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**University of Thessaly Department of Physical Education and Sport Sciences**

**The Motivation of an Paralympic Athlete with Autism and Challenges Associated with  
Competing Professionally**

by

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### Abstract

Not many people with intellectual disabilities are able to participate in sports because there is a lack of programs and facilitators to provide their needs. Autism is a neurological developmental disorder that causes impaired social interaction, verbal and non-verbal miscommunication, and restricted and repetitive behaviors (American Psychiatric Association, 2013). Furthermore, Kunzi (2015) proposed that ASD could lead to anxiety, depression, aggression, and physical health issues. The researcher used Self-Efficacy Theory, which is the belief of an individual's capabilities to plan out and achieve what they set out to do (Bandura, 1997). Self Determination Theory was also used, which states that an athlete can become motivated through autonomy, competence, and relatedness (Deci & Ryan, 2011). People with autism should have the opportunity through sports to learn how to regulate emotions, develop social and motor skills, and develop self-confidence and motivation to achieve a goal in order to survive in society. The researcher asked questions regarding the factors behind the athletes' motivation and how he is confident to get a better understanding of what drives him to succeed. Also, questions were asked regarding his emotional behavior, motor skill improvements and social skill improvements through running competitively. The researcher conducted a case study on a 2016 Paralympic Champion with autism and interviewed him and his Professional coach via phone interviews and in person. The purpose was to see how running has impacted his behavior, motor skills, social skills, confidence, and determination to succeed. Found in the research was that Austin was intrinsically motivated to succeed and he had a lot of support from his coach, family, and fans. Furthermore, when it comes to motor skills, more specifically, exercises with objects was very difficult for Austin, the coach had to adapt to his learning style in order to develop him into a better athlete. Austin also mentioned that too much noise, things not done in order, and pressure that he puts on his self can be overwhelming, but his coach has helped him to focus on the task and not worry about his outside circumstances. This research could help coaches and others realize the impact of sports and the need for more programs for people with autism because it teaches many skills that can apply to life.

**Keywords:** autism, sports, social skills, motor skills, emotion regulation, coaches, athletes, confidence, motivation

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## **Chapter 1**

### **Introduction**

Autism is based on a test, known as the DSM-5, which helps to identify the level of autism an individual has on the spectrum (American Psychiatric Association, 2013). Autism Spectrum Disorder (ASD) is very prevalent today, especially with men. Autism is a neurological developmental disorder that causes impaired social interaction, verbal and non-verbal communication, and restricted and repetitive behaviors (American Psychiatric Association, 2013). According to Kunzi (2015), he proposed that ASD could lead to anxiety, depression, aggression, and physical health issues may arise. These are some attributes that cause frustration in the autistic community because many times they will feel like they are not understood. Facilitating people with ASD can be very demanding and requires skill and training because every person with ASD is different. People with autism are human too, but may need a little extra patience and empathy in order to work with them. In the United States alone, it is estimated that 250 billion dollars were spent annually on costs associated with ASD (Buescher, Cidav, Knapp, & Mandell, 2014). To help cut down the costs of spending billions of dollars for people with ASD, it would be a great way to incorporate sport programs because it is cost-effective, helps develop confidence, motivation, social skills, motor skills, aids in regulating emotion, and many health benefits as well.

#### **Self-Efficacy Theory**

Confidence is an essential element in not only helping a person to succeed not only in sports, but in life too. The Self-Efficacy Theory is the belief of an individual's capabilities to

plan out and achieve what they set out to do, whether it is in practice or competition (Bandura, 1997). Self-efficacy does not depend on the outcome, but it depends on the belief that one has in themselves to achieve a goal. According to Bandura (1997), there are four main sources of self-efficacy theory which include: enactive mastery experiences, vicarious mastery experiences, verbal persuasion, and physiological and affective states. In order to increase self-efficacy beliefs, some athletes learn through overcoming obstacles themselves and learning from their mistakes, which is an example of mastery experiences (Feltz, Short, & Sullivan, 2008).

Furthermore, some athletes increase their self-efficacy by seeing how their teammates perform and how they handle different situations, which is an example of developing self-efficacy through vicarious experiences (Feltz et al., 2008). Additionally, some athletes increase their self-efficacy by receiving feedback from a coach or teammate, which would be an example of developing self-efficacy through verbal persuasion (Feltz et al., 2008). Lastly, athletes increase their self-efficacy by being aroused in a positive or negative way depending on the situation, which would be an example of developing self-efficacy through an arousal state (Feltz et al., 2008). An athlete could become confident through one or more of these structures.

Hatzigeorgiadis, Zourbanos, Goltsios, and Theodorakis, (2008) stated that confidence is directly correlated to motivation when achieving a goal. Self Determination Theory is useful in this research because in order to see how successful an athlete is, one needs to look at the motivation factor behind the success.

### **Self Determination Theory**

The three major factors in Self Determination Theory are autonomy, competence, and relatedness (Deci & Ryan, 2011). Self Determination Theory is basically how motivated an

athlete is to achieve their goals. Within this theory, intrinsic motivation and extrinsic motivation are prevalent (Deci & Ryan, 2011). Typically, athletes who are autistic would be more motivated through autonomy and competence rather than relatedness. Developing motivation through autonomy means that the individual is motivated by governing their self to succeed. On the other hand, competence means that through knowledge of the sport the individual becomes more motivated. Lastly, through relatedness, an individual will become motivated through interacting or training with other people. An individual could have one or more of these motivational constructs in order to succeed in their specific sport.

### **Emotion Regulation: Social Development and Motor Development**

People with ASD should learn how to control their emotions and it is difficult for them to learn if they are not in a facilitated environment. When they are placed in an uncontrolled environment, they become stressed and anxious as described by Kunzi (2015). A person with an intellectual disability may also have a difficult time maintaining eye contact or may display irregular behaviors when with other people. Sports are an organized environment that allows people with ASD to be able to learn and become more social when they are focused on a specific task. Chevallier, Kohls, Troiani, Brodtkin, and Schultz (2012) stated that some people with ASD could have low motivation socially and this would allow us to understand intrinsic motivation to escape rejection and pursue approval. With this in mind, it is important to note that children who are autistic are more likely to be intrinsically motivated to learn how to play a sport than a child who is not autistic because they are not motivated by outside factors. Furthermore, motor skills are important to have, especially in the autistic community. People with autism lack the motor skills needed for balance, strength, and flexibility and sports allows a gateway for them to learn

those skills. Duronjić and Válková (2010) stated that social interaction and motor skills are parallel with each other because if someone has to work on their motor skills, they would need to interact socially in order to learn the skill.

The purpose of this study is to examine the underlying motivating factors that pushes the Paralympic athlete to achieve success, what factors encourages the Paralympic athlete to be more confident, and to see how the Paralympic athlete has developed emotionally, socially, and physically throughout his career. This research will help build on the foundation of realizing the importance that structured programs or sports plays a role in children and adults with ASD. This research will also help people see the need for more organized sports programs.

