Athletes with greater identity as an athlete have lower career optimism (Tyrance et al., 2013). Research has centered on the influence of injury in athlete transition (Webb et al., 1998), suggesting that athletic injury influences athletes at all levels of play.

Literature has emerged examining the mental health of student-athletes as they transition away from competitive sport. Of the research that has examined the mental status of athletes that have completed their time as a collegiate athlete, a majority of the literature centers on the psychopathology of the former student-athlete. Approaching the study of mental health from the standpoint of psychopathology is in line with the approach of much research in the psychological sciences. This approach offers the opportunity to delve into aspects of the athlete that may not otherwise be discussed and may lead to better understanding of how to treat others who experience similar psychological distress.

Though approaching the study of mental health from a psychopathology standpoint continues to be useful for better understanding psychological suffering and testing the implementation of psychological interventions to improve wellbeing, recent statistics suggest that over 90% of athletes leave their time as collegiate athletes without psychological distress (NIMH, 2017). As institutions yearn to find ways to support their student-athletes prior to graduation, examining values associated with a healthy transition from sport may provide healthy objectives for athletic departments to focus their efforts on when fostering an environment for healthy growth away from sport. One of the first explorations of preventing adverse consequences following a transition away from competitive sport was conducted by Pearson and Petitpas (1990). The study was seminal in the exploration of preventative measures for athletes to undergo prior to their transition away from competitive sport.

An early exploration of healthy transition from sport found that a smooth transition from sport was associated with the achievement of sport-related goals (Sinclair & Orlick, 1993). This work was seminal as it provided statistical support for a concept that was accepted at the theoretical level and set the stage for taking into account positive factors associated with the

transition from collegiate sport. Despite the novel findings of Sinclair and Orlick (1993), research related to athlete transition began to focus more on the adverse aspects of transition to hopefully find additional areas for athletic departments to improve (Storch et al., 2005).

While approaching the transition away from university athletics through the lens of psychological dysfunction continues to provide new and interesting insights into the lived experience of athletes, less than 10% of student-athletes report psychological distress within two years of graduating (NIMH 2017). Examining values associated with those student-athletes who have made a healthy transition from collegiate sport may provide additional insight to those who prepare student-athletes for the next stage in their life.

The examination of individual values during athlete transition has long been present in sport psychology literature. Research has utilized values to further understand athletic identity (Balague, 1999; Grove, Lavalley, & Gordon; 1997), youth sport (Lee et al., 2008) injury rehabilitation (Mahoney & Hanrahan, 2011) as well as characteristics of psychological dysfunction (Carless & Douglas, 2008). When using the lens of ACT, sport psychology literature devoted to athlete transition has only begun to examine transition from a values-based approach.

Murphy, Petitpas and Brewer (1996) examined the intersection of athletic identity and career maturity, suggesting that aspects of athlete identity foster a smoother transition from sport. While this understanding may continue to be held among athletes, coaches, and support staff, current literature has not examined which individual values most significantly contribute to a healthy transition from sport, or what environmental factors are present when former student-athletes report a healthy transition from sport.

Research has been devoted to exploring ways in which coaches can foster a healthy environment for athletes from recruitment to transition away from sport (Baillie & Danish, 1992; Green, 2005). Green (2005) suggests that finding ways to socialize athletes in work-related environments and having individual athletes at the center of their own personal development may aid in a healthier development. Though these findings may have been novel, the limitation is similar to other sport psychology research examining athlete transition in that there is a deficit in understanding of specific individual values and environmental conditions present in the workplace.

The examination of individual values has long been explored in vocational psychology literature (Dawis, 2002). The general understanding within vocational psychology literature is that sport-involvement at any level is a vocational responsibility (Wylleman & Reints, 2010). While this theorized idea has been largely supported, the use of an acceptance oriented theory has not yet been utilized to further understand the relationship between individual vocational values and how they contribute to a healthy transition from collegiate sport.

While both ACT and TWA have approached individual values associated with a transition from sport, never before were the two theories used in unison to further explore individual values present in those who have made a healthy transition from collegiate sport. The models are predictively additive in that together they can better explain the discrepancy between the elevated levels of mental health concerns while student-athletes remain in the NCAA and the reported 90% who report no major mental health concerns within two months of graduation. This research question was not previously explored in literature examining counseling psychology, clinical psychology, vocational psychology, or sport psychology.

The goal of this research was to investigate the relationship between Committed Action (Committed Action Questionnaire – 8 [CAQ-8]; McCracken, 2013) and Psychological Flexibility (Acceptance and Action Questionnaire [AAQ-II]; Bond et al., 2011) as well as further understand how vocational correspondence, as studied through individual values and work reinforcers, was associated with this relationship following participation in collegiate athletics. Utilizing the theoretical frameworks of ACT and TWA, the study examined various aspects of a healthy transition from competitive sport. Using validated measures consistent with ACT theory, this relationship is grounded in the theoretical understanding that values drive Committed Action (CAQ-8), which is positively correlated with Psychological Flexibility (AAQ-II). The steps to explore the mediated effect of Correspondence on the relationship between Committed Action (CAQ-8) and Psychological Flexibility (AAQ-II) was examined using a mediation model. The purpose of a mediation model is to explore ways in which a variable explains the relationship between a predictor variable and an outcome variable, where the result provides a more robust explanation of the importance of certain variables in relation to one another.

Hypotheses

Prior to data collection, the following predictions were made.

1. Committed Action is positively correlated with Psychological Flexibility. This means that behaviors aligning with individual values will be significantly related to an acceptance-based definition of wellbeing (Hayes, 1999). This will be determined if scores on the Committed Action Questionnaire – 8 are significantly correlated with the Acceptance and Action Questionnaire – II. If this hypothesis is confirmed, results would indicate that as values-based action increases, so does psychological wellbeing, and visa versa.

2. There is a relationship between Committed Action and Correspondence. This means that behaviors aligning with individual values will be significantly related to the vocational psychology construct Correspondence (definition to follow). This will be determined if scores on the Committed Action Questionnaire – 8 are significantly correlated with calculated Correspondence. Should this hypothesis be confirmed, results would indicate that there is a relationship in the way that values-based action and Correspondence fluctuate.
3. There is a relationship between Correspondence and Psychological Flexibility. This means that there is a relationship between the similarity between individual values and reinforcers found in the workplace and a measure of wellbeing. This will be determined if calculated Correspondence is in some way related to the Acceptance and Action Questionnaire – II. If this hypothesis is confirmed, results would indicate that there is a relationship in the way that Correspondence and wellbeing fluctuate.
4. The relationship between Committed Action and Psychological Flexibility is altered in the presence of Correspondence. This means that there is a change in the observed ability to engage in behaviors that align with individual values and wellbeing when a measure workplace Correspondence is present. This will be determined if calculated Correspondence mediates the relationship between the Committed Action Questionnaire – 8 and the Acceptance and Action Questionnaire – II. Should this hypothesis be confirmed, results would suggest that those who commit to values-based action and whose workplace allows them to act in accordance with their individual values will achieve greater wellbeing than those whose values do not align with their workplace.

Definition of Terms

Correspondence. Correspondence is the similarity between individual values and reinforcers found in the workplace (Dawis & Lofquist, 1984). The specific values measured within TWA are achievement, comfort, status, altruism, safety, and autonomy (Brown & Lent, 2014; Dawis, 2002).

Psychological Flexibility. According to (Bond et al., 2011), Psychological Flexibility may be operationalized as the ability to contact the present moment and changing or persisting in value driven behavior in any context of life. Psychological Flexibility is achieved through utilizing any combination of the six core processes of change; being present, acceptance, self-as-context, cognitive defusion, valued living, and commitment to value driven behavior.

Committed Action. Committed Action is action that is connected to goals and values, persistent yet able to change, flexible to what a situation may afford, able to incorporate aspects of engagement such as pain, distress, and failure, is able to cease when the action becomes inconsistent with values and goals (McCracken, 2013).

CHAPTER 2

REVIEW OF SCHOLARLY LITERATURE

Exposure to unwanted and uncomfortable experiences are common throughout life, and over time people tend learn ways to adapt to the environment that surrounds them. There are times, however, that unwanted experiences are accompanied with aversive consequences that manifest physically, mentally, and emotionally. Due to the frequency of people experiencing psychological distress, the study of mental health concerns continues to be an important component to the wellbeing of society.

Since its inception, the study of psychology has sought to understand elements of human dysfunction. Starting in the late 1800's, social scientists began to refer to themselves as psychologists, and were largely interested in understanding the conscious and unconscious experience of others in the service of finding ways to explain experiences that differ from the norm. There was a marked shift in emphasis with regard to theory with the rise of cognitive-behavioral theories. Aaron Beck sought to provide interventions aimed at a shorter course of treatment through the use of cognitive-behavioral therapy (CBT). Though the effectiveness of CBT remains stable, psychological research utilizing CBT as a framework today continues to focus on dysfunction rather than strengths-based approaches.

Though studying dysfunction can shed light on ways to help make effective change, little research today studies fully functional people and relates commonalities from this population unto those suffering with psychological dysfunction. This trend can be seen in research centering on the general population as well as in sport and performance psychology. This approach is the foundation of the positive psychology movement and is woven into the framework of other 3rd wave cognitive behavioral approaches.

Theoretical Approach

Acceptance and Commitment Therapy

Acceptance and Commitment Therapy (ACT; pronounced as a word, not an acronym) is a third wave behavioral therapy (Hayes & Wilson, 1994). Popularity of the theory grew in the early 2000's, where early support for the effectiveness of the modality was supported across various aspects of psychological dysfunction (Hayes et al., 2006). The following dialogue provides theoretical underpinnings of ACT and evidence of its effectiveness.

ACT is part of the cognitive-behavioral tradition, though is fundamentally different than cognitive-behavioral therapy (CBT) and other cognitive-behavioral approaches such as functional analytical psychotherapy (FAP), dialectical behavioral therapy (DBT), and mindfulness-based stress reduction (MBSR) (Coyne et al., 2011). CBT originated as an approach to understanding and reducing symptoms of major depressive disorder through modalities such as cognitive restructuring and thought stopping.

CBT works under the assumption that behavior change is necessary for cognitive growth (Hayes et al., 2006). While a CBT approach may garner desired outcome regarding symptom reduction, literature supporting the utility of the approach to guide personal growth outside of symptom reduction is unclear. Said another way, there has not been convincing evidence that cognitive approaches add above and beyond behavior therapy (Dobson & Khatri, 2000). The mechanistic nature of CBT suggests that after stimuli enters conscious understanding, a behavior occurs followed by a consequence, suggesting that behaviors are in some ways isolated.

A seminal premise within ACT is that psychological experiences are ongoing, and that thoughts and behaviors are conditionally contextual (Hayes et al., 2006). While ACT takes into account both conditions and behaviors, the foundational roots of the theory differ from a more

traditional cognitive approach. ACT works under three assumptions: (1) behaviors may have different functions depending on the domain, (2) different behaviors can be grouped into similar functional classes, and (3) behavior change is effectively accomplished through the manipulation of the context that contains the behavior (Coyne et al., 2011). Contextual understanding is the result of learning that occurs from the processing of language. These foundational roots may be traced back to Relational Frame Theory (RFT).

Relational Frame Theory is a functional analytical approach that suggests that language and higher-order cognitive abilities are associated with patterns of relational responding (Coyne et al., 2011). Language and cognition are generalized into patterns where humans respond to relational understanding, which is referred to as Arbitrarily Applicable Relational Responding (AARR). AARR suggests that at a young age, humans begin to make rational meaning of the world based on language, where generalization follows appropriate cues.

Contextual frames include environmental information that may or may not be directly associated with a particular stimulus, but aid in the developed frame that is associated with a given understanding. This frame is a basic framework of understanding human language, which is also associated with explaining emotional states. As undesirable emotional states are perceived, meaning is associated with it. Fundamental characteristics of AARR suggest that language and cognition are associated with adverse psychopathology, though the theory lacks a clear approach to unwanted thoughts, emotions and behaviors. As a result, ACT was designed to target the fusion of AARR and human behavior (Coyne et al., 2011).

With roots in Relational Frame Theory (Hayes, Strosahl, & Wilson, 1999), the premise of the mindfulness-based orientation is that human language becomes enmeshed with actual lived events, and the response to both actual events and language-induced events creates psychological

suffering. Unlike other cognitive behavioral therapies which focus on controlling negative thoughts in an attempt to change the thought itself, the modality of change within ACT is contingent on one's ability to modify their relationship with internal states such as thoughts and feelings, instead of attempting to alter the form or frequency of these events (Hayes, Strosahl, & Wilson, 2012).

ACT seeks to enhance quality of life through the increase of psychological flexibility. Operationalized as the ability to contact the present moment and changing or persisting in value driven behavior in any context of life, psychological flexibility is achieved through utilizing any combination of six core processes of change. The six core processes of change within ACT are acceptance, being present, self-as-context, cognitive defusion, valued living, and commitment to value driven behavior. Lillis et al. (2012) explored the effectiveness of ACT intervention through a meta-analytic review, and found significant positive effect sizes for acceptance, defusion, present moment, valued living, mixed mindfulness components, and valued living combined with mindfulness components. While the study provided validity to the use of ACT intervention, missing was the exploration of the relationship between committed action and valued living. While this relationship is theoretically understood and was validated by Hayes et al. (1999), the construct of committed action has not been examined for its effectiveness as a predictor variable when examining the relationship between committed action and psychological flexibility in a collegiate athlete setting.

The six core processes of change may be grouped into two distinct domains that influence the functionality of the other. One domain explores commitment and behavior change processes, and is characterized by the core processes of present moment awareness, values, and commitment to values driven action. The second domain, mindfulness and acceptance

processes, utilizes the core processes of acceptance, cognitive defusion, and self-as-context. These groupings are in place to provide a framework to aid clinician implantation of ACT modalities and conceptualization of clients, but do not need to be approached in an ordered way.

Present moment awareness may be operationalized as a non-judgmental approach toward physical and cognitive events as they occur (Hayes, 2006). Though the process of becoming presently aware to enhance the quality of life has been observed for thousands of years, such practices continue to be followed, and have begun to gain traction in the psychological sciences. Becoming present is achieved through mindfulness practices that focus on attending to physical or cognitive stimuli with direct attention. An example of present moment awareness is the sprinter at the starting line of a 100 meter dash who is focused solely on the start of their race, not preoccupied thinking about a past false-start, or what may happen should they make a mistake. ACT suggests that achieving greater present moment awareness is associated with greater psychological flexibility through more direct and authentic contact with lived experiences. Valued living may be operationalized as chosen qualities of deliberate action that can be represented moment by moment but never obtained concretely (Hayes, 2006). Values may change over time, but remain consistent despite the context of one's lived experience. While a person may claim to value an object, ACT theory would suggest that while this person may think they value the new track spikes they received at the beginning of the season, the deeper value may be comradery as all of the other athletes in their event group have the same style of shoe. Committed Action is the creation and adherence to larger patterns of values oriented behavior (Hayes, 2006). Behavioral goals provide a framework for improving psychological flexibility through the use of commitment to values driven action, where psychological goals may be achieved at the same time. An example of committed action is the

student-athlete who endures hostile environmental conditions in order to compete for their team. While they may want to go on the warm dry bus when the weather is cold and rainy, they may choose to stay out with their team as they may value accountability, leadership, or companionship.

