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The Relationship between Resiliency and the Athlete

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The Relationship between Resiliency and the Athlete

A Synthesis of the Research Literature

A Synthesis Project

Presented to the

Department of Kinesiology, Sport Studies, and Physical Education

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In Partial Fulfillment

Of the Requirements for the Degree

Master of Science in Education

(Athletic Administration)

By

Ronnie M. Joseph

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Department of Kinesiology, Sport Studies, and Physical Education

Title of Synthesis Project: The Relationship between Resiliency and the Athlete: A

Review of the Research Literature

Read and Approved by: <u>Christine J. Hopple</u>

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Accepted by the Department of Kinesiology, Sport Studies, and Physical Education, State University of New York-Brockport, in partial fulfillment of the requirements for the degree of Master of Science in Education (Athletic Administration).

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Abstract

The level of resilience in athletes can impact performance, self-concept, and overall mental health. This synthesis investigates the many factors which contribute, both positively and negatively, to an athlete's level of resilience. The research was conducted using the EBSCOHOST search engine in the SUNY-Brockport Drake Memorial Library's online resources. Three databases (*SportDiscus, Academic Search Complete, and Physical Education Index*) were mined using several different combinations of keywords. Data was collected from a selected critical mass of 10 studies. Each study was conducted in the previous 10 years, peer-reviewed, and data-based. The studies were used to answer the following five research questions: 1. What are factors that impact resiliency in athletes?, 2. What impact do coaches have on an athlete's resiliency?, 3. Do psychological skills training programs have an impact on the resiliency of athletes?, 4. What role does resiliency play in helping athletes respond to loss in a positive way?, and 5. How can athletes be helped to become more resilient? Results indicate that many internal and external factors affect the level of resiliency in athletes. Mental toughness and positive self-concept, specifically, are positively correlated with high levels of resiliency. Task-oriented coping strategies and mastery-oriented motivational climates have a positive effect on self-concept and on resiliency in athletes. Results can be used to help coaches understand the importance of creating mastery-oriented climates. Furthermore, future studies can investigate the effectiveness of psychological skills training programs and the effects they have on resiliency and on overall mental health.

Keywords: Resiliency, Athletics, Coping, Losing, Psychology, Sports

Contents

Chapter 1

Introduction

Those who have participated in competitive sports can remember a teammate who seemed to be able to always bounce back from bad mistakes and perform well; yet, on the other hand, athletes can also remember teammates who seemed to respond negatively to poor performance. This begs the question why do some athletes respond better to perceived failure than others? Why do some people seem to "shut down" after making a costly error in competition? It is important to consider why some people respond well to stressors while others do not and how this impacts the athlete during competition. The answer may lie in the construct of "resiliency."

Resiliency is defined by the dictionary as "the ability of something to return to its original size and shape after being compressed or deformed" and "an ability to recover from or adjust easily to adversity or change" (*Merriam-Webster*, 2020). Additionally, "psychologists define resilience as the process of adapting well in the face of adversity, trauma, tragedy, threats, or significant sources of stress—such as family and relationship problems, serious health problems, or workplace and financial stressors" (*APA*, 2012). Fletcher and Sarkar (2016) suggest that "psychological resilience refers to the ability to use personal qualities to withstand pressure" (p. 136). Fletcher and Sarkar investigated how an athlete's personal characteristics affects their level of resiliency and found that athletes with high levels of resiliency had certain protective factors which allowed them to appraise the stressful situation as less threatening. This ability allowed for sustained success and less negative affect (Fletcher & Sarkar, 2012; 2014).

Furthermore, it has been suggested by Fletcher and Sarkar (2014) that those who experience significant adversity in their personal lives tend to exhibit more resilience in sport, which also correlates to high achievement. Given this connection, if the relationship between

stressors and resiliency can be more fully explained and measured, it may then be possible to better simulate the type of stressful situations which may promote higher levels of resiliency in athletes (Fletcher & Sarkar, 2014). Finding answers to what impacts resiliency may then assist researchers in developing best practices which can be implemented by coaches to create resiliency in their athletes.