## Chapter 2

### Theoretical Framework

#### 2.1. Autism

Autism Spectrum Disorder does not usually start from the beginning of birth, it is a developmental disorder (Speaks, 2013). Young children with ASD who lack social communication will have issues learning effectively in social environments, like group activities (American Psychiatric Association, 2013). Also, children with ASD can have difficulties in maintaining organization, planning, and regulating self in situations that require change, even for children with above average intelligence (American Psychiatric Association, 2013). When children with ASD reaches adulthood, it could still be difficult for them to be independent because of having difficulty with changes (American Psychiatric Association, 2013). Within ASD, many different diagnosis exists which include: selective mutism, Rett syndrome, language and social communication disorders, intellectual developmental disability, schizophrenia, ADHD, and motor disorders (American Psychiatric Association, 2013). It is important to note that ASD and intellectual disability is different from each other, but they can coexist (Speaks, 2013). Within ASD, there is not only different symptoms, but there are different levels to autism as well. Speaks (2013) said that there are three levels which include: level 1 - requiring support, level 2 – requiring substantial support, and level 3 – requiring very substantial support.

Autism does not only affect the individual, but it affects everyone around the individual. According to Speaks (2012), ASD affects one in 68 children, one in 42 boys, and boys are five time more likely than girls to have ASD. In the United States alone, it costs on average 2.2

million dollars for an individual with ASD and intellectual disabilities and 1.4 million dollars for an individual with ASD and without intellectual disabilities (Buescher, Cidav, Knapp, & Mandell, 2014). Parents losing productivity and special education services were the highest factors of spending for children with ASD (Buescher et al., 2014). Supportive living care and individual productivity loss were the highest costs for adults with ASD, and adults with ASD had higher medical costs than children with ASD (Buescher et al., 2014). With this in mind, there should be more cost-effective interventions to help people with ASD. Therefore, sports are a great cost-effective tool that incorporates learning, emotion regulation, social and motor skills, and many other benefits that can help develop an individual with ASD.

## **2.2. Sports**

According to American Psychiatric Association (2013), adolescents with ASD can be prone to anxiety, aggression, depression, and physical health issues. Physical activity can be overwhelming for an individual with ASD, that is why it is important to develop strategies in encouraging social support and physical activity (Rosso, 2016). In past research, youth with ASD may improve in cognitive, behavioral, psychological, motor, and social functioning through physical activity and sports (Faulkner and Sparkes, 1999; Sowa and Meulenbroek, 2012; Sherlock-Shangraw 2013; Sorensen and Zarrett 2014). Furthermore, Pan and Davis (2018) stated that through unified sport experiences, physical self-worth and sport competence are increased. Sports does not only teach motor or social skills, but they teach skills that relate to life in general. When children with ASD becomes adults, social skills can become even worse. According to Ward, Nichols, and Freedman (2010), adults with ASD could have difficulties with communication, knowledge, quality, areas of access, and health care quality as those who do not

have ASD. Furthermore, those with ASD can also have difficulty having access to professionals that do not accept Medicaid or who does not accept insured customers (Kunzi, 2015). Having more professionals trained in knowing what ASD is and the benefits that sports plays in development will help to improve emotion regulation, social skills, and motor skills.

### **2.3. Emotion Regulation**

According to Fletcher, Hanton, and Mellalieu (2006), emotion stressors has been defined as “environmental demands encountered by an individual” and it is broken into three different groups which include: competitive, organizational, and personal stressors. When a person who has autism does not understand society around him or her, it causes frustration because the individual cannot relate to them. Competitive stressors are defined as demands between the environment and the individual during competition (Fletcher et al., 2006). Some examples of competitive stressors would be if an individual does not like the cold temperatures or if someone cheated during competition. People with Autism Spectrum Conditions (ASC), would become stressed through loud noises, too many people, or when there is a short amount of time to complete a task (Roncaglia, 2014). Furthermore, “pressure to perform it correctly and efficiently – fear of failure - pressure stemming from having to select relevant information (and skills) for the task, as well as ensuring that all skills necessary – competition techniques – are not only being acquired, but also retrieved at the right moment and eventually mastered.” (Roncaglia, 2014) Another stressor that is prevalent is organizational stressor, which is defined as the environmental demand with any organization that the individual is associated with (Fletcher, Hanton, Mellalieu, & Neil, 2012). According to Fletcher et al. (2006), five organizational themes are present in an organizational stressor which include: factors intrinsic to sport, roles in sport

organizations, organizational structure and climate, sport relationships and interpersonal demands, and athletic career and performance development issues. Examples of organizational structure would be the team, structure of the competition, national governing body of the sport, or coach-athlete and athlete-athlete relationship. Organizational stressors are the most prevalent stressor that causes issues with ASC (Fletcher et al., 2012). Lastly, personal stressors are defined as an environmental demand on the individuals' personal life (Fletcher et al., 2006). Some examples of personal stressors might include if the individual is sick, hurt, or having financial issues. Furthermore, a person with autism could become stressed when in an environment with other people or when they feel like they cannot complete a task.

### **2.3.1. Social skills.**

Social skills are very important in order to survive and thrive in society. It is the basis of how we live, what we do, and how we learn in different situations. Furthermore, Woods and Wetherby (2003) stated that social skills allows people to establish daily routines. People with ASD typically lack the skills to start or maintain social relationships, like difficulty understanding someone's emotions and reciprocating it, asking someone about their interests, joking, or talking about a common subject (Gerber, 2003). Unfortunately, this is why people who have ASD can have frustration trying to interact with society. Sports would be a great tool to develop and incorporate social skills because it is a natural environment that does not force athletes to be social, but it allows them to have the decision to relate and maintain cohesion with a group of people and promote skill generalization (Alexander, Dummer, Smeltzer, & Denton, 2011). Alexander and his colleagues found that when the athletes with autism received positive feedback, it motivated them to attempt the social skills themselves, and when the athletes

responded with negative behavior, the coaches gave direct instruction in order to help them improve (Alexander et al., 2011). Additionally, participating in sports has encouraged participants to develop better self-esteem related to appearance and ability, assertiveness, and self-control (Faulkner & Sparkes, 1999; Findlay & Coplan, 2008). In one study, children with autism had a higher percentage of social interactions through peer buddy approach than children with autism who were in close proximity with their typical peers (Laushey & Heflin, 2000). This suggests that not only can sports help improve social desirability, but also children with autism can have a higher chance to improve social skills through peers who are not autistic. Sports is not only a great tool to improve socially, but it is also a great tool to improve motor skills for people who have ASD.

### **2.3.2. Motor skills.**

Motor skills are very important to develop, not only in sports, but also in physical activity or work-related activities. Those who do not have the knowledge in order to develop motor skills are more likely to not participate in sports or physical activity later in life than those who do have the knowledge of fundamental motor skills (Stodden et al., 2008; Barnett, Van Beurden, Morgan, Brooks, & Beard, 2009). Not all motor skills come naturally and some people are better than others, but it requires practicing the fundamentals first in order to develop more advanced motor skills (Lee & Porretta, 2013). Learning motor skills does not happen overnight, it requires dedication and development in order to build more technical physical abilities. Duronjić and Válková (2010) stated that if children with autism participated in an intervention program that incorporates motor skills, then they are more likely to maintain that development throughout their lifetime. Additionally, Barnett et al. (2009) found that “object control skills, rather than

locomotor, appear to be more crucial to total activity time, activity of a higher intensity and also the type of activity undertaken in adolescence.” Examples of object control skills would be any sport that requires a ball and, on the other hand, locomotor activities would include skills like running, hopping or walking. Learning these different constructs will allow the coaches and facilitators to better understand how to organize and structure a sport program.