Acceptance is characterized by the active awareness of mental and emotional events without attempting to change the form or frequency of the event (Hayes, 2006). For example, an acceptance based intervention might encourage the shot putter to acknowledge the unwanted thought or emotion they are experiencing when they see their rival throw a season's best mark and learn to accept the thought or emotion for what it is, not the fused meaning that may be associated with it. In this case, a commonly fused meaning associated with seeing a rival throw their best may be shame, as they may not believe they are as good of a person because their rival outperformed them. Acceptance is not viewed as an outcome expectation, but an experience that is cultivated through the utilization of the remaining five core processes of change. Self as context is a core process that targets language to provide a perspective to understand the self and conceptualize patterns of behavior (Hayes, 2006). Using first-person narrative, aspects of the *self* may be explored. The construct is approached using mindfulness to elicit present moment, non-judgmental reflection where the self is void of qualifiers or labels that are otherwise induced from societal expectations. A person may make a decision in order to align with their expectations of a certain role, but this decision may not align with personal values resulting in discomfort later. For example, a coach may choose to demean an athlete following a mistake because that's what the coach thinks other coaches would do, which is an example of acting in alignment with a conceptualized self, the opposite of using self as context. Conversely, the coach could choose to confront their athlete in another manner more consistent with their own

personal values and would be portraying the construct of self as context. Cognitive defusion techniques attempt to alter the relationship one has with internal dialogue and others lived experiences through the creation of contexts whereby ineffective or harmful thoughts are diminished (Hayes, 2006). The process is accompanied by a non-judgmental approach utilizing a framework to evaluate thoughts as helpful or unhelpful as opposed to using qualifiers such as good and bad. Often, people fuse meaning with thoughts and emotions, which leads to greater fulfillment in life. However, this process can also be detrimental, as placing undue meaning on thoughts and emotions may serve as barriers to growth. For example, a collegiate cross-country runner may believe their entire collegiate career will not be successful because they suffered a season ending injury during their debut season. While it may be true that the injury was detrimental in the short term, the student-athlete in this example is putting undue meaning on thoughts associated with the injury which may prevent them from achieving their goal of athletic development.

Literature surrounding ACT has given support for the utility of various core processes of change accounting for significant improvements in mental health within student-athletes (Mahoney & Hanrahan, 2011). Though this finding may be compelling for some, the research approach has been fairly limited to the study of psychological dysfunction in the general population rather than examining wellbeing in student-athletes. Despite this limitation, the similarity in presenting concern may suggest that it can be reasonably assumed that the theory can apply to those in the student-athlete population. Another critique of ACT is that the theory is too closely related to CBT that interventions may not be targeting a different process of change (Hoffmann & Asmundson, 2008a; Hoffmann, 2008b). A primary argument within these critiques suggests that ACT based interventions are truly cognitive-behavioral approaches toward

acceptance and that the philosophical roots of the theories do not differ. While the opinions on that matter may vary greatly, the reader should be reminded that the modality of change within ACT is the acceptance of unwanted experiences as opposed to an effort to alter the form or function of that experience.

Literature supporting theoretical orientations emphasizing acceptance based interventions have increased in current sport and performance psychology literature. Empirical support for the utility of mindful-acceptance oriented strategies to enhance sport performance exists (PMA: Goodman et. al., 2014, Birrer & Morgan, 2010, Petrillo et. al., 2009; Values: Peachey & Bruening, 2012), but literature supporting the usefulness of acceptance oriented strategies for improved mental health in student-athlete populations has also emerged concurrently (Goodman et al., 2014; Lee et al., 2008; Mahoney & Hanrahan, 2011). Given the recent shift in focus to acceptance oriented techniques, the application of ACT within this research strengthens the ability to conceptualize student-athlete transition.

Minnesota Theory of Work Adjustment

The Minnesota Theory of Work Adjustment (TWA) provides a framework for examining the influence of occupational context on an individual's attitudes and beliefs, where strong correspondence between the person and their environment generally leads to greater job satisfaction (Dawis & Lofquist, 1964).

TWA emphasizes the vocational fit between the person and environment (PE- fit) where a person's satisfaction may be predicted by their adjustment to their workplace along with personal characteristics (Dawis & Lofquist, 1984; Dawis, 1991). Originally geared toward work transitions, TWA includes a framework to predict the match between the person and the environment (Eggerth, 2008) where greater fit is characterized by individual needs being met

with the reinforcers or rewards of the environment (Brown & Lent, 2014). This fit is associated with greater performance and satisfaction at work (Weiss et al., 1967). Two models within TWA explain the intersection between the person and environment: the predictive model and the process model. While the predictive model seeks to predict individual satisfaction with their environment, the process model focuses on how the fit between the person and environment is attained and maintained (Brown & Lent, 2014).

As the predictive model emphasizes values that explain whether individuals are satisfied with their work environment following a transition to a new workplace, the model will be utilized in this study. The predictive model targets two factors. The first examines whether the individual has a set of values that the workplace will reward, leading to satisfaction. The second examines whether the workplace has a set of job requirements that may be met by the abilities of the individual, leading to satisfactoriness. Each of these intersections may be examined for its goodness of fit.

With regard to employee satisfaction, Correspondence is measured by the similarity between individual values and reinforcers found in the workplace (Dawis & Lofquist, 1984). Alternatively, dis-correspondence occurs when individual values are not reinforced by the workplace or when workplace demands are not matched by the values of the individual. The measurement of characteristics of the individual and the workplace are examined through six vocational values: achievement, comfort, status, altruism, safety, and autonomy (Brown & Lent, 2014; Dawis, 2002). Correspondence has shown to predict the relationship between individuals and their environment when examining college graduates transitioning into full time employment (Carless, 2005). While the study aided in the understanding the importance of PE fit within the general population, the study failed to acknowledge which values were most significant.

The Minnesota Importance Questionnaire (Henley, Dawis, Lofquist, & Weiss, 1981), has long been the flagship psychological instrument examining the six vocational values of TWA. The manual for TWA (Rounds et al., 1981) discusses the 20 needs statements that ultimately get conceptualized through one of the six core values. The manual goes on to describe each of the values: *Achievement* is characterized as the ability for an individual to utilize their skills and thus feel a sense of accomplishment with their work. The vocational value of achievement is derived from needs statements which center on ability utilization and achievement. *Comfort* is measured by the lack of stress in the workplace and is associated with the individual feeling comfortable with the demands of the workplace. The vocational value of comfort is derived from assessing needs statements tailored toward activity, independence, variety, compensation, security, and working conditions. *Status* is associated with the individual obtaining recognition for the work they do, and working toward a position of dominance in the workplace. The vocational value of status is derived from assessing needs statements regarding advancement, recognition, authority, and social status. *Altruism* is characterized by providing service to others as well as harmonious feelings when working with others. The vocational value of altruism is derived from assessing needs statements tailored toward co-workers, social service, and moral values. *Safety* is measured by feelings of stability, order, and predictability with regard to the workplace and the workload the individual is expected to complete. The vocational value of safety is derived from assessing needs statements focusing on company policies and practices, supervision related to human relations, and supervision relating to technical aspects of work. *Autonomy* is associated with feelings of freedom and an overall sense of control. The vocational value of autonomy is derived from assessing needs statements centering on creativity, and responsibility.

The tenure of student-athletes varies depending on their divisional affiliation. NCAA Division-I student-athletes have a five year “clock” where 4 years of eligibility may be used within the 5 calendar years following high school graduation. NCAA Division-II student-athletes have 10 semesters or 15 quarters where they can use 4 years of athletic eligibility, where the “clock” starts for a year of eligibility when the student-athlete is enrolled full time and attends class or they are enrolled part time, attend class and practice; there is not an age limit. NCAA Division-III student-athletes can spread out 4 years of eligibility how they see fit, again, there is no age limit. NAIA student-athletes have a similar eligibility “clock” as NCAA D-II student-athletes as they are limited to 4 years of eligibility within 10 semester or 15 quarters of academic involvement.

There are various adjustments a student-athlete experiences when they arrive on campus. These adjustments include adjusting to a new coach, teammates, training style, and geographic location. Once the student-athlete is settled into the university, they experience all the additional adjustments associated to the typical college trajectory: new roommates, meal plans, friends, and ever changing class schedules. Once the student-athlete leaves sport, whether voluntarily or involuntarily, they may adjust from the student-athlete identity to whatever role they will play in society following sport. Underlying these adjustments is the satisfaction the athlete experiences. As satisfaction is a main theme present in TWA, such a framework may provide insight to conceptualize data collected surrounding the perception of satisfaction with various aspects of the sport experience.

Recent findings suggest that administrators (Connole et al., 2014; Wrisberg et al., 2012) and coaches (Wrisberg et al., 2010; Zakrajsek et al., 2013) wish to provide mental performance and mental health services to their student-athletes should the services become necessary.

University athletics directors and president's polled indicated that having a professional who is qualified to assist in life-related concerns of student-athletes would be advantageous, further noting a desire to have professional trained in working with burnout, communicating with teammates, and communicating with coaches (Wrisberg et al., 2012). The findings suggest that administrators acknowledge the importance of helping the student-athlete to find a balance between expectations from sport and concerns that are associated with life outside of sport (Wrisberg et al., 2012).

This fit between the student-athlete and the sport environment seems to be an important dynamic that may be overlooked by some coaches and administrators, as personal sacrifice is often a contributing aspect to improving the performance of the team as a whole. Though student-athletes may be able to temporarily bracket their own well-being out from the performance domain in order to achieve performance excellence, such sacrifice comes at a cost. Many athletes feel satisfied with their overall experience in sport once their time with the program is complete (NCAA, 2017), yet student-athletes who pursue mental health services indicate a majority of their concerns stem from the intersection between their personal identity and the sport environment (Brown et al., 2014). This paradox is alarming, and may suggest that a further examination into factors contributing to the satisfaction of the student-athlete warrants further investigation.

A common critique of TWA is the lack of multicultural flexibility within the model given it was normed in a predominantly white, heterosexual population. The multicultural limitations of TWA were explored by Lyons, Fassinger, and Brenner, 2005 who did find that the theory as a whole was only culturally sensitive to those in the LGBTQ+ community about half of the time, but did acknowledge that the conceptualization of Correspondence within the theory remained

consistent across varying cultural dimensions. Despite this critique, the reader should be reminded of the nature of this exploration given its focus on Correspondence as opposed to the utilizing the theoretical framework to conceptualize other aspects of mental health or identity. Another limitation of TWA is the assumption that values are an easily understood construct. A foundational aspect of TWA is the fit between the individual and the environment, where values serve as a way to conceptualize this fit. While this critique may be valid, the instrument used in this study, the Minnesota Importance Questionnaire, evaluates values as opposed to asking the participant outright.

Historical Context of the NCAA

It may be hard for some to imagine that what would later become one of the largest industries in the world began with a two-team regatta. According to Harvard tradition, the Crimson were challenged by the Crew team of Yale to, “test the superiority of the oarsmen of the two colleges” (Harvard, 2014). On August 3rd, 1852, the two colleges competed head to head on Lake Winnepesaukee, and two miles later the first intercollegiate athletic event was complete. How was it that a rowing challenge turned into a billion-dollar industry, providing educational experiences to some and entertainment to many?

Early on collegiate sport was a student-run affair, much like the management of many recreational sports in the United States are today. Often a group of students would get together to play against one another and eventually grew to challenge other nearby colleges in friendly competition. As intercollegiate athletics grew in contested sports and in popularity, so did the need to regulate the financial and safety concerns put forth from the university or college (Smith, 1999). Larger events between institutions provided a space for the exchange of services and goods, and soon major sporting events began to be present all over the country.

While the growth of sport in America continued to bring commerce to otherwise under-developed areas of the country, this spike in interest came with it the need to reregulate rules and standards in order to keep student-athletes safe. Perhaps the greatest catalyst for change occurred in 1905 when there were 18 reported deaths associated with football alone (Smith, 1999).

These tragedies gained the national attention of President Theodore Roosevelt. As a response to the 18 deaths sustained during 1905, the President called for the creation of a council to determine the fate of intercollegiate athletics (Schubert et. al., 1986). As a response, the Chancellor of New York University, Henry MacCracken, organized a conference resulting in a Rules Committee represented by 13 universities. The idea for a governed association was proposed, and on December 28th, 1905, 62 institutions of higher education became members of the Athletic Association of the United States (IAAUS) (Schubert et. al., 1986). The IAAUS oversaw the regulation finances and rules associated with intercollegiate competition.

The IAAUS was renamed to the National Collegiate Athletic Association (NCAA) in 1910, and primarily oversaw the regulation of rules in championships and attempted to regulate the financial nature of the game. Many of the concerns faced in the early 1900's remain true today. Commercialism of intercollegiate sport grew as the years went on, heavily influenced by the pressure placed on competing athletes to win. Smith (1999) goes on to support the notion that the integrity of fair and clean support was upheld by the attempts of university presidents to diminish the commercialism of intercollegiate sport. The Carnegie Report was a document created in 1929 by the Foundation for the Advancement of Education giving rise to the notion that administrators had the power to sanction and govern athletics involved with their institution (Smith, 1999).

A substantial increase in access to higher education following World War II led to the expansion of athletic programs across the country (Smith, 1999). More sporting events were being broadcasted on television and the radio, leading to lucrative contracts and the need for financial governance. This increase in visibility led to greater desire to join and recruit the best athletes from around the country.

The NCAA entered the picture again in a major way with the enactment of the *Sanity Code*. The code was created to, “Alleviate the proliferation of exploitive practices in the recruitment of student-athletes” (Schubert et al. 1986). The code was enacted to ban athletic scholarships but seven colleges, Boston College, Maryland, Villanova, University of Virginia, Virginia Military Institute, Virginia Tech, and the Citadel boycotted the ban. After the NCAA failed to obtain a 2/3 majority vote to ban the aforementioned colleges, the NCAA faced, “irrelevance” as they could not enforce their own rules (Leeds et al. 2018).

Surviving just 3 years following its development in 1948, the *Sanity Code* was repealed by the NCAA in 1951 and replaced with a broader list of infractions to be enforced by the Constitutional Compliance Committee, a sub-committee in the NCAA (Smith, 1999). This compliance committee was the first of its kind in collegiate sport, and continues to be a model followed by compliance offices that govern intercollegiate athletics at the national and institutional level.

As athlete recruitment and training improved, the NCAA decided to create divisions in the 1980’s based on competitive capacity, leading the way to the divisional style that continues to be used today. Larger universities were generally attracting teams with more skillful players and more competent coaching staff which generated more income for the university as the success of these team grew. However, the economic recession in the early 1980’s impacted

institutions of higher education leading university presidents to have a more instrumental role in intercollegiate sport.