A number of both qualitative and quantitative studies have been conducted to explore how athletes cope with perceived failure (i.e. resiliency) (Sagar et al., 2010; Secades et al., 2016; Arnold et al., 2017). These studies found that task or problem-focused coping strategies led to positive outcomes and higher levels of resiliency, whereas emotion-focused or avoidance-focused strategies had negative outcomes. It is important to consider that an athlete's definition of and response to failure can be greatly determined by the motivational climate developed by the coach (Sagar et al., 2010; Tudor & Ridpath, 2018).

Researchers generally agree that "mastery-oriented motivational climates and achievement goal orientations have been associated with a range of salutary and clinically relevant outcomes in both educational and sport research" (Smoll, Smith, & Cumming, 2007, p. 23). A person will demonstrate behavior consistent mostly with his definition of competence and failure, and this definition is greatly impacted by the coach and the climate. Mastery-oriented climates have been determined to be best suited for continued success, and these climates help athletes to strengthen intrinsic skills and improve mental toughness and resilience (Morgan et al., 2019; Breiger et al., 2015; Gearity, 2012; Sagar & Jowett, 2012; Tudor & Ridpath, 2018).

Additionally, mastery-oriented climates and positive reinforcement from coaches help athletes to develop and maintain positive self-concept (Sagar et al., 2010). Positive self-concept was found to have a positive correlation with higher mental toughness scores, better emotional

control, and increased confidence (Meggs et al., 2014). Coaches have a profound impact on their athletes and can affect how they perceive failure, how they respond to adversity, what coping strategies they use, and most importantly, their overall concept of self. Athletes are aware of negative emotions from their coaches, and these negative emotions or outbursts, especially after failures, can profoundly have negative affect on the athlete's concept of self and success (Sagar & Jowett, 2012).

Having positive self-concept helps athletes employ beneficial problem-focused coping strategies and strengthen mental toughness and resiliency. Sagar et al. (2010) investigated different coping strategies used by elite English soccer players and concluded that the fear of failure promoted avoidance-based coping strategies that potentially had negative psychological effects. They suggest that if coaches pay attention to the coping responses of their athletes, "they can help players develop and employ adaptive coping skills, (i.e., that allow for positive psychological adjustment) to manage these stressors" (Sagar et al., 2010, p. 227).

While it is important to consider that coping with adversity is congruent with the definition of resiliency offered by the dictionary and by psychologists, Fletcher & Sarkar (2012) suggest that resiliency must be looked at holistically, with many personal characteristics and experiences inherently determining an individual's level of resiliency. They argue that resiliency lies within the meta-cognitive processes that occur when someone is introduced to a stressor (Fletcher & Sarkar, 2012). These processes are different for people who have experienced major adversity. For example, someone who experienced the death of a parent, a major injury, or another major adversity, should have the ability to appraise a stressor differently than someone who has not experienced significant adversity (Fletcher & Sarkar, 2012).

So, back to resiliency in athletes. Is it possible to make an athlete more resilient? The answer lies within what is taught by the coach. If a coach is mastery-oriented and teaches his players to be the same, it is likely that the negative effects of losing would not hurt the athlete psychologically over time, but on the other hand, if an athlete plays for an ego-oriented coach, where success is solely defined in terms of winning or losing in competition, the long-lasting negative effects are unknown. Hill et al. (2019) investigated the negative effects of "choking" in competition, where they accept the most recent definition of "choking" (as cited in Mesagno and Hill, 2013, p. 273) as being "an acute and considerable decrease in skill execution and performance, when self-expected standards are normally achievable, and which is the result of increased anxiety under perceived pressure" (Hill et al., 2019, p. 12). In a study conducted on elite golfers, they determined that the athletes who reflected constructively were only able to do so "when they had the opportunity to seek additional guidance (e.g., receive instruction from a golf professional)" (Hill et al., 2019, p. 16). This supports the fact that psychological skills training is essential for an athlete's ability to cope and to reflect constructively. In the study, the athletes who had negative affects "indicated that they thought a loss of self-confidence inhibited their ability to (re)focus appropriately and in turn, recover performance" (Hill et al., 2019, p. 15). This diminishing self-worth, in addition to the loss of enjoyment, "appeared to encourage them to withdraw from their sport (albeit temporarily) and avoid pressurized situations" (Hill et al., 2019, p. 17).