## **2.4. Parents and Coaches**

Coaches play a major role in the development of their athletes life. Parents have an even greater role to nurture their children to become civilized citizens in society. Alexander and Leather (2013) found in their study that 76 percent of parents with children who has ASD wanted their children to attend a sports program for about two to six hours per week and 91 percent of the parents wanted their children to learn to develop social skills through sports. Without the leadership and knowledge of the coach involved in the athletes’ life, no success or growth will be prevalent in the children. Ohrberg (2013) stated that open and courteous communication is important for the parents and coaches to establish in order to provide a healthy environment for families with children who have ASD. Furthermore, not many coaches are trained on what ASD really is and how to handle it. One study showed that 60 percent of health professionals did not receive any education in the field of developmental disabilities, including ASD (Sanders et al., 2008). Townsend, Cushion, and Smith (2018) stated that coaches should be able to learn how to adapt, embrace individual differences, and reinforce guidelines. A social relational model is needed to help coaches to move towards a relational existence of learning rather than to challenge it (Townsend, Cushion, & Smith, 2018). Parents also mentioned that having a buddy system and being consistent pairing with the child would be a major tool in encouraging the child

to be more motivated to succeed (Hayward, Fragala-Pinkham, Johnson, & Torres, 2016).

According to Alexander and Leather (2013), some recommendations that parents mentioned that would help to improve the well-being of their child is including numerous sports, offering educational sessions to people who are interested in becoming a coach or volunteer, and incorporating social skills. In conclusion, the coach can not coach by him or herself, he or she needs the help of the community to build a program suitable to the needs of individuals with ASD. Once the structure is setup, more people with ASD will be able to develop in emotion regulation, social skills, and motor skills.

## **2.5. Aim of Study**

This in-depth study will help build on the past research of how sports aid in the development of self-confidence, emotion regulation, social skills, and motor skills in people with ASD. Furthermore, this study will help others realize the need for more sport programs geared toward children with ASD and help coaches to understand how to work with them effectively. For my study, I will conduct a qualitative case study on a Paralympic athlete with autism and see why he is motivated to compete. I will interview the coach and the athlete to understand more about his motivation and determination to succeed. With the athletes' coach, we will see the challenges she has had when coaching the athlete with autism and how she handles his emotions, social aspects, motor skills, and his determination. Additionally, we will see what the athlete hopes to achieve in the future and what sources have motivated him to succeed. My hypothesis is that he would be intrinsically motivated to succeed rather than motivated through extrinsic rewards or social motivation. I hypothesize that he would develop confidence through mastery experiences, vicarious experiences, and verbal persuasion from his coach. Furthermore, I believe

that he would become frustrated when he does not achieve a goal or if he has difficulty understanding someone's emotion rather than being frustrated from outside sources he cannot control, like the environment. Based on the research, I also assume that he would have a more difficult time compared to others without autism in performing specific skills, like weights.

## **Chapter 3**

### **Methodology**

#### **3.1. Participants**

The participants include a coach and her athlete with autism. I decided to do a qualitative case study on Austin because I wanted to get an in-depth scope of why he displays confidence and self-determination to achieve so much throughout his career and also see the qualities it takes as a coach to manage the athlete. The coach is an African-American woman who coaches athletes with autism. She has been coaching for 4 years unofficially and has been coaching Austin for 2.5 years. She was also an elite runner in her earlier days and has been in the track and field world for most of her life. Austin was diagnosed with autism at 18 months old and did not speak until he was five years old. He was a six-time All-American in high school and even ran under 39 minutes in the 10 kilometer as a 12 year old. Austin is a 21 year old paralympic distance athlete with autism spectrum disorder who competed in his first Paralympics in 2016. He also competed in the Paralympic World Championships in the T20 division in 2015 and 2017. He placed first in both the Paralympics and Paralympic World Championships and set records for both races. He was also the first person to ever run four minutes in the mile and nine minutes in the two mile as a person with ASD. According to Tweedy and Vanlandewijck (2011), in order to be considered a T20 athlete, they must have significant limits to the way they behave in society and have an IQ of 75 or lower. Additionally, the T20 category covers a range of diagnoses, not just autism, and not all athletes with Autism are T20 eligible (Tweedy &

Vanlandewijck, 2011). Furthermore, Austin has also competed in many high level competitions against autistic and non-autistic competitors. Furthermore, he has broke many records including his high school record and currently has the Paralympics World Record in the T20 category. I changed the names in the interview for confidentiality purposes.

### **3.2. Procedure**

Firstly, I used EBSCO databases (included is Academic Search Complete, EBSCOhost, Econlit, ERIC, LISTA, MEDLINE, Newswires, OpenDissertations, and SportDiscus) from the University of Thessaly resources. Secondly, I manually searched the reference lists of identified articles and used some for additional sources. Search terms related to autism included “ASD”, “autism spectrum condition”, “autism spectrum disorder”, and “intellectual disabilities” were combined with words associated with sports like “physical activity”, “programs”, “exercise and health”, or “paralympics”. When looking up these key terms, I found many articles associated with motivation (Self-Determination Theory) and confidence (Self-Efficacy Theory). This is why I decided to use the following theories as framework for my study. Furthermore, search terms I found when looking up autism and sports were “emotion regulation”, “social skills”, and “motor skills”. Words related to these word searches were “adaptability”, “social development”, and “motor ability” respectively. A full list of search terms can be found in Appendix A. I looked at articles that were peer-reviewed, full-text, and between years 1997-2018. A total of 247 articles were found in the search related to sports and autism.

I contacted Austin through Facebook and was directed to his coach by his parents. I spoke with Austin and his coach about the impact of the study and they agreed to participate. I conducted my interviews through the phone and in person with the coach and the athlete. The

sessions lasted no more than 30 minutes and I asked the coach and athlete a total of about 30 questions, including the follow-up questions that lead to a deeper topic. I recorded the phone interviews using my computer and recorded in-person interviews using my phone. I met with them in-person at two different track meets and conducted the phone interviews twice as well. The athlete was always present with the coach whenever I asked the athlete questions. In order to establish credibility during my qualitative interview, I used members checking to build trustworthiness (Leech & Onwuegbuzie, 2007). I asked the coach to look over everything to verify what I understood from the interview as being correct. If it was something that she did not agree with, I would change it. Her main concern was to make sure that Austin would be anonymous.

### **3.3. Instruments**

I used thematic analysis when forming my literature review. In order to use thematic analysis, one has to read and read in order to understand the material and then reflect on the literature by keeping notes (Boyatzis, 1998). Additionally, one has to generate initial codes in the literature (Boyatzis, 1998). Furthermore, after generating identified key terms, one has to find themes and sub-themes; after that one has to create a structured diagram in order to dissect it appropriately to see the whole picture of the interview (Patton, 1990).