During this time of uncertainty, influential members of institutions of higher education had concerns about the implications of economic hardship on the success of the university. Alumni and boards of trustees were concerned about the success of athletics programs many times contributing to the 'win at any cost mentality' while university faculty and educators were concerned with upholding the academic values of the institution (Smith, 1999). The person concerned with answering these concerns was the university President, and increasing pressure due to impending economic collapse sent many looking for additional support.

In 1984, university Presidents came together to form the Presidents Commission, which was set forth to work toward improving cost containment (Smith, 1999). One way the Presidents Commission worked to better understand the workings of the NCAA was through the work of the Executive Committee and Board of Directors, two groups housed of a combination of university Presidents and chief executive officers. While the initiatives proved to be successful in navigating the NCAA through difficult economic times, a secondary result was that university presidents and other leading officials were now in a position of power in an organization that, by its competitive nature, pits itself against other social institutions that also call for university resources. [anything else that needs university money that is dwarfed by athletics (if needed add here)].

Though the recession in the early 1980's has come and gone, the need to gain financial security has been at the forefront of the NCAA. With university Presidents having a large voice in decision that involve the financial gain of the NCAA, it is reasonable to see how the, 'win at any cost' mentality is supported from the top down. As intercollegiate athletics has developed

into a multi-billion dollar industry, the pressure to win remains high for coaches and athletes alike. The examination of this attitude has been explored for the past half-decade (Epstein, 2018; (Van Yperen et al., 2011).

Current Climate of Collegiate Sport

Sport psychology is a multidisciplinary field spanning psychology, sport science, and medicine (APA Div 47). The field focuses on the interplay of psychology and sport performance, encompassing both performance enhancement, and well-being of athletes, coaches, and other individuals within sport, military, and organizational settings. In sport, psychology services span various domains such as youth sport (McGuire, 2012), collegiate sport (Shaffer, Tenenbaum & Eklund, 2015), professional sport (Aoyagi & Poczwadowski, 2012), and Olympic sport (Vernacchia & Henschen, 2008). The American Psychological Association (APA) recognizes sport psychologists as individuals who have earned a doctoral degree in one of the primary areas of psychology, followed by licensure as a psychologist. The proficiency encompasses training in the development and use of psychological skills for optimal performance of athletes, in the well-being of athletes, in the systematic issues associated with sport settings and organizations, and in developmental and social aspects of sports participation (“APA Div 47,” 2016). Since the growth of professional psychologists who chose to work with individual athletes, teams, and large athletic organization.

McEwan & Tod (2015), suggest that analyzing the technical and tactical aspects of sport as well as the mental health of student-athletes may help advance the knowledge and wellbeing of student-athletes. At an increasing rate, sport psychologists are being hired by university athletic departments and university counseling centers, where the population who have access to counseling services are collegiate student-athletes. Collegiate student-athletes have historically

been a special population underrepresented within college counseling centers (Valentine & Taub, 1999), yet the unique nature of the student-athlete population presents challenges and stressors related to athletic status that can lead to compromised well-being (Beauchemin, 2014).

Often, student-athletes experience a sense of celebrity status due to their participation in athletics, and thus may avoid seeking support from campus resources for fear of jeopardizing their image (Ferrante, Etzel, & Lantz, 1996). Logistical barriers such as demands of academic schedules, travel, practices, and game preparation and participation, can significantly restrict opportunities for student-athletes to seek services (Watson, 2006). These stigmatic and logistical barriers may increase the difficulty for psychologists to positively intervene with student-athletes, but they can be responded to in a positive manner by a psychologist knowing the role they play in the athlete's life. A counseling/ clinical psychologist is in a role of exploring the psychosocial aspects of the student-athlete's life, both in and out of the sport domain. In the event a non-athletic issue is present in a student-athlete's life, a counseling/clinical psychologist is competent to handle such a situation through current, therapeutic techniques that are empirically supported. With a psychologist serving in a counseling role, student-athletes have an increased chance to work through mental health concerns.

One of the most influential contributions from counseling/clinical training that a psychologist working within an athletic domain brings in their ethical toolbox is the use of the APA code of Ethics to back their practice. Although governing bodies in the field of sport psychology such as the Association for Applied Sport Psychology have their own code of ethics, current literature (Moore, 2003; Aoyagi & Portenga, 2010) suggests that when a sport psychologist is confronted with an ethical dilemma, the APA code of ethics provides a foundation for understanding ethical decision making.

The very essence of sport dictates that there must be one side that wins, and the other(s) are characterized as losing. The dichotomous nature of competition is one factor that makes sport exciting to watch and participate in, and sport at the collegiate level is not exempt from this understanding. Universities continue to pour exceedingly large quantities of resources into the advertisement, marketing, and branding of their athletic programs before, during, and after athletic seasons in hopes of continuous growth of their fan base and revenue. As discussed previously, the ‘win at any cost’ mentality is supported from university presidents (Epstein, 2018; Van Yperen et al., 2011), but is further perpetuated by society putting increased value on successful athletic accomplishments.

The well-being of former student-athletes has been scantily examined in psychological literature with a greater emphasis being placed on student-athletes before graduation. This may be due to the accessibility of student-athletes as research participants or because only around 10% of former student-athletes report significant mental health concerns within the first two years of graduation (NIMH, 2017).

The NCAA suggests that there are roughly 7.3 million student-athletes competing at the high school level, and only 6% of high school student-athletes go on to compete in the NCAA (NCAA, 2018a). With roughly 490,00 student-athletes competing across three divisional levels, about 59% of student-athletes receive financial aid from the athletic department at some level. The desire to compete at the collegiate level is high, where it can be argued that many high school student-athletes feel the pressure to perform at a high level should they make a collegiate sport roster. This pressure may be internally or externally driven, with motivates such as fear of failure, financial burden should their scholarship be cut, in addition to concerns related to athletic identity (Otten, 2009; Murphy et al.,1996). Regardless of the lack of research support on this

topic, athletic departments may benefit from understanding what values are present in those who have made a healthy from collegiate support so that they may foster these traits in their student-athletes prior to graduation.

Student-Athlete Identity

Identity is comprised of characteristics and values that a person may hold both individually or as part of a group. There are various aspects of identity for all people, but those competing in athletics at the collegiate level hold an identity as a student-athlete. Student-athletes are glorified for their athletic feats in competition through media outlets that are ever growing. Traditional student-athletes fall in the age range of 18-23, where identity development is not yet crystalized. While there are other psychological theories that examine social constructs, Social Identity Theory (Tajfel, 1978) is a common theory utilized in sport psychology literature when examining the role of athletics in a collegiate student's identity.

Social Identity Theory suggests that a person's identity is formed because of shared experiences within various social contexts, interactions, relationships, institutions, and processes (Scanlon, Rowling, & Weber, 2007). The identity is formed over time, where characteristics are either reinforced through a given scenario, or extinguished when the characteristic is no longer utilized. Within the context of sport, Sturm, Feltz, & Gilson (2011) suggests that the identity of student-athletes is formed through two contexts: academics and athletics, and thus student-athletes hold both identities at the same time.

The expectation to hold two identities within a university system may cause dissonance for the student-athlete as there may be expectations from professors, coaches, and family to perform at a certain level academically. While student-athletes have opportunities within the sporting context that students in the general population may not have, these privileges do not

exempt a student-athlete from being held to the same academic standard as any other student on campus.

Collegiate student-athletes often travel during their competitive seasons, which often interferes with their ability to attend to academic expectations such as studying for exams and getting coursework completed on time (Balague, 1999). Their travel schedule may at times even prevent student-athletes from taking exams at the regularly scheduled time, which may in turn create a scenario where the student-athlete is forced to take the exam early with less time to prepare. While student-athletes are also entitled to fail, or drop classes like any other student, doing so may result in athletic ineligibility depending on their current academic standing.

Student-athletes may perform at higher levels athletically relative to their peers in the general student population, but do perform lower than the general student population on average (Gayles, 2009). As a result, many student-athletes are coined as the “dumb jock,” which may often be accompanied by the assumption that passing grades are a result of the student-athlete’s status as an athlete (Sailes, 1993). Just as there is an expectation to perform at a certain level academically, there is at the same time an expectation for the student-athlete to perform at a high level athletically no matter their academic status. This dichotomy presents a unique challenge for student-athletes to navigate throughout their time in college. While it is generally understood that coaches want their athletes to be academically eligible, some are willing to side-step processes designed to keep student-athletes accountable for fear of the student-athlete becoming academically ineligible (Cullen et al., 1990). Stories about academic misconduct are showcased through national news outlets discussing times when coaches and administrators facilitated ways for student-athletes to gain unfair academic advantage which only progresses stereotypes about the academic performance of student-athletes (Salgado, 2007). This macroaggression does not

cultivate the space for safe, creative growth, and may in turn serve as an additional barrier to a student-athlete's academic success and may have long term effects on the student-athlete's personal development, especially when the student-athlete is a minority student (Gatman, 2011).

Innate athletic ability, often referred to as skill, is another aspect of athlete identity that may be present for student-athletes. Skill has been viewed through the lens of genetic inheritance, as measured by height, weight, type of dominant muscle fiber, and how these traits relate to the physical demands of the given athletic task (Brewer, 2018). Brewer, (2018) suggests that the level of skill an athlete may attain is also based on external stressors experienced by the coach and in the context of practice.

The background of a student-athlete may also contribute to their identity as a student-athlete. Collegiate athletes are generally recruited from high school programs where they were involved with the same sport. While the rules may remain the same at the collegiate level, the culture of the high school program may influence how the student views themselves (Lubker & Etzel, 2017). When the culture of the high school program does not align with the culture of their collegiate program, there may be a threat to the identity of the student-athlete. Some student-athletes transfer to new universities due to various reasons, and this transition may also be an aspect of identity that contributes to their identity (Lubker & Etzel, 2017). Athletes who transfer may have the label of being a transfer student, which may come with its potential barriers both athletically, academically, and socially.

Given the use of statistics in sport, rank order is a factor that is generally known and understood by fans, coaches, and the student-athlete themselves. This rank order may influence psychological wellbeing, in addition to mental performance relative to the required task (Zuccolotto et al., 2018). Where someone sees themselves when compared to others may

influence their self-confidence, self-esteem, and overall performance (Rees et al., 2015; Triplett 1898). The intersection between high expectations and fragile individual identity development contributes to the difficulty experienced by student-athletes before and after graduation (Chartrand & Lent, 1987). Athletic teams and the network of support staff that surrounds them may act as a barrier for detrimental consequences of psychopathology, but many of these resources are not present following graduation.

As various resources surround a student-athlete before they even arrive on campus and during their time throughout their academic and athletic careers, further understanding the perception of previous student-athletes may provide a new way to look at the experience of current student-athletes. This study attempts to explore how personal values influence the relationship between the commitment to personal values and Psychological Wellbeing – a question that has not been asked before. The findings of this study may guide the development of new resources to aid in the transition from collegiate track and field, as well as provide insight into how to improve current programs and resources.

CHAPTER 3

METHODOLOGY

Introduction

The overall goal of this research was to investigate the relationship between Committed Action (Committed Action Questionnaire – 8 [CAQ-8]; McCracken, 2013) and Psychological Flexibility (Acceptance and Action Questionnaire [AAQ-II]; Bond et al., 2011) as well as further understand how vocational Correspondence, as studied through individual values and work reinforcers, was associated with this relationship following participation in collegiate athletics. Consistent with the original manual for the MIQ (Gay et al., 1971) Correspondence is the measurement between a participant's MIQ profile and the ORP for a specific occupation which is referred to as D_2 .

According to Gay et al., (1971), Correspondence may be calculated using D_2 , which is the sum of squared differences between each of the 20 scale values on an MIQ Profile and the corresponding scale values on an ORP profile. As the complete MIQ was not administered, the sum of squared differences between each of the 20 values of the absolute judgement section and the corresponding scale values on an ORP profile was examined. A low D_2 value indicated high correspondence between vocational needs (MIQ) and workplace reinforcers (ORP), while a high D_2 value indicated low correspondence.

Utilizing the theoretical frameworks of ACT and TWA, the study sought to examine various aspects of a healthy transition from competitive sport. Using validated measures consistent with ACT theory, this relationship was strengthened from the theoretical understanding that values drive Committed Action (CAQ-8) which, in theory, is positively correlated with Psychological Flexibility (AAQ-II). The steps to explore the mediated effect of

Correspondence on the relationship between Committed Action (CAQ-8) and Psychological Flexibility (AAQ-II) were examined using a mediation model.

Primary Hypotheses

1. Committed Action is positively correlated with Psychological Flexibility.
2. There is a relationship between Committed Action and Correspondence.
3. There is a relationship between Correspondence and Psychological Flexibility.
4. The relationship between Committed Action and Psychological Flexibility is altered in the presence of Correspondence.

Participants

Three hundred (n= 300) post-collegiate track and field student-athletes who were recruited from Amazon Mechanical Turk (mTurk), an online crowdsourcing marketplace, participated in the study. Crowdsourcing websites such as mTurk have been popular in recent sport psychology research and have shown to be an effective and reliable way of collecting data within the student-athlete population (Merz et al., 2020; Yankov et al., 2019). As such, mTurk was utilized in the data collection process. In addition, participants were recruited using word of mouth advertising from one of the committee members who reached out to coaching contacts who then forwarded the anonymous weblink to the survey onto potential participants. The total number of participants from mTurk and word of mouth advertising cannot be differentiated as each were directed to the same survey link. Following consent (see Appendix V), participants were asked the following questions to discern their eligibility for the study. (1) Are you a US citizen? (2) Are you between the ages of 21 and 26 years old? (3) What is your age? (4) Has it been two or more years since you graduated from an NAIA or NCAA institution? (5) Did you compete for at least 1 full season in collegiate track and field? (6) In the past two years, were

mental health concerns significant enough to interfere with your ability to work, go to school, or engage in social functions? (see Appendix VI) An answer of, “yes” to questions 1, 2, 4, 5, and an answer of, “no” to the question 6 deemed a participant eligible for the study.

Those who met all criteria were granted access to the study and could complete the measures discussed below. Those who did not meet full criteria were automatically dismissed from the survey. All participants who began the survey received the same, \$0.01 benefit for their involvement.

Descriptive statistics were collected to analyze participants who completed the study. All three divisional levels of collegiate track and field within the National Collegiate Athletic Association (NCAA) were represented in the study with the addition of participants from the National Association of Intercollegiate Athletics (NAIA). NCAA Division 1 was represented by 118 participants with an average age of 24.8, NCAA Division 2 was represented by 97 participants with an average age of 24.4, NCAA Division 3 was represented by 58 participants with an average age of 24.6, NAIA was represented by 27 participants with an average age of 24.8. Of the total participants ($N = 300$), the average age was 24.6 (see Table 1).

Table 1

Division	Total	Age (Average)
NCAA 1	118	24.8
NCAA 2	97	24.4
NCAA 3	58	24.6
NAIA	27	24.8
Total	300	24.6

Participant’s occupational data were collected and paired with the appropriate occupation outlined in the Occupational Reinforcer guide (ORP-III, 1986). Overall, 35 occupations were represented in this study (see Table 2). Some liberties were taken to fit the reported occupation

with an available reinforcer pattern. For instance, the ORP for “Work Evaluator” was comprised of 20 participants who reported, “Manager” as their primary occupation along with 18 who reported “Administrator,” with the remaining 9 participants reporting occupations with manager or supervisor in their title (i.e Store Manager). “Digital Computer Operator” was another ORP that was comprised of reported occupations that didn’t neatly fit inside the given title. Since their last revision in the 1980’s, have been various new employment opportunities involving computers and technology that are not available as an ORP. Reported occupations such as “IT,” “Multimedia Creator,” “Software Developer,” and, “Web Programmer” are examples of occupations that were coded as “Digital Computer Operator” because a better alternative was not available.

Participant data associated with any of the following vocations were removed from the dataset as there was not an Occupational Reinforcer Pattern (ORP) which aligns with that given vocation: Army Officer (2), Employed (6), Football Player (1), Hobo (1), Job (8), “M” (1), Pro Athlete (2), Professional Runner (3), Prostitute (1), Snowboarder (1), Student (125), Student-Athlete (1), Unemployed (1). Two additional sets of results were removed from the dataset as they were tests administered by the student principal investigator to ensure the survey was ready for transmission prior to making the survey available to participants. Of the 3,460 respondents, 300 were deemed useable as they completed the survey in its entirety and had occupations which aligned with established ORP’s.

Table 2

Occupation	Total	Occupation	Total	Occupation	Total
Accountant, Certified Public	10	Home Attendant	4	Sales Agent (Insurance)	4
Bookkeeper	11	Lawyer	6	Salesperson (General)	22
Carpenter	1	Mail Carrier	1	Secretary (General Office)	17
Clerk (General Office)	3	Marker	1	Statistician	2
Cook	2	Nurse, Professional	17	Taxi Driver	1
Counselor (Private)	15	Painter	1	Teacher (elementary)	9
Counselor (School)	1	Pharmacist	2	Teacher (secondary)	8
Digital Computer Operator	49	Physical Therapist	10	Teacher Aide	8
Electrician	1	Post Office Clerk	1	Waiter-Waitress	1
Engineer (Civil)	13	Programmer	2	Work Evaluator	47
Engineer (Mechanical)	3	Psychologist (Counseling)	2	Writer	14
Heavy Equip Operator	9	Recreation Leader	3		

Measures

Committed Action Questionnaire – 8

Committed action is characterized as having five key characteristics. Committed action is action that is connected to goals and values, persistent yet able to change, flexible to what a situation may afford, able to incorporate aspects of engagement such as pain, distress, and failure, is able to cease when the action becomes inconsistent with values and goals (McCracken, 2013). Commitment to values driven action was measured using the *Committed Action Questionnaire* (CAQ-18; McCracken, 2013) which is an 18-item measure originating from a pool of 24 items following factor analysis, regression analysis, and correlational studies.

Despite the functionality of the CAQ-18, McCracken et al (2015) sought to refine and condense the measure which resulted in the CAQ-8. There are 4 items with a positive valence while 4 have a negative valence. Items with a negative valence are reverse scored. The CAQ-8

is measured using a 6-point Likert-type scale (0 = never true. 6 = always true) where higher scores indicate higher levels of values driven committed action. An example of an item with a positive valence is, “I can remain committed to my goals even when there are times that I fail to reach them,” and an example of an item with a negative valence is, “I find it difficult to carry on with an activity unless I experience that it is successful. McCracken (2013) found that the original CAQ had an internal consistency of ($r = .91$). When tested against the CAQ, McCracken et al (2015) found that the intercorrelation between the original CAQ and the CAQ-18 is very high ($r = .96$, $r^2 = .92$), suggesting that the CAQ-8 adequately reliable for clinical use. As the outcomes and effect sizes share the same magnitude and direction, the CAQ-8 showed good construct validity indicating that it reliably measures the same construct as the full-scale version (McCracken et al., 2015).

Correspondence

Correspondence may be operationalized as the match between individual values and work reinforcers (Dawis & Lofquist, 1984). To measure correspondence, participants were asked their primary occupation which will be aligned with the corresponding Occupational Reinforcer Pattern (ORP; Appendix, 1) Next, individual vocational values were assessed and compared to the satisfaction the participant reports with their work environment. Participants’ vocational values were assessed using the *Absolute Judgement* items within the Minnesota Importance Questionnaire (Minnesota Importance Questionnaire [MIQ]; Rounds, Henley, Dawis, Lofquist, & Weiss, 1981). The MIQ is a 210 item self-report measure is offered in two forms: *Paired Form* or a *Ranked Form* which each explore 20 vocationally centered dimensions that are grouped into 6 vocational value dimensions (Achievement, Comfort, Status, Altruism, Safety, and Autonomy). The final 20 questions of the MIQ constitute the Absolute Judgement

items of the protocol and are added together to form a subscale to examine individual vocational needs preferences.

Minnesota Importance Questionnaire – Absolute Judgement Items

Vocational Values were assessed using the *Absolute Judgement* items within the Minnesota Importance Questionnaire (Minnesota Importance Questionnaire [MIQ]; Rounds, Henley, Dawis, Lofquist, & Weiss, 1981). The MIQ is a 210 item self-report measure is offered in two forms: *Paired Form* or a *Ranked Form* which each explore 20 vocationally centered dimension that are grouped into 6 vocational value dimensions (Achievement, Comfort, Status, Altruism, Safety, and Autonomy). The final 20 questions on either measure form a separate sub-category referred to as Absolute Judgement section.

The Absolute Judgment section was used to assess which vocational values participants found most important. Participants were asked to score the importance of 20 statements related to each of the each of the 20 vocational needs dimensions. Participants were asked, “On my ideal job it is important that...” and were asked to evaluate for their importance by denoting, “yes” or, “no.” A sample item is, “I could do something that makes use of my abilities.”

Statements that were important to an idea job were represented by 1, while statements that were not important to an ideal job were assigned a 0. Raw scores for each statement contribute to the score of an overall value. Needs statements are then compiled into their respective value sub-categories and added numerically. Values with higher scores indicate a greater importance of that particular vocational value.

When tested against another protocol assessing vocational values (SVIB; Strong Vocational Interest Blank; Berdie, 1960), the MIQ showed moderate convergent validity with positive correlations of .74 and .78, suggesting that the MIQ is a valid measure of vocational

interests which remains consistent with TWA theory (Brown & Lent, 2005). Additionally, the MIQ remains consistent when examined against other measures examining vocational values: ($r = .57$) Work Importance Locator – Paper & Pencil (WIP-P&P, Wall, Rivkin, & Lewis, 1999), and the Work Importance Locator – Computer (WIP-C, McCloy, Medsker, & Lewis, 1999). These findings suggest that the MIQ is a valid and appropriate measure to examine vocational values.

TWA suggests that correspondence is the measure between vocational values and workplace satisfaction. Consistent with the original MIQ manual (Gay et al., 1971) and Eggerth, 2004), workplace satisfaction may be measured using Occupational Reinforcer Patterns (ORPs). ORPs indicate which reinforcers are available in various work environments that may satisfy works' needs and values (Stewart et al., 1986). ORP profiles match the specific demands and needs of a given occupation and thus ORP profiles differ between occupations. An example of an ORP is provided in Appendix V.

Acceptance and Action Questionnaire – II

Psychological Flexibility may be operationalized as the ability to contact the present moment and changing or persisting in value driven behavior in any context of life, psychological flexibility is achieved through utilizing any combination of six core process of change (being present, self-as-context, cognitive defusion, valued living, and commitment to value driven behavior). Psychological flexibility was measured using the *Acceptance and Action Questionnaire* (AAQ-II; Bond et al., 2011). The AAQ-II has long been a measure of *Experiential Avoidance*, the inverse of psychological flexibility, where the inverse of scores on the Acceptance and Action Questionnaire – II suggest a measurement of psychological flexibility. 7 item self-report measure for experiential avoidance: the altering of form,

frequency, or situational sensitivity of negative thoughts and emotions. The measure was scored using a 7-point Likert scale (1 = never true, 7 = always true) where higher scores indicated elevated levels of experiential avoidance. Items examined avoidance of unwanted thoughts and emotions and the inability to commit to value-driven action while remaining in the present moment. A sample item is, “My painful experiences and memories make it difficult for me to live a life that I would value.” Palladino et al., (2013) found strong internal consistency of the AAQ-II ($\alpha = .93$) suggesting that the measure is suitable for assessing psychological flexibility.

Procedure

After the study obtained approval from the university’s institutional review board, the student principal investigator developed the survey using Qualtrics using the aforementioned assessments and created an account on Amazon Mechanical Turk (mTurk), an online crowdsourcing marketplace. The Qualtrics survey was then uploaded to mTurk where it was advertised to prospective participants.

In an electronic message prior to beginning the survey, participants were informed of the voluntary and anonymous nature of the study, and that surveys would ask about their reactions to former collegiate involvement as a student-athlete. Participants who began the study were met with a consent form. Participants were then evaluated for their eligibility for the study using the aforementioned screening criteria.

Eligible participants were granted access to complete the remainder survey which included a demographic questions and employment related questions. The demographic question was (1) What level was the track and field program you were a part of? (answers of: NCAA Division 1, NCAA Division 2, NCAA Division 3, NAIA). With regard to questions related to employment, participants were asked the following questions will be asked and scored on a 5-

point Likert-type scale. “How satisfied are you with your current employment?” and “I am satisfied with my overall workplace conditions.” Participants were also asked to write in their occupation.

After demographic data and employment data were collected, participants were granted access to the main survey which was comprised of the Committed Action Questionnaire, MIQ (Absolute Judgement questions), and the Acceptance and Action Questionnaire – II. In total, the survey took roughly 5 minutes to complete.

Identifying information from the participant was kept separate from submitted responses through the use of an anonymous coding system. When the participant completed the survey, they were provided with a unique, anonymous code that the participant used to collect their incentive. Participants were instructed to submit their unique code to the primary investigator who then accepted the online request for \$0.01 through mTurk. The anonymous code was strictly used only for identifying the participant with a completed survey. This was accomplished while keeping identifying information of the participant anonymous whereby the participant received an anonymous unique voucher code when completing the study that they will then able to use to cash in their incentive.

CHAPTER 4

RESULTS

The overall goal of this research was to investigate the relationship between Committed Action and Psychological Flexibility, and further understand how vocational Correspondence, as studied through individual values and work reinforcers, was associated with this relationship following participation in collegiate athletics. This chapter is devoted to providing descriptive statistics and describing the process by which results were calculated.

Mediation

Completed analyses. Prior to any analysis, the data were cleaned and organized. To clean the data, all participants who did not complete the survey were removed from the data set. Data were standardized by each of the twenty vocational needs examined by the Minnesota Importance Questionnaire (MIQ). In order to standardize the data, the mean score and standard deviation for each vocational need was found. Next, the overall mean for a given vocational need was subtracted from each case's obtained score. This result was then divided by the standard deviation for the vocational need of the given case; this result was a z-score. Z-scores were used as the MIQ Scale Score (MIQ-SS) for each vocational need as the absolute judgement items of the MIQ used in this study were measured on a 5-point Likert-type scale as opposed to the 0-1 style in the original MIQ.

As the data were standardized and scale scores were now available, Correspondence could be calculated. To calculate correspondence, the Occupational Reinforcer Pattern Scale Score (ORP-SS) for each vocation was found using the ORP-III scales (ORP-III, 1986). The ORP-SS for a given case was subtracted from the MIQ-SS with the result being squared. The sum of this process for each of the 20 vocational needs was found and rounded to two decimal

places. The 21st item on the MIQ serves as an anchor point in calculations conducted following completion of the entire MIQ and thus was unused in this study. Mean scores for the CAQ-8 were obtained prior to data analysis. Each of the 8 items from the CAQ-8 were obtained for each participant. Likewise, mean scores for the AAQ-II were obtained prior to data analysis. Each of the 8 items from the AAQ-II were obtained for each participant.

Regression analyses were run to explore whether Committed Action mediated the relationship between values and quality of life. A mediation model was constructed to explore the process that underlies the relationship between values driven Committed Action and Psychological Flexibility. While ACT suggests that values are the driving force behind Committed Action, the theory lacks a construction of specific values that are associated with wellbeing. Given the theoretical applicability of utilizing the TWA construct of Correspondence to account of specific values associated with wellbeing, the construct of Correspondence was predicted to be the mediating variable.

Traditional Mediation

Regression analysis was chosen for this study given the nature of the research question was one that explores the relationship between dependent and independent variables while exploring the potential impact of a third variable on the relationship between independent and dependent variables.

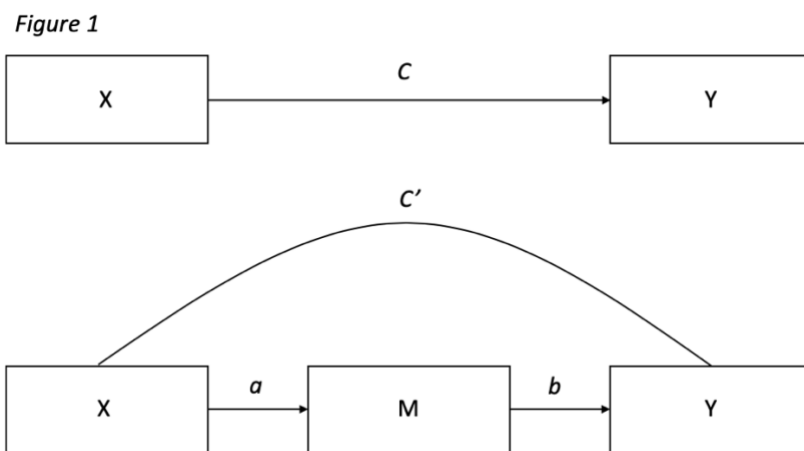
A mediation model, as opposed to a moderation model, was constructed as the research questions sought to explore the underlying nature of the relationship between an independent variable and dependent variable through the addition of a third variable: the mediator. Predictability or causality were not the purpose of the study, otherwise a moderation model would have been more favorable. While mediation may have been the most optimal statistical

strategy to explore the relationship between committed action and psychological flexibility, mediation was not without its limitations. Cohen et al., (2003) suggested the following limitations and retorts. First that a strong theoretical understanding must be present to explore the possibility of mediation. Secondly, the manipulation of the mediator variable must occur in an ethical manner that is not otherwise explained by the time in which variables were introduced. A final criticism suggests that it is possible that the mediating variable is in some way correlated to the predictor variable and outcome variable in that a way that does not mediate the relationship, and thus is simply correlational in nature.

Cohen et al., (2003) responded to the previous limitations as follows. First, there is a strong theoretical link between the importance of values and Committed Action (Hayes et al., 1999), and the link between Correspondence and values and their association with Psychological Flexibility through the examination of wellbeing studies (Dawis & Lofquist, 1984; Dawis, 1991). Secondly, temporal precedence suggests that if the independent variable does precede the dependent variable, the link may be directional in nature and actually provide more support for mediation. Thirdly, the nature of mediation suggests that there must not be a confounding variable that impacts the relationship between the independent and dependent variable, so other variables that are theoretically related to the mediator must be statistically ruled out. Various methods of mediation will be introduced and discussed. A summary will provide an explanation for the analysis chosen.