I found, based on the literature review, some key themes which include emotion regulation, motivation, and self efficacy. Within emotion regulation, people with ASD lacked in social skills and motor skills when trying to adapt to their environment (Kunzi, 2015; Hayward, Fragala-Pinkham, Johnson, & Torres, 2016). Furthermore, my questions were formed from two main theories and characteristics found lacking in ASD behavior. The theories include Self

Determination Theory (Deci & Ryan, 2011) and Self-Efficacy Theory (Bandura, 1997). Self Determination Theory is how determined or motivated one is to succeed (Deci & Ryan, 2011). Additionally, Self-Efficacy Theory is the belief of an individual's capabilities to plan out and achieve what they set out to do, whether it is in practice or competition (Bandura, 1997). Based on the research, I created my own questions and grouped them into three different subjects which included: autism and sports, emotion regulation, and social and motor skills. Furthermore, Self Determination Theory and Self Efficacy Theory questions were included in each group. I also asked general questions related to sports and what they want to achieve in the future.

A question I asked regarding Self-Determination Theory is "What things do you have to work on as a coach in order to help motivate Austin?". Furthermore, regarding Self-Efficacy Theory, I asked questions like "What drives Austin to succeed?". In regards to regulating his emotions, I asked the coach "What types of behaviors have you noticed that may affect Austin's learning in a negative way? Positive ways?". Additionally, regarding his social and motor skills, I asked the following questions: "Have sports impacted his social life? Does he struggle to learn different drills?". The full list of questions can be found in Appendix B.

## Chapter 4

### Results

#### 4.1. Autism and Sports

Speaks (2012) said that more boys tend to have autism more than girls. People who are autistic tend to have a special gift. Austin's gift is running. A series of questions were asked to Austin and his coach regarding how important sports has played in his life with having autism. The coach was asked how long has she coached Austin and what is her experience in athletics. She stated that:

“I have coached Austin for two and a half years officially and four years unofficially. I helped out with administration for the special needs program that Austin started off with, but I did not get involved with the team as a coach. It turned out I showed up for practice one day and all of a sudden I found myself coaching the team. So that was what brought my attention to coaching. I have been coaching in general for many years, since 1999, and have coached ages six years old all the way up to young adults, mid 20s. Actually, I just realized one of the seasoned athletes was 32 years old. I also competed at the University of Missouri and ran the 400 meters, 800 meters, 1500 meters, and relays in college. Post collegiately I ran the 800 meters, 1500 meters, and three kilometers. I have coached USATF national running clubs and have lead a few athletes to the Junior Olympic Championships, World Youth teams, and state championships. I am a USATF level 2 certified coach and have also been coached by world renowned distance coaches.”

She also mentioned that even though she has coached for many years and have been coached by high-profiled coaches, people still have doubted her in her ability to coach Austin because he is such a phenomenal athlete and she does not have the necessary accolades as other professional coaches. She has definitely proved otherwise. Additionally, Austin was asked how he was able to get into sports and how it has impacted his life. He also describes how important sports are to his family and what sports they have played as well.

“I got into sports since seven years old. I first ran in elementary school. Before track, I played soccer and lacrosse. I loved sports. I started running in track at 9 years old, I had to learn and prepare in running before I became a great runner. It changed my life and it is a passion of mine and a gift from God. My parents encouraged me to keep running and to never stop. My dad and brothers played hockey, lacrosse, rugby, and soccer. None of them ran track before. I played lacrosse when I was about nine years old until 11 years old. I loved it and also played football. Soccer was my first sport, it helped for my running skills. My parents found out I was really good in running during middle school, junior high.”

According to Faulkner and Sparkes (1999), Sowa and Meulenbroek (2012), Sherlock-Shangraw (2013), and Sorensen and Zarrett (2014), sports and physical activity has many benefits in maintaining a healthy and well-balanced life. Because his family is very supportive of his gifts, it makes him feel confident in achieving his goals. Also, with Austin being a young adult, he still loves the sport and it makes him feel accomplished. Buescher, Cidav, Knapp, and Mandell (2014) stated that more support programs for adults with autism should be established because it would give them something to accomplish and work on. Sports

could be that solution. Furthermore, Austin describes what a typical day is like for him as an elite athlete and how his Coach has encouraged him throughout his track career.

“It has been good, I have been in Colorado for altitude training, its very tough to get air for my lungs and takes time to get adjusted. A typical day for me would be to go for breakfast, then train or stretch in the morning for practice. Sometimes I train twice a day, it depends. My coach tells me to keep going and to not stop, keep pushing. I am really glad that I have a great coach that is consistent with me.”

Austin has a unique story that has touched many lives. The composure and character he displays on the track shows how determined he is to never give up. A question was asked about how he can encourage others who may have a disability and want to tryout for sports. He said the following:

“I would encourage other people with autism to get involved in sports. Having support from family and friends has helped me succeed in sports as well. It gives me confidence to be able to try new things and believe in myself to achieve it. Also, my previous coach was very influential in my life and he has helped motivate me to succeed.”

Rosso (2016) stated that it is important to create strategies for helping people with autism to have social support from their peers or family members to help them because sports or physical activity can be stressful for them. With Austin having the help of his family and coach supporting him, it has helped him achieve so much in his running career. Additionally, with the coach constantly managing and coaching Austin, a question was asked how difficult was it for Austin's' parents to allow the coach to train him and take him to national and international competitions. Because she has been able to take him all over the world and train with top of the

line professional athletes as well, a question was asked to Austin how has the experience been when learning and training with other runners. This is what the Coach and Austin said:

*Coach:* “It was a process. But now that Austin and I are just gone all the time, we just do what we need to do. His dad would come on some trips but now we have been away from home for eight weeks. Austin has been traveling and training but I took him to my home, my mom's home. We train there, it's beautiful. He ran with some sprinters to work on speed mechanics, so that was good.

*Austin:* “They are all world class elite runners and I get to run with them and learn from them is a blessing and I get to hear their experiences, techniques and strategies to succeed. It has really helped me as a runner.”

Based on the Self-Efficacy Theory (Bandura, 1997), Austin seems to be highly motivated through vicarious mastery experiences. His coach mentioned that she has to watch many videos of elite racers to watch different tactics and learn from them. Furthermore, I asked the Coach, what advice would she give other coaches who are coaching people with disabilities or autism. This is what she said:

“To be patient, understand your athlete, and know that everyone is an individual. I know to say that is kind of cliché but each athlete learns different things and at different rates and each athlete is not necessarily in a position or in a place where they can absorb every change in the traditional manner. You may have to switch up your coaching techniques because it does not make sense to do it the way you do it for everyone else. It is your job to understand them, not for them to understand you. So if you can be patient and then

make sure you understand them, put yourself literally in their shoes as much as possible so that, it is much quicker to understand them and their behavior.”

The saying that it takes a team to raise up a child is very true. No one person is able to help reach someone to their full potential. That is the same with Austin, it takes a team to help him to become the best that he can possibly be with his abilities. With the help of his coach, training with other professional athletes, his other coaches, family, and therapists it has helped him to achieve huge accomplishments.

#### **4.2. Emotion Regulation**

People with autism tend to struggle with regulating their emotions and there are specifically three kinds of emotional stressors which include: competitive, organizational, and personal stressors (Fletcher, Hanton, & Mellalieu, 2006). According to Fletcher, Hanton, Mellalieu, and Neil (2012), people with autism are more susceptible to having organizational types of stressors. Fletcher et al. (2012) defined organizational stressor as an environmental demand on the individual. More specifically, Roncaglia (2014) stated that people with autism tend to struggle with fear of failing, pressure from decision making, too many people or loud noises, and mastering skills. I asked Austins coach a series of questions regarding regulating his emotion in order to help him achieve his best. She was asked what behaviors she has noticed that might have affected Austin in a negative way. She described that he would get stressed or anxious if things were not done in the order they were done beforehand. She gave an example:

“If I write down drills for him that he must do, like backwards walk and whatever other exercises for five days straight, it is written down on paper and he sees it and reads it.

Then, the next week he does drills and there is no paper, but he starts doing drills in a

different order. He will say, ‘Well, this is not right. This is wrong. We are doing it wrong because it is not in the same order.’ I will say ‘it is okay we can do it in this order.’”

In terms of positive behavior, she was asked what has she noticed in Austin when it comes to controlling his emotions. She mentioned that Austin is very diligent and will continue to work on the task as much as possible to perfect it. He is very goal-oriented. As an athlete, it is important to develop the small things in order to achieve the bigger things. Many athletes are driven by money, scholarships, or medals, but in order to be a dedicated athlete and maintain composure during the bad moments, one has to be consistent. Furthermore, the coach mentioned that Austin is still young in the sport, so she makes sure that when he learns a new skill that he takes the time to learn and apply the skill. Even though Austin may learn things slower than other athletes, she is joyous because Austin is a rare athlete in the sense that he is dedicated to learning a new skill and he will work hard to achieve it. Stodden et al. (2008) and Barnett, Van Beurden, Morgan, Brooks, and Beard (2009) described that having the knowledge of different motor skills and physical activity would strengthen into adolescence and adulthood. With Austin playing sports most of his life, he has developed exceptional abilities compared to other people with autism. She described an example of how Austin is an exceptional athlete compared to others:

“The greatest athletes like Michael Jordan, Wayne Gretzky, LeBron James, Tiger Woods, they all have a comparable ability that separates them, everybody talks about their work ethic, their ability to push themselves to be better than themselves the day before. You cannot teach that. Austin understood even from a young age that he was really racing against himself. Other people happen to be out there but he is really racing against

himself, so you cannot teach that. You either have it or you do not. He does not get caught up in winning the awards and the medals and that is all great, but that is not where the real reward is. The real reward for him is internal. You cannot teach people how to be satisfied with what they have achieved.”

Austin being able to focus on a specific task is an exceptional talent in itself, because many people with autism would struggle with having to perfect something they are not good at. Austin seems to enjoy the process and seems to learn from his mistakes. Furthermore, the coach was asked how Austin reacts when he competes against his competitors. She described that: “Austin definitely gets nervous when he is running any race. He is probably more nervous when it is big meets and he is running against people that he looks up to and that are better runners than him. I work hard to kind of help him deal with the anxiety of running against people that are better than him and when something is on the line. When he is at like the World Championship, I work with him on making sure he follows the game plan for the race, it can go really great or it can be a disaster.”

The coach mentioned that when he completely goes off script and talks with her after the race, he will confidently say “well I just did this” without giving an explanation of why he did not follow the race plan. He does not understand the consequences of going off the script, especially if he would have followed the script he would have done much better. She further mentioned:

“Being a low IQ athlete, he cannot look forward and see consequences for his actions. He does not understand tactics. You think he understands, but he really parrots what he hears other people say. That is really what it comes down to. This is why it is important for me

to keep him grounded and focused before the race, because if he is distracted by what other people say, he could listen to them or lose focus of what he wants to accomplish.”

Based on the American Psychiatric Association (2013), they stated that people with Autism tend to express anxiety when in an social environment. I asked the coach if she has noticed any causing stressors in Austin outside of her coaching ability. She explained that:

“No, well first of all Austin has never been injured, which is definitely a blessing. But one thing that we are addressing even currently is how to minimize different stressors. For example, when he goes to the next World Championships, there is a good chance that he is not going to stay with the team. Also, once he enters into the competition, there is a good chance he is not going to be allowed to be around his parents. He may want to go sightseeing and do other things, but he should be at home, putting his feet up and watching TV. That definitely takes an effect on his performance.”

The coach has worked with Austin for a number of years and she understands how he perceives things and the way that he thinks. She feels best that when it comes to huge races, he should be in the most stable mindset in order to accomplish his goals. She knows what triggers could distract or cause him to lose focus off his race strategy.

“Also one of the things I have learned is that Austin puts pressure on himself because he thinks that his parents want him to win or want him to run a certain time, so that is why I have changed up the way I approach his races. I limit the information that I give him as well. His dad was an elite athlete and his mom did gymnastics, they understand sports but may send a different message to Austin that may be more of a negative goal, rather than a positive goal. I believe it is all about executing the plan, winning the race will happen. I

know how to do that without saying, 'win the race,' and so I have learned the hard way that I have to manage that and have to help him manage that as well. For example, he has said to me, 'Oh, my mom is going to be disappointed.' I tell him 'what do you mean your mom is going to be disappointed? And why does it matter if your mom is disappointed? Why would your mom be disappointed because of your race?' So what I have realized is that he internalizes what other people are going to feel or what he thinks other people are expecting of him. The way he thinks is the mentality of a child when you think about it. He is at 21 years of age and he is still working on that."

Motivation plays a huge factor in how a person performs. According to the Self Determination Theory, people can display three different factors which includes: autonomy, competence, and relatedness (Deci & Ryan, 2011). The coach was asked if she has to motivate Austin when it comes to practices and competitions. She mentioned that she does not have to worry about him being motivated because he is self motivated. She stated that the difficult thing is his cognitive ability to perform at a high level. She gave an example:

"What if you are an exceptional Nascar driver and I told you that I will enter you in the Daytona 500, would you want to compete in the most competitive Nascar race and not have the intellectual ability needed in order to excel in the race? That is what I am asking Austin to do when I have him race. Here is this person who has this amazing physical ability to be able to drive a Nascar but does not have the intellectual ability to do it. I am asking him to just step on the track, run as fast as he does and he has the mind of a ten year old. When you think of it like that, he would never do that. I mean, you would never send a 10 year old to go surf with Tom Blake. He would get killed. So that is the

challenge with Austin, he has this great physical ability and works really hard, but he has to know how to race to reach the next level. I recently had this conversation with his parents that I cannot get caught up in the tactics of the race, I just have to make sure that Austin is ready to run once he gets to that level. That is why I have Austin rabbiting a race as well because I need him to understand pace. This would be a great learning experience for Austin and is setting him up for his own outdoor season. Austin really responds well once he knows he is helping someone and has a job to do. So I have been working on him taking the next step to becoming an elite national class level runner.”