Mediation was operationalized as a variable which explains the relationship between a predictor variable and an outcome variable (Baron & Kenny, 1986). The purpose of a mediation model was to explore ways in which a variable explains the relationship between a predictor variable and an outcome variable, where the result provided a more robust explanation of the

importance of certain variables in relation to one another (See Figure 1). Said another way, mediation served to explain if a particular variable (mediator) affected the relationship between a predictor variable and an outcome variable. Baron & Kenny (1986) outline the four steps required to run a mediation analysis. The first step is to establish the understanding that there is a significant relationship between the predictor and the outcome variables. The second step is to show that the predictor variables are related to the mediator variable. The third step is performed to establish the relationship between the mediator and the outcome variable. The fourth step is conducted to show that the strength of the relationship between the predictor variable and the outcome variable is reduced when the mediator variable is added to the model. Power is the construct used to describe the impact of a given statistical model. Models constructed to examine mediation are recommended to have a sample of 200 participants or greater to ensure sufficient power (Frazier, Tx, & Barron, 2004; Hoyle & Kenny, 1999). A “full” mediation occurs when the relationship between the predictor variable and outcome variable does not differ from zero when the mediator is added to the model, whereas “partial” mediation occurs when the relationship between the predictor variable and outcome variable is significantly smaller when the mediator is added to the model, but the outcome is still greater than zero (Baron & Kenny, 1986). The mediation model used in this study is explained in the accompanying text.



According to Frazier, Tix & Barron (2004), mediation analyses should have been concluded at step 2 when the relationship between Committed Action (the predictor) and Correspondence (the hypothesized mediator) was not found to be significant. While the method for testing mediation described by Frazier, Tix and Barron (2004) was a foundational guide for some time, current examination of statistical practices have shed light on the utility of alternative methods which offer validated methods of testing for mediation that have come to rival Frazier, Tix and Barron (Rucker et al., 2011).

Methods of calculating mediation were reexamined when Rucker et al., (2011) questioned the importance of a total effect between X and Y being present prior to assessing mediation and challenged the notion of “full mediation” and “partial mediation.” Consistent with additional contemporary views of mediation (Hayes, 2009; MacKinnon et al., 2002; Shrout & Bolger, 2002; Zhao et al., 2010). Rucker et al. (2011) contends that the purpose behind mediation is to understand the effect a mediator has on a relationship between X and Y, and thus should analyses indicate that the mediator influences that relationship in any way, the importance lies in the difference, not the semantics suggesting a categorical way of understanding the difference.

Analyses in the current study indicated a change in the relationship between Committed Action (the predictor) and Psychological Flexibility (the outcome variable) in the presence of Correspondence (mediator) suggesting that mediation took place. Interpreting the findings of the present study using a more contemporary approach provides strength to the argument as the use of both Acceptance and Commitment Therapy and the Minnesota Theory of Work Adjustment have never before been used to examine the importance of values within the student-athlete

population. There is utility in drawing conclusions based on sound theory in cases where statistical precedent is not available.

Contemporary Approaches

The purpose of mediation is to understand the effect a third variable, a mediator (M), has on the relationship between a predictor (X) and outcome variable (Y). Hayes (2009) contends that it is possible for M to be causally between X and Y even in cases where X and Y are not associated. The argument by Hayes (2009) gains strength with the notion that constraining the size of a and b does not in fact exist, suggesting rather that it can be shown that X cannot affect Y indirectly in the absence of a detectable total effect size. Examples supporting this argument can be found in Hayes (2009), though the summary of the method relies heavily on the finding that when considering that total effect is the sum of various paths of influence (direct and indirect), many of which are not formally represented in the model. Further, two or more indirect effects, when valanced with opposing signs may cancel one another out, effectively making the indirect effects undetectable and not different than zero, “in spite of specific indirect effects that are not zero” (Hayes, 2009). Hayes (2009) provides additional support to the claim that mediation can occur despite non-significant relationships in steps 1-3 by providing the understanding that Hypothesis tests are fallible as they include the possibility of a decision error. Further, Preacher & Hayes (2004) share the lack of importance of utilizing the commonly conducted Sobel Test (Sobel, 1982) to examine the significance of a mediation effect as it relies on a normal distribution and sampling of *Path a* and *Path b*, “tend to be asymmetric with nonzero skewness and kurtosis” (Bollen & Stine, 1990; Stone & Sobel, 1990).

Hayes (2009) supports the use of routines suggested by Preacher & Hayes (2008) where mediator models use pairwise contrasts in single step multiple mediator models and bootstrap-

based routines for inference. While the methods suggested by Preacher & Hayes may in fact be a novel approach for analyzing mediating effects in psychological research, the present study sought to examine only a single mediator (as opposed to multiple mediators) and as such, bootstrap-based routines and pairwise contrasts were not appropriate and thus were not run.

Summary

According to Baron & Kenny (1986), there are four steps to creating a mediation model that supports that a variable (Correspondence) mediates the relationship between a predictor variable (Committed Action) and an outcome variable (Psychological Flexibility). The four-step model was first utilized first to analyze the data. Given the strength of counterarguments of Hayes (2009) and Rucker et al. (2011), analyses were reexamined using the suggestions of Hayes (2009) in an attempt to exhaustively examine relationships between the predictor variable and both the hypothetic mediator and outcome variables. Steps utilized during the mediation are described below.

First, the relationship between Committed Action (CAQ-8) and Psychological Flexibility (AAQ-II) was examined by finding the correlation between Committed Action (CAQ-8) and Psychological Flexibility (AAQ-II). We hypothesized that Committed Action (CAQ-8) would be positively correlated with Psychological Flexibility (AAQ-II). Should this hypothesis be confirmed, results would suggest that the more someone is able to behave in accordance with their personal values, the greater wellbeing they will experience. An outline of the proposed mediation model can be found in Figure 2.

Next, the relationship between Committed Action (CAQ-8) and Correspondence was explored. The original definition of Commitment to Values Driven Action remains remarkably consistent with the vocational psychology construct of Correspondence; both constructs dictate

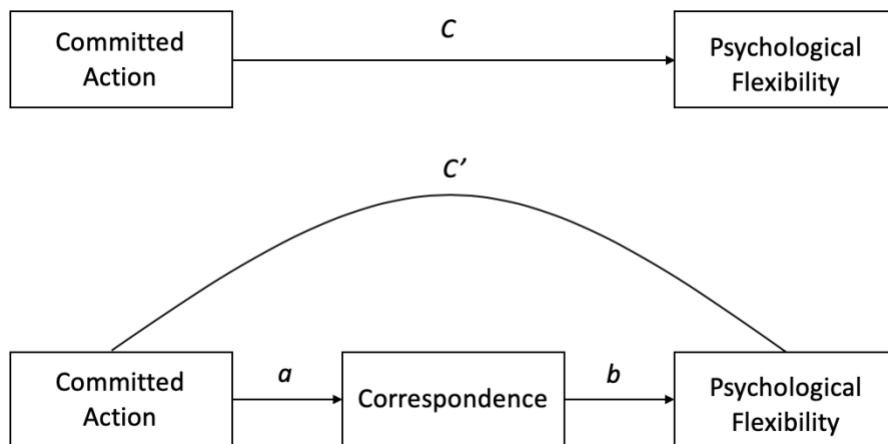
the necessity of values to lead toward purposive action. While the two constructs are similar, Committed Action only examines the relationship between values and their relationships with a particular action, whereas Correspondence assesses the satisfaction associated with needs and workplace reinforcers. An example of correspondence may be understood using the Occupational Reinforcer Pattern for Counseling Psychologist (Appendix V). In this example, correspondence would suggest that the counseling psychologist who scores high in Ability Utilization, a value within TWA, would most likely feel correspondent with their workplace if they were rewarded for using their abilities. As Creativity was a high scale value within the Occupational Reinforcer Pattern, the Counseling Psychologist would enjoy work in a setting in which creativity is appreciated and needed. It was hypothesized that Committed Action (CAQ-8) is positively correlated with Correspondence, and it is predicted that there is a positive relationship between Committed Action (CAQ-8) and Correspondence. Should this hypothesis be confirmed, results would suggest that people have a greater ability to behave in ways that align with their values when their values align with the demands of the workplace. This relationship has been theoretically understood and validated in various other populations, but never specifically targeting a post-collegiate athletics population.

Third, the relationship between Correspondence and Psychological Flexibility (AAQ-II) was examined. A primary goal when utilizing ACT theory is examining Psychological Flexibility (AAQ-II) through any of the 6 core processes of change, however the relationship between Correspondence and Psychological Flexibility (AAQ-II) has yet to be explored in sport psychology research. The authors hypothesize that Correspondence is positively correlated with Psychological Flexibility (AAQ-II). The relationship between Correspondence and Psychological Flexibility (AAQ-II) was predicted to be positively correlated. Should this

hypothesis be confirmed, results would suggest that wellbeing is greater when individual values align with workplace needs.

Finally, the relationship between Committed Action (CAQ-8) and Psychological Flexibility (AAQ-II) was examined when in the presence of Correspondence. Though the relationship between Committed Action (CAQ-8) and Psychological Flexibility (AAQ-II) is theoretically understood, the influence of specific individual values, as measured by Correspondence, has not been examined. It was hypothesized that the relationship between Committed Action (CAQ-8) and Psychological Flexibility (AAQ-II) will change in the presence of Correspondence. While values are a fundamental aspect in conceptualizing career transition through the lens of TWA, the vocational values of Achievement, Comfort, Status, Altruism, Safety, and Autonomy were utilized when assessing Correspondence and aided in examining the influence of Correspondence on the relationship between Committed Action (CAQ-8) and Psychological Flexibility (AAQ-II). As such, it was predicted that the relationship between Committed Action (CAQ-8) and psychological flexibility (AAQ-II) will be reduced in the presence of Correspondence (See Figure 1). Should this hypothesis be confirmed, results would suggest that those who can act in accordance with their individual values in their workplace would find it easier to do so and will achieve greater wellbeing than those whose values do not align with their workplace.

Figure 2



Data Analysis

First, the analyses found that Committed Action (the predictor) was related to Psychological Flexibility (the outcome) by regressing a measure of Psychological Flexibility on the Committed Action variable (step 1). The unstandardized regression coefficient ($\beta = .439$) associated with the effect of Committed Action on Psychological Flexibility was significant ($p < .000$). As such, Path c was significant, and the requirement for mediation in step 1 was met. The model can be found in Figure 2 while a summary of statistical outcomes can be found in Table 3.

Second, the analyses sought to establish that Committed Action (the predictor) was related to Correspondence (the hypothesized mediator). To do so, Correspondence was regressed on Committed Action (step 2). The unstandardized regression coefficient ($\beta = -0.04$) associated with this relation was not significant ($p < .443$). Thus, Path a was not significant ($p < .443$), and the requirement for mediation in step 2 was not met.

Third, to test whether Correspondence was related to Psychological Flexibility, Psychological Flexibility was regressed on both Committed Action and Correspondence (step 3). The coefficient associated with the relation between Correspondence and Psychological Flexibility (when controlling for Committed Action) was significant ($\beta = -.016$, $p < .000$) and as

such the condition for step 3 was met (Path b was significant). The third regression provided an estimate of Path c' which examines the relationship between Committed Action and Psychological Flexibility, indicating a significant relationship ($\beta = .429, p < .000$).

Despite significant relationships in Path C as well as Path B and Path C', the beta coefficient representing Psychological Flexibility regressed on both Committed Action and Correspondence (step 3) was smaller than in step 1 when Psychological Flexibility was regressed on Committed Action, indicating mediation did occur.

Figure 3

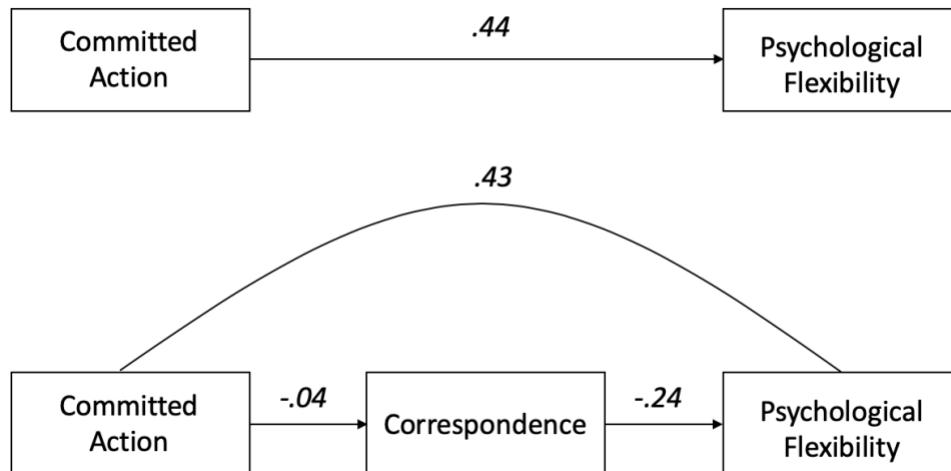


Table 3

Path	Measure	B	SE B	95% CI	Beta
Testing Step 1 (path c)					
Outcome	AAQ-II				
Predictor	CAQ-8	0.826	0.098	8.442, .000	0.439
Testing Step 2 (path a)					
Outcome	Correspondence				
Predictor	CAQ-8	-1.211	1.577	-.768, .443	-0.044
Testing Step 3 (paths b & c')					
Outcome	AAQ-II				
Mediator	Correspondence	-.016	0.003	-4.711, .000	-.237
Predictor	CAQ-8	0.806	0.095	8.519, .000	0.429

CHAPTER 5

DISCUSSION

This chapter will begin by reviewing the purpose of the current study. Results will then be explored and discussed as they relate to current literature. Limitations of the study will be shared along with considerations for future research.

The purpose of this study was to investigate how personal values were associated with a healthy transition from collegiate track and field in order to shed light on ways in which universities can prepare their student-athletes for transition away from competitive sport prior to graduation. Over 500,000 student athletes are participating in NCAA and NAIA athletics at any given time and more than 100,000 leave collegiate sport each year (NCAA, 2018a). Current statistics indicate that current student-athletes endorse higher rates of depression compared to their non-sport peers (Cox et al., 2017), and the trend continues following graduation or forced exit from sport in that former student-athletes report higher levels of depression compared to the general population (NIMH, 2017). Given the sheer quantity of former student-athletes leaving sport and considering the significance in documented mental health concerns, examining ways in which colleges and universities may aid in a healthy transition away from collegiate sport is a way to support those with reported psychological need.