By applying what he learns in the previous races, he is able to take that and learn and grow as an elite runner. Even though others may view Austin as an elite athlete, the coach and Austin believes they still have a lot more to accomplish on the track and the coach is continually working with Austin to help regulate his emotion. Furthermore, Austin seems to be more self-motivated than anything else because it allows him to reach and achieve goals. The coach explained in detail another lesson she learned regarding regulating emotion which was when Austin competed at the USATF Nationals in 2017.

“It is a lot of kind of thinking ahead, knowing what his temperament is, and learning from the experiences he has gone through. Last year he tried to qualify for USATF Outdoor Nationals in Oregon. The first week went pretty well, he ran 3:43 in the 1500 meters. It was kind of chilly but nobody went super fast. Then the next week he was doing fine, they were on pace and then all of a sudden it is like he just stopped. They announced his name over the intercom and he just froze up. I realized then that many times, he internalizes what he thinks people are expecting him to do, win races. Nobody really

coached him regarding that until I coached him, so I have been working him on how to handle that.”

Furthermore, she suggested that patience is the best skill to have when working with athletes with mental disabilities. The coach also stated that it is important to show empathy and try to think the way your athlete thinks. She provided an example when he does weights or drills.

“He still does not understand the mechanics that it takes to lift weights and it may never happen for him. I have to be creative on how I add drills to his training. He does a lot of body weight exercises as well. If I do not prepare him at the best of my ability, I am leaving him vulnerable to other racers. He does a lot of things that are considered kind of child-like physical exercise like jumping jacks, skipping, and hopping, but it is what is needed for his strength and balance.”

These things are needed for Austin, because most people who are intellectually impaired are usually not coordinated, imbalanced, and not sequenced. She mentioned:

“Austin is getting better and better. We just started using a Swiss ball and it is very hard for him to hold a plate on the Swiss ball. Others ask how hard is that? We just do three exercises using the Swiss ball and he gets sweaty after that. What does that tell me? That tells me he is working really hard to balance. I will take that all day long as opposed to him trying to bench press 150 lbs because I know that it requires him to hold his tight core and improve on his balance. He will keep doing it and practicing it until he accomplishes the task. Then we will change the exercise and do something else. There is real pride in him when he accomplishes a task because he knows he put in the work. Then the other thing is that he has grown two inches in the past two years. That is very late for

someone to be growing that much. Typically, someone will grow maybe an inch between 18 and 21. But you typically do not grow two inches in two years. If he is delayed physically then he is also probably delayed intellectually.”

The coach said that the typical average brain stops growing and developing at 25 years old, but Austins’ brain development might be delayed and not be fully developed intellectually until he is 30 years old. She stated:

“I think that when you are dealing with people that are intellectually impaired, you have to be patient and you have to be in it for a long process. If the average person can learn something in three years, you need to make it six years or maybe longer for a person with autism. That is okay for me and he has to be okay with that.”

According to American Psychiatric Association (2013), children with ASD can have problems with planning and regulating self when something changes. With having the help of a long-term coach who is there to help and guide him, it has helped him tremendously in being able to regulate his emotions.

#### **4.3. Social & Motor Skills**

According to Gerber (2003), people with Autism Spectrum Disorder have difficulties understanding constructs of conversations, how to react, or what emotion to express when it comes to social activities. It is really difficult for people with ASD to have any type of social interaction between others. Usually when talking with a person with ASD, one has to initiate and lead the conversation. With Austin not being able to talk until age five, he did not develop his social skills until later and also develops at a much slower pace than other people without autism.

Furthermore, motor skills are developed at a much slower pace or not developed at all for people with autism. In fact, if people with autism started to practice different motor skills for development at a young age, they would be more likely excel in that development in their lifetime (Duronjić & Válková, 2010). With Austin running at a young age, he is able to do simple drills and different exercises that most people with autism cannot do. I asked his coach a series of questions to get a better understanding of how she trains Austin in building his social skills and motor skills. A question was asked how he react socially when he is around his friends. She said Austin will say he has a lot of friends, but in actuality, does not have many friends at all. She gave the following example:

“Say you called him up and say, ‘Hey, Austin. We are going to have lunch at the cafeteria today at 12:30,’ and he goes and he sees you there and sitting with other people at the table and there is a chair at the table, an empty chair. But he looks over and the first thing that he would think is that you decided you did not want to have lunch with him, that you wanted to have lunch with somebody else and so he would not want to be in the way. That is the way he would interpret it. He would not interpret it as it is a bunch of us because he would immediately think that he did something wrong or you changed your mind or you do not want to have lunch with him. That is the way he would look at that.”

Because of his low IQ, it is very hard for him to connect with people and socialize. His coach said that Austin is on the higher end of the low IQ spectrum; he knows that he is different from most people, but then he does not know why he is the way he is. The coach mentioned that it takes time to develop the relationship with him and peel the layer to see the way he thinks, so that she can better understand him. Having much experience with him, she has been developing

him, not only physically, but in settings outside of track and field. When he tries to fit in with other people, it creates anxiety for him. Another question was asked regarding how other people treat Austin. This is what she said:

“A lot of them can tend to be condescending but then there is a few people that go out of their way to encourage him to engage. They try to greet him, they will say things like ‘you are doing a good job’, ‘happy to see you.’ It is like a kindergarten teacher when she is engaging with little kids, she is expected to do most of the conversating. People are not expecting to do that when they are talking with a 20 to 23 years old and how inevitably it kind of fizzles out in terms of conversation because Austin does not have anything to respond with. One example, we were at some hotel last night and I had a conversation with another coach and all of a sudden Austin bursts in and said, ‘I ran 3:57. My best mile is 3:57.’ Okay, ‘what does that have to do with the conversation,’ I asked.”

She mentioned that he has a mind like an 10 year old when it comes to conversating. But she has been teaching him the proper etiquettes in order to converse with others. When I spoke with Austin he displayed eye contact and seemed to be understanding the conversation through body language. Even though people with autism have difficulty displaying emotions (Woods & Wetherby, 2003; Ward, Nichols, & Freedman, 2010), sports has helped changed that for Austin. Alexander and Leather (2013) described that by establishing social boundaries, it allows the athlete to become more skilled socially. Additionally, the coach talked about how Austin adapts to training with other runners .

“Austin learns to run controlled with other people, without running to the front doing all the work. While in California in April, he worked out quite a lot with a couple athletes, probably twice a week. I would have Austin running with the other athletes on their hard day and it was a medium or sub-medium day for Austin so that he would be tired but not unreasonably tired to do a tempo workout.”

Laushey and Heflin (2000), as well as Hayward, Fragala-Pinkham, Johnson, and Torres, (2016) stated that people with autism tend to react more socially when they are with a peer or mentor. With the help of his coach and other elite athletes he is able to train with, it teaches him the necessary skills in order to learn from others and develop social skills as well. In regards to how sports has had an impact on his life socially, she mentioned many benefits.

“Sports has impacted him in a positive way because that is how Austin really sees the world. Running has been able to connect him to the world. Before he had sports he was very isolated. There was no point for him to connect. He started running when he was eight but he also played soccer, baseball, football, and lacrosse and he was the best then. People knew him when he was a little kid and they said, ‘Austin was always the best one on the field, at five, at seven, at eight, and ten.’ A lot of people did not know that he was actually autistic until he was in high school.”

The coach stated that Austin was isolated before sports, this is parallel to what Faulkner and Sparkes (1999), as well as Findlay and Coplan (2008) stated when they said that participating in sports has encouraged participants to be more confident and have higher self-esteem. Running has definitely been a huge part in the way he views life around him. In

regards to races, the coach was asked what strategies she gives Austin to help him reach his goals.

“We are still working on pacing for races but it is a work in progress. Austin does not understand pace really. He does not feel it the way you and I do. And so, unfortunately, a lot of the things that you learn as a high schooler in sports, he never learned it. Regarding in practice, I try to treat them a lot like races. So I am constantly telling him ‘you are on pace’, ‘you are a little slow’, ‘you are a little fast’, ‘pick up’, ‘relax’, or ‘stay right there’. I do that in races as well as in practice. We will write out a race plan, so he knows the splits that he is supposed to hit, but the racing itself could be difficult to achieve based on the level of competition. But we do try to have a race plan so he knows not to go out too fast. It is better for him to go out too slow than too fast especially in races, like the mile. You do not want to be too far behind, but you want to be at a position where you can catch up with the leaders. He is starting to understand that. We watch a lot of races on YouTube so that he gets an understanding of why people, like Mo Farah, is inevitably at the back of the pack in the 5,000 to 10,000 races. But when Austin goes to the front, he is not just taking off and setting the pace, he is hoping to stay in the lead for two laps and then slows it way down and I am trying to help him understand why he does that. Those are the things that I want him to practice at the lower level races so that hopefully when he races more elite level, he will not make so many tactical errors.”

With Austin being coached under her for two and a half years, he still has to learn at more slower pace than most people because she wants to help him understand the “why” behind the “what”. According to Lee and Porretta (2013), they stated that before moving to more

advanced levels of motor skills, the fundamentals has to be developed first. She further mentioned:

“Regarding showing Austin footage videos of running, I have learned that what Austin sees and what he thinks he sees are two different things. What he thinks is going on in the race actually is not sometimes, because he has the mind of an 10 year old. He does not, in my mind, understand what a rabbit does in a race for example. Additionally, there are many things you have to address with him that are outside of the track. As a distance runner, you have to understand how you need to heal your body and that you have to manage the amount that you eat because you have to do everything within your power to protect your workout. For example, if it is a matter of you having an hour until you go run but you are hungry, what do you do? Will you eat something little? I am like, ‘No, you do not eat at all.’ He is like, ‘But I am hungry.’ ‘Yes, but your workout is more important than you being hungry.’ He does not understand that you eating soon before practice can blow your workout. So little things like that, he does not understand that.”

Furthermore, she discussed how she helps him learn different skills or drills, she mentioned that great communication and feedback is key. When he is able to accomplish the drill it gives him confidence to pursue more goals. It is important to show the skill vividly and explain it in small pieces to get a better understanding of the skill. This goes in conjunction with what Feltz, Short, and Sullivan (2008) which stated that an athlete can become confident through verbal persuasion and mastery experiences. She gave some examples of what she uses in practice to help Austin focus and obtain his goals.

“I would use simple things like how when you run, you are clawing the ground to work on your mechanics. I would use words that he could relate to and understand better like saying: ‘Okay when you run you actually do this but we need to get you to do it faster. You are crimping the track behind you. The track is coming up and it is rippling behind you’ and so using cues like that has helped. I also use animal cues for him because he seems to like it and understand it. So we have tiger, lion and cheetah and so I ask him, ‘are you going to be a tiger today, are you going to be a lion today or are you going to be a cheetah?’ So the cheetah clearly is the fastest and so you are really picking up your feet and putting it down, it is really fast turnover speed. A lion is a different persona, they move quickly leading and domineering the race. The persona is ‘this is my race you guys are running.’ So I want him thinking and knowing he has a big presence. He is a big presence on a line and so we use that to our advantage. Then the tiger is very methodical. It knows what it needs to do. It just goes to work. So he seems to like using animal cues and he responds to that well.”

Additionally, because he has a huge presence in social media and at track meets, she was asked if it has been difficult for Austin at practice or track races. The coach responded:

“It has not been difficult but it has been challenging in the sense that what you just described has been the good part on social media. The bad part is that, and actually this is one of the things that we are going to address with his autism assessment because it has created anxiety for Austin, in that, when he gets up in the morning the first thing he does is he tries to make sure he says happy birthday to everyone on their birthdays. Others want him to have a corporate account so that he has more than 5000 friends, but I said no

we cannot do that. We have to come up with a plan, he will have a corporate account pretty soon but he will not manage it. I or the personal relations team will manage it. He could spend hours upon hours of time on Facebook or Instagram looking at what everybody else is doing. He is very concerned about how other people perceive him. Austin says: ‘all my friends went back to college.’ ‘Yeah I get it, they are supposed to do that. But how many of your friends have gone to Europe? How many of your friends have gone to here to there?’ He does not look at it that way. He does not look at it as if he has a cool excellent life and he just sees his other friends or people that he knows doing these cool things like going on spring break, having a good time, or going to the beach. Austin can do these cool things with his friends or people that he knows, but he is going to be sitting on the side not interacting so much.”

The coach is honest and upfront with Austin because it is what he needs. Social media has been a huge factor in today’s society in how we react and socialize with others and so there are always negatives and positives in the way social media is used. Furthermore, the same question was asked to Austin and this is what he had to say.

“Being famous in the track and field world, it can get pretty discomforting and distracting sometimes because I may not be so focused or well prepared for the race.”

His coach said that sometimes he has to tune the noise out when he is focused on his race. Austin understands that he has to be used to the noise and the pressure of the crowd during the races as well.

## **Chapter 5**

### **Discussion & Conclusion**

The purpose of this research was to discover how Austin is able to succeed and remain so consistent at a high level. Also, part of this research was to look at how sports has been able to build confidence, encourage emotional regulation, transform his motor skills, and develop social skills to help have a more enjoyable life. This research will also help other people with autism to be incorporated in sports, parents with children that are autistic, and those who are coaching children with autism.

Running has challenged Austin in all aspects of life and he has applied many of his skills from sports to life. He has a lot of goals that he still wants to achieve, even though he has achieved a lot in his career. Because of the support and encouragement from his friends, family, and coach, he has been able to reach high and to never give up. The coach was very engaging with the athlete and always kept in direct communication with him making sure he understands why he does the things he does and the importance of setting small goals to achieve the bigger goals. This also goes in line with what I have found in the research, according to Ohrberg (2013), in order to provide a healthy, engaging environment it is up to the coaches and parents to be conscience in making sure they keep an open and consistent communication with people that are autistic. Also Hatzigeorgiadis, Zourbanos, Goltsios, and Theodorakis (2008) stated that increase in self-efficacy is directly correlated to an increase in performance. Austin developed confidence

through his own experiences, learning from others, and also from his coach encouraging him. These results were parallel to what was described by Bandura (1997). It is very important to establish a foundation to build character in the athlete in order to help him or her to reach their ultimate potential.