Interpretation of Findings

The very label of those partaking in collegiate athletics, student-athlete, suggests a divide in time and a strain on personal resources that may not be the same in their non-sport counterparts. Student-athletes strive for personal and team growth during their time in college, all while making progress toward a degree that may impact the trajectory of their professional careers (Wylleman & Reints, 2010). Various studies have explored the interplay between the

commitment to individual values and Psychological Flexibility (Hayes et al., 1999; Levin et al., 2012; McCracken et al., 2013) yet such research has failed to include the potential influence of values associated with professional growth into analyses. Vocational values were explored using the variable Correspondence, which quantifies the relationship between the vocational needs of an individual with the opportunities associated with the role, known as reinforcers. This study sought to better understand how a measure of Correspondence influenced the relationship between Committed Action and Psychological Flexibility. Each aspect of the research design will be shared in the context of collegiate track and field, followed by a summary of relationships between variables.

Traditional and contemporary views in sport psychology and vocational literature outline the conceptual importance of commitment to individual values (Danioni & Barni, 2019; Frost & Sims, 1974; Trail & Chelladurai, 2002), where a relationship between individual values and overall wellbeing is important for social functioning and athletic performance (Gardner & Moore, 2012). As exploring the potential influence of a third variable, Correspondence, was the primary objective of the study, mediation was chosen as the preferred statistical analysis.

Hypothesis 1: Committed Action is positively correlated with Psychological Flexibility

Hypothesis 1 predicted that Committed Action (CAQ-8) would be positively correlated with Psychological Flexibility (AAQ-II). Consistent with Acceptance and Commitment Therapy (Hayes et al., 1999), analyses found significant positive relationship between Committed Action and Psychological Flexibility (Path C) which suggests that psychological wellbeing is promoted through the committed adherence to individual values. It can be interpreted that those who choose to consistently behave in ways in which align with their personal values are more likely to experience psychological wellbeing as well as those who experience greater psychological

wellbeing may choose to live out their personal values through their actions. As commitment to values increases so does psychological wellbeing, and vice-versa.

Hypothesis 2: There is a relationship between Committed Action and Correspondence

The second step in the mediation analysis was to understand the relationship between Committed Action and Correspondence. Hypothesis 2 predicted that Committed Action (CAQ-8) was positively correlated with Correspondence and analyses found that this relationship was not significant. Such a result may suggest that former collegiate track and field student-athletes do not have consistency between a measure of individual vocational values and workplace reinforcers, and their own individual values. It is possible that participants in this study hold a magnitude of individual and vocational values where all values are not met in the workplace.

Hypothesis 3: There is a relationship between Correspondence and Psychological Flexibility

Hypothesis 3 predicted that there would be a positive relationship between Correspondence and Psychological Flexibility (AAQ-II). Interestingly, analyses suggested that the relation between Correspondence and Psychological Flexibility (when controlling for Committed Action) was found to be negative and significant. These findings suggest that the presence of Correspondence influenced the relationship between Committed Action and Psychological Flexibility indicating that a participant's workplace involvement impacts the adherence to individual values in the service of wellbeing. These findings also suggest that as workplace Correspondence decreases, the need for wellbeing, as measured by Psychological Flexibility increases and vice versa. These findings are novel, suggesting a unique interplay between values and wellbeing.

Hypothesis 4: The relationship between Committed Action and Psychological Flexibility is altered in the presence of Correspondence.

Hypothesis 4 predicted that the relationship between Committed Action (CAQ-8) and Psychological Flexibility (AAQ-II) will change in the presence of Correspondence. While the analyses confirmed this hypothesis, the amount of change in the relationship between Committed Action and Psychological Flexibility was not significantly changed in the presence of Correspondence. This means that a person's ability to engage in behaviors which align with personal values remains significantly tied to their personal wellbeing whether or not there is a union between personal values and reinforcers in the workplace. This may suggest that the workplace that surrounds the individual does not directly alter the impact values driven action has on overall wellbeing. While this finding contradicts TWA theory overall, it is possible that the result may be unique given combined use of ACT and TWA measures.

General Discussion

The global takeaway from this study suggests that former collegiate track and field student-athletes who have an ability to engage in values driven behavior will not see a significant impact on their wellbeing even when their personal values do not correspond to reinforcers in the workplace. Seen through the lens of traditional mediation, the study could have stopped when Committed Action (CAQ-8) was not significantly correlated with Correspondence yet continuing in the analyses shows an important understanding. In this case, the lack of mediation effect may shed light on the importance of individual resilience by understanding that former collegiate track and field student-athletes were shown to have a strong ability to engage in action that aligns with their personal values driven action despite environmental stress experienced in the workplace.

The context surrounding career choice should also be examined when looking at the overall findings of the study. While the results suggest that Correspondence does not have a positive and significant impact on wellbeing, the authors suggest that the reader takes into account the context surrounding the participant. The Minnesota Theory of Work Adjustment (TWA), suggests that Correspondence is a predictive construct where the study of individual vocational values and workplace reinforcers may influence the occupational choice of a prospective employee (Dawis, & Lofquist, 1984). While Correspondence has been found to be an effective and appropriate predictor of workplace satisfaction (Dawis, 1991) not all people hold occupations which satisfy them. A person may hold a job out of financial necessity, personal interest, or social pressure, among other reasons.

The nature of collegiate track and field plays a role in the conceptualization of this data. The sport often holds an eclectic mix of race, ethnicity, nationality, and SES which are all factors that may influence personal values and thus an athlete's experience before, during, and after transition from collegiate track and field. While these cultural factors were not analyzed in this study, one cannot exclude the influence of culture in any psychological study. While collegiate track and field traditionally has a lower cumulative Grade Point Average (GPA) than many NCAA sports (Men = 3.02, Women = 3.24; NCAA, 2018b), successful transition from sport is not only influenced by GPA.

Many track and field student-athletes compete from December-May, as the indoor and outdoor seasons go back to back. Those who compete with both the cross-country team and the track and field team may be on the road every other weekend between September and May, often with just a short break around the Thanksgiving holiday. The length of time spent competing is a significant time commitment, and one that may require greater flexibility in the way that

studying and other academic tasks are completed. The length of time spent away from the university on team sanctioned trips to competition may also influence academic outcomes, though this was not tested in this study. While the significant time commitment of collegiate track and field student-athletes may be viewed as a downfall, the creativity and flexibility acquired to meet the significant time demand may in turn provide applicable skills to be utilized later on in the workplace. These preparation and time management skills may be general in nature, though advantageous in most any line of work. Time away from the routine of everyday campus life may also provide the opportunity for track and field student-athletes to stress their ability to engaged in values driven action, which as this study has shown, in an important variable when considering psychological wellbeing following graduation. It is worth noting that while the findings of this study may carry-over to other collegiate sports, though the data collected in this study only supports the transition from collegiate track and field.

Implications

There is direct utility in the findings of this study for the applied practitioner. Firstly, the study validated the conceptual relationship between Committed Action and Psychological Flexibility through a significant correlation with adequate statistical power. As the field of sport psychology continues to trend toward acceptance-based approaches (Gardner & Moore, 2012), the findings of this study give voice to the importance of living a values-driven life and that doing so positively influences wellbeing. This finding supports the utility of interventions at the individual and system level that directed at increasing the commitment to individual values.

Another implication of this study was furthering the understanding of that collegiate sport involvement influences a person's experience in the workplace following graduation. Given the duality of improving sport and academic performance during college, this study suggests that

supporting an individual's personal growth in commitment to values prior to graduation may in turn have a positive influence on their wellbeing in the workplace. As findings point to the importance of values driven Committed Action, this study provides support to the notion that student-athletes may benefit from resources directed at helping them to (1) understand which personal values they hold, and (2) providing ways to help student-athletes test their ability to engage in Committed Action prior to leaving collegiate sport involvement to improve their ability to do so when in a workplace environment.

This study highlighted the importance of continuing to utilize contemporary views of mediation analyses in conjunction with traditional approaches. According to Frazier, Tix & Barron (2004), mediation analyses should have been concluded following step 2 when the relationship between Committed Action (the predictor) and Correspondence (the hypothesized mediator) was not found to be significant. While traditional approaches have paved the way to foundational understandings in the psychological sciences, they should, like all things in science, continue to be monitored given the ever-changing zeitgeist. Employing the same 4-step approach laid out by Baron & Kenny (1986) but instead using the more contemporary understanding of Hayes (2009), this study shed light on the novel finding that came about by a mediated effect of Correspondence on the interplay between Committed Action and Psychological Flexibility. While the mediation was not significant, the applied practitioner is now provided an additional understanding of the way in which a student-athlete may experience transition away from sport. Given the amount of indirect effects that could be possible for any of the 100,000 collegiate athletes who transition out of collegiate sport each year and given the magnitude of importance surrounding wellbeing and mental health, continuing to lean on both traditional and contemporary approaches has shown to be prudent.

Lastly, there are implications for those working in non-clinical roles such as mental performance consultants and coaches. The findings of this study extend to those working in the spaces of mental performance and coaching as findings suggest that those who come into the contact with student-athletes prior to their transition from collegiate track and field may be in a position to discuss the importance of adhering to personal values and the impact that can have on mental health and work performance. The study was conducted within a population where participants denied significant mental health concerns, suggesting that professional training and accreditation is not imperative to have an impact on wellbeing through commitment to personal values.

Limitations

As is the case with all research, limitations exist. This section will outline the limitations associated with this study and provide a brief understanding of why said limitations occurred.

One limitation was the nature by which research was collected. While crowdsourcing has shown to be at least as reliable of a method for obtaining collegiate research as traditional methods (Buhrmester et al., 2016), there comes along with it the risk that participants falsified personal demographic statistics in order to gain the incentive associated with the study. With a large population required for proper mediation analyses and given the niche population and age restrictions of the study, finding ~300 local research participants who met all inclusion criteria was not feasible.

Another limitation was the absence of gender and sex classification data. As these data were not collected in the study, generalizing the findings to one gender or sex is not possible. While some may have found it helpful to have such data, the purpose of the study was to provide a more general understanding of how individual values interact within the population of those

who previously competed in collegiate track and field and not to make gendered or sex-based assumptions.

A third limitation of the study surrounds measurement error. While some statistical methods may suggest that the findings of this study provide enough rationale to conclusively say that Correspondence does in fact mediate the relationship between Committed Action and Psychological Flexibility (Hayes, 2009), others may argue that because certain conditions were not met (absence of significant relationship in *Path a*), mediation could not exist (Baron & Kenny). This disagreement may weaken the findings of this study depending on the theoretical and philosophical background of the reader. Another discrepancy between statistical findings and psychology theory was the insignificant relationship between Correspondence and job satisfaction. Post-hoc analyses did not show this relationship to be significantly related, which is a limitation of the study. This discrepancy could have occurred as participants were asked outright if they were satisfied with their current employment (see Appendix VII) where a validated instrument examining job satisfaction may have offered a framework for a deeper and more comprehensive explanation.

There continues to be a discussion on whether satisfaction should be assessed via single item measurement (Loo, 2002) or assess by multiple facets of job satisfaction (Lepold ety al., 2018). In the case of this study, satisfaction in a participant's current occupation was examined by specifically asking about their experience which may have led to some measurement error. It is possible that the relationship between Correspondence and satisfaction would have been different when examined more thoroughly, which would be in line with the Minnesota Theory of Work Adjustment.

A fourth limitation of the study was the use of traditional Occupational Reinforcer Patterns (ORP-III, 1986) which have not been updated since 1986. While many participants did fall under the ORP's outlined in the guide from 1986, it can be reasonably assumed that aspects of occupations have changed in the past 50 years given the advancements in technology and social norms. Additionally, the study could have gained strength by exploring how reinforcers in the workplace have changed since 1986 because as needs in the workplace change, it is likely that so do reinforcers. While not validated by experimental inquiry, it is worth noting that it is possible that reinforcers in the workplace have changed since the final revision of the 1986 ORP manual. As needs and roles in the workplace have changed, reinforcers in the workplace may be non-existent or may even alter the experience of the employee. While reinforcers for some occupations may have remained relatively stable, such as achievement and autonomy for professors, reinforcers surrounding farming occupations may be different now given rapid technological advancements. Given the limited number of ORP's, it should be noted that various participants were not included in the study because the occupations they listed through self-report was not an option at the time of publication of ORP's. While the original ORP's created may in some ways be outdated, they were utilized given the theoretical fit between Acceptance and Commitment Therapy (ACT) and TWA, as the Minnesota Importance Questionnaire provides versatile vocational values that could be examined through ACT or TWA.

Another limitation centers on whether participants were in their first job following graduation or if they moved between jobs since graduating. Should participants have moved between careers since graduating it is possible that their outcome scores on instruments included within the survey were impacted by a variable that was not accounted for. While this limitation does pose the possibility for unmeasured variance, the primary focus of the study was to examine

how Correspondence impacts the relationship between Committed Action and Psychological Flexibility which was still accomplished as long as the occupation of the participant aligned with an ORP. While these findings are novel in the understanding of the experience of a student-athlete transitioning away from collegiate track and field, the reader is reminded that the findings of this study examined only collegiate track and field and may vary if the study was completed with former student-athletes from other collegiate sports.

Future Recommendations

Understanding the influence of Vocational Correspondence in student-athletes prior to graduation is a worthwhile endeavor for those providing support to student-athletes as they transition into the workforce. While this study provided a snapshot of current beliefs of former collegiate track and field athletes, future research could explore the influence of Correspondence on the relationship between Committed Action and Psychological Flexibility in all other sports offered through the NCAA and NAIA. Future research could expand the research questions of this study into other domains of performance. Occupations specific to the military, first-responders, the arts, and martial arts; all roles wherein an understanding of individual values plays a role in understanding the theoretical reasoning underlying vocational choice and retention.

In any of these occupations, performance continues to be evaluated which may shed light on ways personal values continue to be reinforced or challenged, and how these dynamics impact personal wellbeing. As this study showed, finding a way to reinforce personal values within the workplace can have an impact on a person's adherence to their own values and on their overall wellbeing.

While each person in this study competed at the collegiate level prior to graduation, it is possible that their personal values began to take different forms as they entered into the world of work where expectations and outcomes are not measured by a mark on the track or a grade in the classroom. This study showed the how impactful commitment to personal values can be on wellbeing and highlighted the importance of workplace Correspondence, both important considerations for those going through the process of transitioning away from the collegiate setting as well as for those who are helping foster a healthy transition. As personal values differ between people and ultimately change over time, continuing to examine how values take shape is a worthwhile endeavor when the current and future wellbeing of those in our community is of concern. This understanding may be applied through direct psychological training or further examined through research.

CHAPTER 6

FIGURES

Figure 1

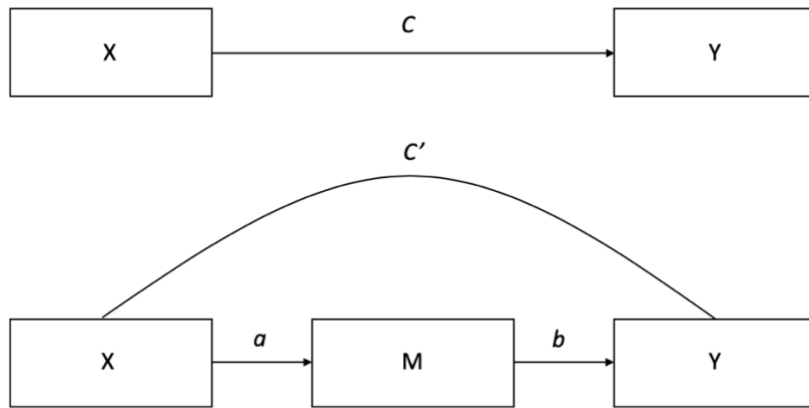


Figure 2

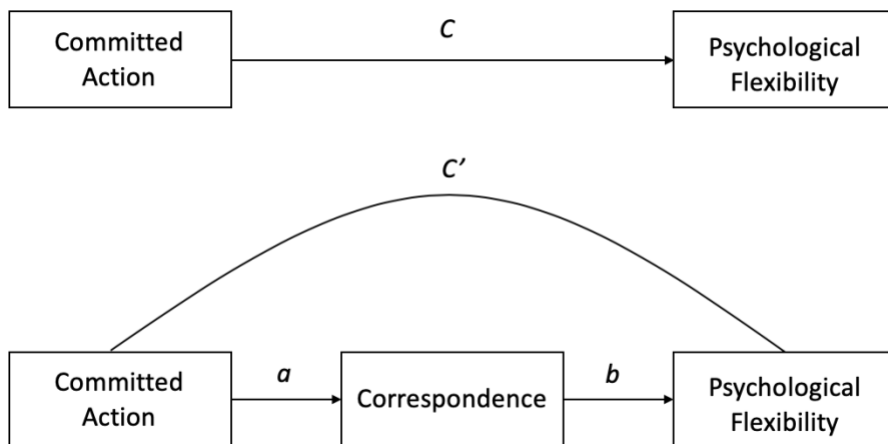
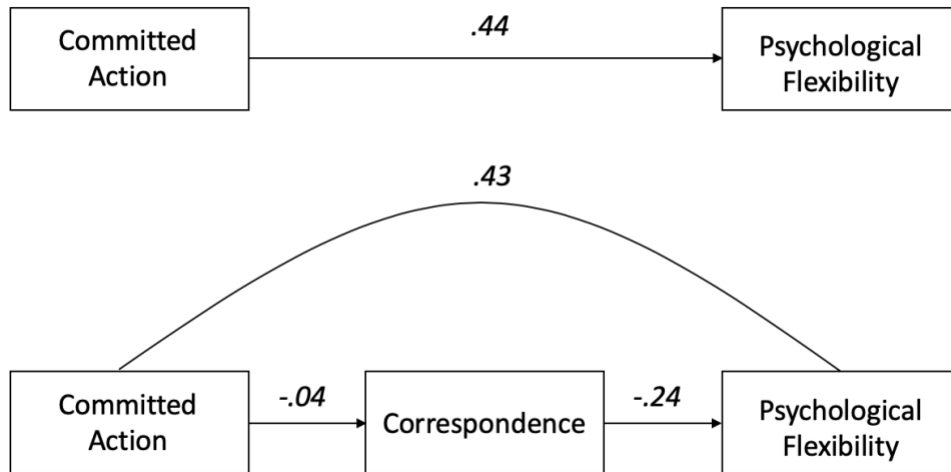


Figure 3



CHAPTER 7

TABLES

Table 1

Division	Total	Age (Average)
NCAA 1	118	24.8
NCAA 2	97	24.4
NCAA 3	58	24.6
NAIA	27	24.8
Total	300	24.6

Table 2

Occupation	Total	Occupation	Total	Occupation	Total
Accountant, Certified Public	10	Home Attendant	4	Sales Agent (Insurance)	4
Bookkeeper	11	Lawyer	6	Salesperson (General)	22
Carpenter	1	Mail Carrier	1	Secretary (General Office)	17
Clerk (General Office)	3	Marker	1	Statistician	2
Cook	2	Nurse, Professional	17	Taxi Driver	1
Counselor (Private)	15	Painter	1	Teacher (elementary)	9
Counselor (School)	1	Pharmacist	2	Teacher (secondary)	8
Digital Computer Operator	49	Physical Therapist	10	Teacher Aide	8
Electrician	1	Post Office Clerk	1	Waiter-Waitress	1
Engineer (Civil)	13	Programmer	2	Work Evaluator	47
Engineer (Mechanical)	3	Psychologist (Counseling)	2	Writer	14
Heavy Equip Operator	9	Recreation Leader	3		

Table 3

Path	Measure	B	SE B	95% CI	Beta
Testing Step 1 (path c)					
Outcome	AAQ-II				
Predictor	CAQ-8	0.826	0.098	8.442, .000	0.439
Testing Step 2 (path a)					
Outcome	Correspondence				
Predictor	CAQ-8	-1.211	1.577	-.768, .443	-0.044
Testing Step 3 (paths b & c')					
Outcome	AAQ-II				
Mediator	Correspondence	-.016	0.003	-4.711, .000	-.237
Predictor	CAQ-8	0.806	0.095	8.519, .000	0.429

CHAPTER 8

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Appendix I: Committed Action Questionnaire

Committed Action Questionnaire (CAQ-8)

Directions: Below you will find a list of statements. Please rate the truth of each statement as it applies to you by circling a number. Use the following rating scale to make your choices. For instance, if you believe a statement is “Always True”, you would circle the 6 next to that statement.

0 Never True	1 Very Rarely True	2 Seldom True	3 Sometimes True	4 Often True	5 Almost Always True	6 Always True
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1	I can remain committed to my goals even when there are times that I fail to reach them	0	1	2	3	4	5	6
2	When a goal is difficult to reach, I am able to take small steps to reach it	0	1	2	3	4	5	6
3	I prefer to change how I approach a goal rather than quit	0	1	2	3	4	5	6
4	I am able to follow my long terms plans including times when progress is slow	0	1	2	3	4	5	6
5	I find it difficult to carry on with an activity unless I experience that it is successful	0	1	2	3	4	5	6
6	If I feel distressed or discouraged, I let my commitments slide	0	1	2	3	4	5	6
7	I get so wrapped up in what I am thinking or feeling that I cannot do the things that matter to me	0	1	2	3	4	5	6
8	If I cannot do something my way, I will not do it at all	0	1	2	3	4	5	6

Appendix II: Minnesota Importance Questionnaire – Absolute Judgement

On this page consider each statement and decide whether or not it is **important** to have in your **ideal** job.

- If you think that the statement is **important** for your **ideal** job, mark an X in the “**Yes**” box on your answer sheet.
- If you think that the statement is **not important** for your **ideal** job, mark an X in the “**No**” box on your answer sheet.

On my **ideal** job it is important that . . .

1. I could do something that makes use of my abilities.
2. The job could give me a feeling of accomplishment.
3. I could be busy all the time.
4. The job would provide an opportunity for advancement.
5. I could tell people what to do.
6. The company would administer its policies fairly.
7. My pay would compare well with that of other workers.
8. My co-workers would be easy to make friends with.
9. I could try out some of my own ideas.
10. I could work alone on the job.
11. I could do the work without feeling that it is morally wrong.
12. I could get recognition for the work I do.
13. I could make decisions on my own.
14. The job would provide for steady employment.
15. I could do things for other people.
16. I could be “somebody” in the community.
17. My boss would back up the workers (with top management).
18. My boss would train the workers well.
19. I could do something different every day.
20. The job would have good working conditions.
21. I could plan my work with little supervision.

Appendix III: Acceptance and Action Questionnaire – II

AAQ-II

Below you will find a list of statements. Please rate how true each statement is for you by using the scale below to fill in your choice.

1	2	3	4	5	6	7
never true	very seldom true	seldom true	sometimes true	frequently true	almost always true	always true

1. My painful experiences and memories make it difficult for me to live a life that I would value.

2. I'm afraid of my feelings.

3. I worry about not being able to control my worries and feelings.

4. My painful memories prevent me from having a fulfilling life.

5. Emotions cause problems in my life.

6. It seems like most people are handling their lives better than I am.

7. Worries get in the way of my success.

Appendix IV: Occupational Reinforcer Pattern: Counseling Psychologist

PSYCHOLOGIST, COUNSELING

O.A.P. = 49

D.O.T. = 045.107-026

Occupations with Similar Reinforcers: See Cluster A

Descriptive Characteristics

MAKE USE OF THEIR INDIVIDUAL ABILITIES

HAVE WORK WHERE THEY DO THINGS FOR OTHER PEOPLE

TRY OUT THEIR OWN IDEAS

Make decisions on their own

Get a feeling of accomplishment

Plan their work with little supervision

Do work without feeling that it is morally wrong

ORP Scale Values, Standard Errors, and P and Q Indices

Scale	Scale Value	+1 SE	-1 SE	P	Q
1. Ability Utilization	1.84	1.75	1.94	.03	5.33
2. Achievement	1.39	1.31	1.49	.03	3.58
3. Activity .....	.75	.65	.85	.25	1.52
4. Advancement .....	.31	.24	.37	.28	.80
5. Authority	-.33	-.44	-.24	.75	.71
6. Company Policies	-.10	-.20	-.00	.47	.21
7. Compensation .....	.20	.12	.28	.42	.46
8. Co-Workers .....	.83	.73	.93	.11	1.74
9. Creativity	1.52	1.47	1.57	0.00	5.42
10. Independence .....	.63	.53	.73	.33	1.29
11. Moral Values	1.00	.90	1.10	.03	2.17
12. Recognition .....	.58	.51	.65	.22	1.46
13. Responsibility	1.42	1.36	1.48	.03	4.67
14. Security .....	.56	.49	.63	.17	1.41
15. Social Service	1.77	1.67	1.88	0.00	4.80
16. Social Status .....	.49	.42	.57	.14	1.20
17. Supervision-Hum.-Rel. ...	.02	-.06	.08	.42	.04
18. Supervision-Technical ...	-.31	-.41	-.21	.69	.66
19. Variety .....	.95	.88	1.01	.19	2.61
20. Working Conditions .....	.74	.67	.82	.19	1.80
21. Autonomy	1.28	1.20	1.36	.06	3.45

N = 36 Raters

1985

Appendix V: Consent Form

CHAPTER 10

CONSENT

University of Wisconsin-Milwaukee Informed Consent to Participate in Research

Study title: Student-Athlete Transition: An Examination of Values and Commitment

Researcher[s]: Michael Clark, M.Ed., UW-Milwaukee; Stephen Wester, Ph.D., UW-Milwaukee

We're inviting you to participate in a research study. Participation is completely voluntary. If you agree to participate, you can always change your mind and withdraw. There are no negative consequences, whatever you decide.

What is the purpose of this study?

We want to understand which personal values former collegiate track and field student-athletes align with and whether there is a connection between these values and your mental health. The purpose of the study is to gain further understanding into ways former collegiate track and field student-athletes make a smooth transition from collegiate sport into the work force.

What will I do?

This survey will ask you questions about your values, and any current or past mental health concerns you may have. The survey will take about 10 minutes.

Risks

- Some questions may be very personal or upsetting. You can skip any questions you don't want to answer, or stop the survey entirely.
- Online data being hacked or intercepted: This is a risk you experience any time you provide information online. We're using a secure system to collect this data, but we can't completely eliminate this risk.
- Amazon could link your worker ID (and associated personal information) with your survey responses. Make sure you have read Amazon's mTurk participant and privacy agreements to understand how your personal information may be used or disclosed.
- Breach of confidentiality: There is a chance your data could be seen by someone who shouldn't have access to it. We're minimizing this risk in the following ways:
 - All identifying information is removed and replaced with a study ID.
 - We'll store all electronic data on a password-protected, encrypted computer.

Possible benefits: Besides the compensation listed below, your responses contribute to advancing resources for current and future student-athletes to aid in their transition away from collegiate sport.

Estimated number of participants: 400 former student-athletes.

How long will it take? The survey will take an estimated 10 minutes.

Costs: None

Compensation: Successful completion of the survey will result in a five-cent (\$0.05) benefit.

Future research: De-identified data (all identifying information removed) may be shared with other researchers. You won't be told specific details about these future research studies.

Confidentiality and Data Security

Your mTurk ID will be collected but will be withheld during statistical analysis.

Where will data be stored? On the servers for the online survey software (Qualtrics), accessible through the researchers' computers.

How long will it be kept? De-identified data will be kept for 6 years.

Who can see my data?

- We (the researchers) will have access to de-identified information (no names, birthdate, address, etc.). This is so we can analyze the data and conduct the study.
- The Institutional Review Board (IRB) at UWM, the Office for Human Research Protections (OHRP), or other federal agencies may review all the study data. This is to ensure we're following laws and ethical guidelines.
- We may share our findings in publications or presentations. If we do, the results will be de-identified.
- Amazon: Because they own the MTurk internal software, and to issue payment, Amazon will have access to your MTurk worker ID. There is a possibility Amazon could link your worker ID (and associated personal information) with your survey responses.

Contact information:

For questions about the research, complaints, or problems: Contact Michael Clark, M.Ed. clark45@uwm.edu, or Stephen Wester, Ph.D. srwester@uwm.edu.

For questions about your rights as a research participant, complaints, or problems: Contact the UWM IRB (Institutional Review Board; provides ethics oversight) at 414-229-3173 / irbinfo@uwm.edu.

Please print or save this screen if you want to be able to access the information later.

IRB #: 20.012

IRB Approval Date: 7/31/19

Agreement to Participate

If you meet the eligibility criteria below and would like to participate in this study, click the button below to begin the survey. Remember, your participation is completely voluntary, and you're free to withdraw at any time.

- I am at least 18 years old
- I am a US Citizen
- I graduated in Spring of 2017 or before
- I am a former collegiate track and field athlete (NAIA or NCAA)
- Mental health concerns have not significantly interfered with my ability to work, go to school, or function socially in the past 2 years

Appendix VI: Screening Survey

Are you a US citizen?

- Yes
 No

Are you between the ages of 21 and 26 years old?

- Yes
 No

What is your age? (years)

Has it been two or more years since you graduated from an NAIA or NCAA institution?

- Yes
 No

Did you compete for at least 1 full season in collegiate track and field? (NAIA or NCAA)

- Yes
 No

In the past two years, were mental health concerns significant enough to interfere with your ability to work, go to school, or engage in social functions?

- Yes
 No

Appendix VII: Satisfaction Survey

What is your primary occupation? (job title, student, etc.)

How satisfied are you with your current employment?

Very Dissatisfied

Dissatisfied

Neutral

Satisfied

Very Satisfied

I am satisfied with my current employment.

Never True

Seldom True

Sometimes True

Often True

Always True

What level was the track and field program you were a part of?

- NCAA Division 1
- NCAA Division 2
- NCAA Division 3
- NAIA

Appendix VIII: Curriculum Vitae

CHAPTER 11

CURRICULUM VITA

Curriculum Vitae Michael N. Clark, M.Ed.

General Information

University of Wisconsin- Milwaukee
Department of Educational Psychology
2400 E. Hartford Ave
Milwaukee, WI 53211

Formal Education

University of Wisconsin-Milwaukee, Milwaukee, WI
Ph.D. Counseling Psychology
August 2016 - Spring 2021
GPA: 3.89

University of Missouri, Columbia MO
Educational, School and Counseling Psychology
M.Ed. Counseling Psychology, Emphasis in Sport
August 2014 - May 2016
GPA: 3.98

Mississippi State University, Starkville MS
B.A. Psychology, Cum Laude, May 2014
August 2010 - May 2014
GPA: 3.42

Licenses, Accreditations, and Memberships

Licensed Professional Counselor – In Training, State of Wisconsin. (#3775 – 226), December 2017-Present.