One thing I have noticed while interviewing the coach and athlete is that being committed is key to being successful. If the coach is not committed, then the athlete will not be committed as well. One benefit that I noticed when interviewing the coach and Austin is that Austin is intrinsically motivated to succeed, he does not depend on others or external prizes in order to motivate him. He also loves learning and mastering new skills which goes in line with the Self-Determination Theory (Deci & Ryan, 2011). Furthermore, based on the Chevallier, Kohls, Troiani, Brodtkin, and Schultz, (2012) Austin is more intrinsically motivated to improve in performance to pursue approval from his coach and family. This is huge, because most athletes that compete are in it for something external; it is usually the internally motivated athletes that are the most consistent, focused, and most likely to succeed in training and competition. This study also supports Pan and Davis (2018) in that through sports participation, the athlete is able to gain psychological well being improvement and fitness.

Furthermore, Barnett, Van Beurden, Morgan, Brooks, and Beard (2009), stated that object control skills tend to be more difficult than movement type of skills. From what I found in my research, it seems to be true. When interviewing the coach, she said that Austin struggles with performing exercises like using the swiss ball because he struggles with balance but it is much needed for him to become a better runner. He does not do the typical advanced exercises as other advanced runners do, like lifting heavy weights, but he does exercises that really helps him

to improve his balance and stamina as a runner. Because he is an elite athlete, she has to make sure that he improves his weaknesses, as well as his strengths.

With social skills and emotional balance being a negative factor when having autism, Austin has seemed to conquer those things with the help of his coach. Sanders et al. (2008), stated that 60 percent of health professionals did not receive any education regarding how to work with people that are autistic. This research is parallel to what the coach stated in that she did not receive any education regarding learning about the autistic community as well. Furthermore, not many coaches are able to help develop athletes with autism because they are not educated enough to help them in the best way possible. With Austin's coach, she was committed and able to help him develop and apply those skills in track to life. Coaching requires a lot of patience and empathy to understand what the other person is feeling. Facilitating people with ASD can be very demanding and requires skill and training because every person with ASD is different. Kunzi (2015) stated that people with ASD could have depression and other factors that cause frustration in the autistic community because many times they will feel like they are not understood. What I have found in my interview with the Coach is that she has to constantly be present with her athlete and give him her undivided attention in order to allow him to be himself and to be the best that he can be.

During her coaching career, she has noticed some factors that may cause stress in negative and positive ways in Austin. One of the major things she noticed was that Austin likes to have everything in order. When something is not done the way it was done previously, then he becomes stressed. Some other stressors included large crowds and listening to too many people when not focusing on the task. His stressors are the same stressors experienced by many others

that have autism, according to what I found in American Psychiatric Association (2013). Also, one positive stress that the coach has noticed, particularly in Austin, is that he is very task oriented. He does not focus so much on factors he cannot control, but runs his own race and does the best he can do. If he does not understand how to do a task, he would keep working at it until he masters the task. As a coach, she has to prepare him mentally when things change abruptly. Also, when there are big competitions, she has to keep him guarded to help keep him focused on the race. According to American Psychiatric Association (2013), people with autism tend to be very specific and task oriented when it comes to performing duties. What I have found to be the most prevalent stressor in the interview is organizational stressor which is based on what Fletcher, Hanton, and Mellalieu (2006) described in their article.

Some limitations to this study would be that because it is a qualitative study, this information may not be generalized to other people with autism. Also, individual sports are different from team sports, so it would be difficult to generalize track to other sports like basketball or soccer. People with ASD are very unique and have their own individuality, so this information may not be able to reach a broad audience. Furthermore, because Austin is an elite athlete, it would be difficult to generalize his results to other athletes with autism who are not elite. In order to extend my thesis, I would also interview the parents and some of Austin's teammates as well to get a better understanding of his behavior and the way he manages stress. Additionally, it would be interesting to see the different characteristics displayed between those who are autistic in team sports and individual sports. Also, the need for more sports programs for adults with autism should be looked at.

In order to develop an athlete with autism it requires patience and empathy because athletes with autism takes longer than others to adapt. Also, being creative allows the athletes to enjoy the process and helps them to become more adapted to the environment easier than if things were done more monotonously. With this research, this could impact many other athletes with autism. This would also help many coaches in learning how to understand athletes who are autistic. Furthermore, this research will help parents to better understand the benefits of having their children with autism in sports as an outlet for them to build connection, develop skills, and have a chance at setting goals and achieving them. By having more sports programs for people with autism, they are able to help not only reduce the cost of money being put into programs for autistic children, but help them to learn how to develop emotionally, physically, and mentally.

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## Appendices

### Appendix A

#### **Literature search terms.**

##### ***Autism and sports.***

“ASD” or “ASC” or “autism spectrum condition” or “autism spectrum disorder” or “asperger syndrome” or “mental illness” or “disability” or “intellectual disabilities” or “intellectual disability” or “physical activity” or “physical activities” or “programs” or “exercise” or “exercise and health” or “special olympics” or “paralympics” or “para-sport”

OR

##### ***Social and motor skills.***

“social development” or “social relational” or “self-concept perceptions” or “motor development” or “psychomotor skills” or “motor ability”

OR

##### ***Emotion regulation.***

“psycho-emotional oppression” or “adaptability” or “behavior therapy methods”

### Appendix B

#### **Interview Guide.**

##### ***Autism and sport questions.\****

1. When was Austin diagnosed with ASD?

2. What tendencies did he show that displayed ASD behavior?
3. Does he know that he has a disability?
4. When did he get into sports? How has it impacted him?
5. What sports has he played throughout his life?
6. When did the parents find out he was exceptional in running?
7. What is a typical day for him (during practice and outside practice)?
8. How can sports help other kids with autism?
9. What drives Austin to succeed?
10. What things do you have to work on as a coach in order to help motivate Austin?

***Emotion regulation questions. \****

1. What tools are necessary to help him to reach his best potential?
2. What types of behaviors have you noticed that may affect Austin's learning in a negative way?

Positive ways?

3. Have you noticed any causing stressors that may affect Austin outside of your coaching ability (ie. weather, crowd, parents or friends of the athlete, relationships with other athletes, injuries)?
4. What do you suggest is the best skill(s) to have in order to coach athletes with autism?

***Social and motor skills questions. \****

1. How does he react to training or competing with other competitors?
2. How did he react to his peers outside of track?
3. How did others treat him?
4. Has sports impacted his social life?
5. Does he react differently to athletes with ASD than to athletes without ASD?

6. Was he a natural born runner starting out as a track athlete?
7. How has he learned to pace in a race? Does he just run or does he try to hit specific times during practice or competition?
8. Does he struggle to learn different drills?

***Other general questions.\****

1. How long have you coached athletes with disabilities? What disabilities specifically? And age range?
2. What is the current number of athletes you coach with mental disabilities?
3. As an athlete, what advice could you give to other people who do not know the importance of how sports plays a role in autism?
4. How did it feel as a coach coaching athletes with disabilities?
5. Did it take a while for the parents to get adjusted to you training Austin?
6. What should other coaches understand about people with autism?
7. How does the coach and athlete deal with his social media influences?

*\* Questions regarding motivation and self-efficacy are included in each of the themes.*