Certified Mental Performance Consultant – Association for Applied Sport Psychology (2019-2024)

Member, Pi Lambda Theta, 2019 – Present

Member, Psi Chi, 2012 – Present

Member, American Psychological Association, 2015 – Present,

American Psychological Association Division 47 Student Affiliate, 2018 – Present

Member, Association for Applied Sport Psychology, 2015 – Present

Member, Association for Contextual Behavioral Science 2017 – Present

USATF Level I Coach, Benedictine, IL, February 2017

Professional Experience

Applied Experience

Professional Counselor, Roger's Behavioral Health: Adult Trauma Recovery Unit

-July 2019 – Present

-Provided 1-1 and group therapy to adults with primary diagnosis of PTSD

-Adhered to Prolonged Exposure model of PTSD recovery

-Created and administered in-vivo exposure hierarchies

-Administered and interpreted psychological evaluations (MINI, CAPS)

Owner, Clark Performance Consulting

-June 2018 – Present

-Provided 1-1 mental skills training

-Developed and implemented workshops targeting mental skill improvement and leadership development

-Consulted with coaches regarding results of athlete assessment surrounding mental skills and team culture

Mental Performance Coach, Waukesha South High School

-February 2019 – Present

-Contributed to the bio/psycho/social development across 30 athletic programs

-Improved mental performance through individual and team sessions

-Consulted with coaches regarding athlete advocacy and concerns

Summer Mental Conditioning Coach, IMG Academy

-June 2018 – August 2018

-Delivered 1-1 and group mental conditioning sessions to 8-18 year old student athletes

-Lead and assisted in perceptual-cognitive skills training

-Developed and implemented mindfulness curriculum to be used with full time students

Psychological Trainee, Marquette University

-September 2018 – May 2019

-Provided 1-1 therapy

-Assisted in university outreach

-20 hours/week

Psychological Trainee, University of Wisconsin-Milwaukee

-September 2017 – May 2018

- Provided 1-1 therapy
- Assisted in bi-weekly university outreach event Let's Talk
- Assisted in university outreach to campus life leaders
- 20 hours/week

Psychological Trainee, Roger's Memorial Hospital, Brown Deer PTSD Program

- October 2016 – July 2017
- Provided 1-1 and group counseling
- Administered and interpreted psychological evaluations (MINI, CAPS)
- Assisted in administration of exposure therapy under prolonged exposure model
- Lead psychoeducational groups centered around CBT, ACT, IPR, and Mindfulness
- 20 hours/ week

Psychological Trainee, University of Missouri

- August 2015 - May 2016
- Provided counseling services for up to 6 clients per week
- 3 hours of weekly coursework pertaining to conceptualization, intervention and diagnosis pertaining of clients
- 15 hours/ week

Track and Field Internship Supervised by Dr. Richard McGuire, University of Missouri

- January 2015 - January 2016
- Assisted with delivering sport psychology services to University athletes

Graduate Assistant, Thompson Center for Autism and Neurodevelopmental Disorders

- July 2015 - June 2016
- Facilitated the therapeutic process by supplying accurate medical charts
- Finalized reports while collaborating with medical providers

Research Assistant with Dr. E. Samuel Winer, Unconscious Perception and Psychopathology Lab, Mississippi State University

- January 2013 - May 2014
- Facilitated experimental process by running subjects
- Conducted relevant literature reviews

Teaching Experience

Instructor, COUNS 970: Supervised Practicum 2 in Clinical Mental Health Counseling

- Fall, 2018; Spring 2019
- Taught ~4 graduate students at the Master's level
- Facilitated the development of competence of MPCAC and State of Wisconsin Licensed Professional Counselor standards
- Evaluated client case-conceptualization supported by empirical psychological theory
- Supervised student presentations on topics related to clinical mental health counseling

Instructor, COUNS 765: Supervised Practicum 1 in Clinical Mental Health Counseling

- Fall, 2018; Spring 2019
- Taught ~15 graduate students at the Master's level
- Facilitated the development of competence of MPCAC and State of Wisconsin Licensed Professional Counselor standards
- Evaluated client case-conceptualization supported by empirical psychological theory

Instructor, COUNS 755: Pre-Practicum

- Fall, 2018; Spring 2019
- Taught ~5 graduate students at the Master's level
- Facilitated the development of competence of MPCAC and State of Wisconsin Licensed Professional Counselor standards
- Evaluated client case-conceptualization supported by empirical psychological theory

Instructor, COUNS 702: Neuroscience and Medical Aspects of Counseling

- Spring, 2018
- Taught ~37 graduate students using an online medium
- Develop curriculum
- Grade and provide substantive feedback to Master's level students
- Work collaboratively with teaching assistant

Instructor, Ed Psy 105: Motivation Strategies

- Spring, 2018
- Taught ~25 undergraduate students
- Collaborated on the creation and administration of weekly content for teaching assistants

Instructor, COUNS 714: Essentials of Counseling Practice

- Fall, 2017
- Taught ~25 graduate students
- Worked collaboratively with supervising professor

Instructor, Ed Psy 104: Pathways to Success

- Fall, 2017
- Taught ~80 undergraduate students
- Worked collaboratively with fellow instructors and teaching assistants

Teaching Assistant, Ed Psy 330: Introduction to Learning and Development

- Fall 2016, Spring 2017
- Assisted in exam writing
- Evaluated and graded student research projects
- Taught ~80 undergraduate students through lecture and small group lab meetings

Teaching Assistant, Ed Psy 105: Motivation Strategies

- Spring, 2017
- Taught ~20 undergraduate students each Wednesday and Friday
- Served as a liaison into the college educational experience
- Created weekly lesson plan
- Administered and graded Bi-weekly quizzes

Teaching Assistant, Ed Psy 104: Pathways to Success at UWM

- Fall, 2016
- Taught ~20 undergraduate students each Wednesday and Friday
- Served as a liaison into the college educational experience
- Created weekly lesson plan
- Administered and graded Bi-weekly quiz

Leadership Roles

Abstract Reviewer – Division 47, APA Annual Convention 2019

- Reviewed student and professional poster and symposium abstracts
- Worked collaboratively with team of reviewers to ensure consistency among accepted abstracts

Advisory Council Member for *Team Mental Training*.

<https://www.teammentaltraining.com/course/mental-toughness-1/>

- October 2018 – Present
- Mental Training Course for Elite Athletes
- Provided feedback on course material
- Collaborated on marketing strategies

Student Liaison, Counseling Psychology Student Association

- August 2017 – Present
- Facilitated effective communication between faculty and students
- Disseminated critical information to the counseling psychology graduate program

Assistant Coach, Waukesha South Boys Cross Country & Track and Field

- August 2016 – Spring 2019
- Contributed to the psycho/bio/social development of ~150 boys
- Developed mental performance program for distance athletes
- Contributed to the physiological training plan for distance athletes

Student Conference Volunteer Initiative Chair, Association for Applied Sport Psychology

- December 2016 – Present
- Served as liaison between conference presenter and AASP management group
- Assisted with audio/visual production for conference presentations

Website and Social Media Initiative Chair, Association for Applied Sport Psychology

- December 2015 – December 2016
- Managed and operated social media platforms
- Created and aggregated content pertinent to current and future members

Social Media Representative, M-Club, Mississippi State University

- September 2013 - May 2014
- Informed current members and followers of current club news

-Participated in club board meetings

Citations & Presentations

Articles

Grau P.P., McDonald, J.E., **Clark, M.**, & Wetterneck, C.T. (In Press). The Relationship Between Three ACT Core Processes of Change, PTSD, and Depressive Symptoms. *Journal of Contextual Behavioral Science*. (In press)

Posters

Clark, M.N., Love, T., Dueck, D., Wester, S. (2019, October). *Putting Data into Action: Acceptance Based Approaches in High School Athletics*. Poster presented at the 34th Annual Conference of the Association for Applied Sport Psychology. Portland, OR.

Clark, M.N., Grau, P., Warner, R.C., Wetterneck, C.T. (2019, August). *Exploring Experiential Avoidance and Symptom Severity Using ACT Core Processes Within a PTSD Population*. Poster presented at the Division 17 Student Poster Session at the 127th Annual Convention of the American Psychological Association. Chicago, IL.

Clark, M.N., Orr, B. (2018, October). *An Analysis of Value Driven Committed Action in Division I Track and Field: Challenges and Next Steps*. Poster presented at the 33rd Annual Conference of the Association for Applied Sport Psychology, joint meeting with the Canadian Sport Psychology Association. Toronto, ON, CA.

Clark, M.N., Grau, P., Kjar, K.L., Parra-Nelsen, J.L., Abdulrasool, S.Z., Pierson, Wetterneck, C.T. (2018, June). *Predicting Quality of Life, and PTSD and Depression Symptom Severity using ACT Core Processes in a PTSD Population*. Poster presented at the 2018 Trauma in Our Community Conference. University of Wisconsin- Milwaukee, Milwaukee, WI.

Clark, M.N., Kjar, K.L., Parra-Nelsen, J.L., Abdulrasool, S.Z., Lepak, J., Wetterneck, C.T. (2018, April). *Do ACT Core Processes Determine Quality of Life, and PTSD and Depression Symptom Severity in a PTSD Population?* Poster presented at the Annual Convention of the Wisconsin Psychological Association: 21st Century Psychology: Diverse Populations, Diverse Practices, Appleton, WI.

Clark, M.N., Parra-Brownrigg, J.L., Cass, T.J., Grau, P., Dryssen, D.D., Wetterneck, C.T. (2017, November). *The Relationship Between ACT Core Processes of Change and PTSD and Depression Symptom Severity*. Poster presented at the 33rd Annual Meeting of the International Society for Traumatic Stress Studies: Trauma and Complexity: From Self to Cells, Chicago, IL.

Grau, P., Wojcik, K.D., Cook, J.A., **Clark, M.N.**, & Wetterneck, C.T. (2017, November). *An Analysis of the Relationship Between Self-Compassion, Psychological Inflexibility, and PTSD Severity in a Partial Hospitalization Program*. Poster presented at the 33rd Annual Meeting of the International Society for Traumatic Stress Studies: Trauma and Complexity: From Self to Cells, Chicago, IL.

Clark, M.N., Orr, B. (2017, October). *The Effect of a Season Opener on the Perception of Season Readiness in a Collegiate Athlete: A Case Study*. Poster presented at the 32nd Annual Conference of the Association for Applied Sport Psychology. Orlando, FL.

Clark, M.N., Wetterneck, C.T., Wojcik, K.D., Parra-Brownrigg, J.L. (2017, April). *An Analysis of the Relationship Between Valued Living and PTSD Symptomology in a Partial Hospitalization Program*. Poster presented at the Annual Convention of the Wisconsin Psychological Association. Madison, WI.

Presentations

Clark, M.N., McGuire, R. (2020, February) Applying the Power of Positive Coaching: Teaching the Skill of Focus. Presentation at the Wisconsin Track Coaches Association Association Annual Clinic. Madison, WI.

Clark, M.N. (2019, November) Improving Confidence and Composure in High School Athletics. Presentation at the Wisconsin Athletic Directors Association Annual Conference. Wisconsin Dells, WI.

Clark, M.N. (2019, January). *Commitment and Confidence: Mental Skills for Competition and Practice*. Presentation at the Waukesha South Coach's Corner. Waukesha, WI.

Clark, M.N., (2018, January). *Values, Communication, and Winning: Sport Psychology Interventions in High School Cross Country*. Presentation at The Wisconsin Cross Country Coaches Association Annual Clinic. Brookfield, WI.

Clark, M.N., (2017, July). *Mental Preparation for Competition and Practice in High School Cross Country*. Presentation at Milwaukee Area Distance Camp. Shorewood, WI.

Texts

Chapter Contributor:

Sachs, M., Tashman, L.S., Razon, S. (2020) *Performance Excellence: Stories of Success From the Real World of Sport and Exercise Psychology*. Rowman & Littlefield Publishing Group.

Chapter Assistant:

Taylor, J. (2019) *How to Survive and Thrive When Bad Things Happen: 9 Steps to Cultivating an Opportunity Mindset in a Crisis*. Rowman & Littlefield Publishing Group.

Blogs

Getting to Know the Unknown. Blog post for Trail Transformation

<https://www.trailtransformation.com/post/getting-to-know-the-unknown>

The Great Unknown. Blog post for Waukesha South High School

<https://goblackshirts.com/2020/03/21/the-great-unknown-blog-post-from-coach-clark/>

Managing Emotions in Sports. Blog post for Psychotherapy.net.

<https://www.psychotherapy.net/blog/title/managing-emotion-in-sports>

See It, Feel It, Trust It. Blog post for Wisconsin Golf Academy's *Forethoughts*.
<http://wisconsin-golf-academy.com>

Composure on the Course. Blog post for Wisconsin Golf Academy's *Forethoughts*.
<http://wisconsin-golf-academy.com>

Having the Hard Conversations in Sport. Blog post for Psychotherapy.net.
<https://www.psychotherapy.net/blog/title/having-the-hard-conversations-in-sport>

Symposia

Acceptance Based Approaches in Youth Sport.

- **Michael Clark, M.Ed.**, & Jenna Halvorson, M.S
- Presented at the 2019 AASP Midwest Regional Conference
- Chair: **Michael Clark, M.Ed.**

Examining the Impact on ACT Process of ACT and Exposure-Based Treatments for OCD and PTSD. *Valued Living and Psychological Flexibility in an Exposure-based PTSD Program: Considerations for Treatment.*

- Peter Grau, M.S., **Michael Clark, M.Ed.**, & Chad T. Wetterneck, Ph.D.
- Presented at the 2018, 16th Annual Association for Applied Contextual Behavioral Science World Conference. Montreal, Canada.
- Chair: Chad Wetterneck, Ph.D.; Discussant: John Forsyth, Ph.D.

Research Interests

Clinical Sport Psychology; Athlete Wellbeing; Performance Psychology; Psychological Interventions for PTSD; Psychology of Men and Masculinities

Awards and Honors

UW- Milwaukee School of Education General Scholarship, \$1000 (Fall, 2019)
UW- Milwaukee School of Education General Scholarship, \$1500 (Fall, 2018)
Student Travel Award, \$550, University of Wisconsin- Milwaukee (Fall 2018)
UW- Milwaukee School of Education General Scholarship, \$4200 (Fall, 2017)
Student Travel Award, \$450, University of Wisconsin- Milwaukee (Fall 2017)
UW- Milwaukee School of Education General Scholarship, \$4200 (Fall, 2016)
Student Travel Award, \$400, University of Missouri (Fall 2015)
All-SEC Academic Team (2010-2014)
Mississippi State All-Academic Team (2010-2014)
USATF Intermediate 3000m Junior National Champion (2008)
Eagle Scout, Troop 16, Brookfield WI (2007)