Some of the athletes in the aforementioned study were able to cope with choking and learn from it. They were able to understand what caused it and were also able to make adjustments not to repeat the episodes of choking. Those who experienced negative effects all identified the loss of control of attention and emotion, which agrees with what Secades et al.

(2016) concluded when they found that resilience correlated positively with task-oriented coping strategies and negatively with emotion-oriented and distraction-oriented strategies. Some of them even reported feeling depressed and having low self-esteem. These long-lasting effects of failure can have life-long implications, and this should be studied further.

Because of what is already known, much of this responsibility to foster a nurturing climate in athletics lies with the coach. "It is recommended that coaches be knowledgeable of the technical, tactical, and mental skills of their sport, and also how to facilitate athletes' learning" (Gearity, 2012, p. 91). Sagar and Jowett (2012) go further to say "[c]oaches have a major influence on their athletes by taking a leadership role that encompasses support, instruction, and guidance" (p. 149). Part of this guidance involves teaching athletes the correct definition of success and having athletes evaluate themselves and holding themselves accountable for making improvements. Most importantly, coaches have a responsibility of teaching athletes psychological skills that will inherently help them cope with losing and improve resiliency over time.

In learning how to cope with loss, athletes will develop mental toughness and psychological resiliency, which is essential for continued success during their lives and not just in athletics. "The examination and identification of mental toughness attributes in elite athletes has led to the suggestion that mental toughness is developed through experience and environmental influences" (Drees & Mack, 2012, p. 378).

Meggs et al. (2014) identifies resilience as just one facet of mental toughness. The experience is the competition and the environment is largely the one that the coach instills in the program. Athletes will benefit greatly from a psychological skills training program and this type of training and intervention will allow them to have a better definition and measurement of

success. It will also allow them to perform better and more consistently for a sustained period of time. This is related to mental fortitude training that strengthens an athlete's resiliency. "Mental fortitude training program places emphasis on helping individuals to positively evaluate and interpret the pressure they encounter, together with their own resources, thoughts and emotions" (Fletcher & Sarkar, 2016, p. 145).

The literature identifies ways to help athletes mature physically and psychologically and agrees that it is mainly the coach's responsibility to develop a climate where success is judged by whether or not an athlete is improving and gaining mastery, rather than by winning or losing. It is important to implement a psychological skills training program, so athletes can train their minds and so that they can perform under pressure. It is important to remember, however, the impact that other factors have on a person's overall resiliency, e.g. protective factors, personal characteristics, and life experiences. "Although the benefits are wide-ranging and far-reaching, it is important to emphasize that resilience training is most certainly not a panacea for all mental health or performance problems" (Fletcher & Sarkar, 2016, p. 149). So although there are theories that have been practiced and proven to be successful in how to enhance performance and psychological well-being, resiliency is affected by many factors outside of athletics. Better understanding these factors can help coaches teach athletes how to become more resilient and withstand greater pressures.

Statement of Purpose

The purpose of this synthesis is to investigate the construct of resiliency as it relates to the athlete. The synthesis will be guided by the following research questions:

Research Questions

1. What are factors that impact resiliency in athletes?

2. What impact do coaches have on an athlete's resiliency?

3. Do psychological skills training programs have an impact on the resiliency of athletes?

4. What role does resiliency play in helping athletes respond to loss in a positive way?

5. How can athletes be helped to become more resilient?

Operational Definitions

Resilience: "psychological resilience refers to the ability to use personal qualities to withstand pressure" (Fletcher & Sarkar, 2016, p. 136).

Coping: "refers to the strategies employed following the appraisal of a stressful encounter…characterized as a specific response and by varying effectiveness in resolving outstanding issues" (Secades et al., 2017, p. 238).

Motivational Climate: Mastery oriented vs. ego-oriented: "Mastery-oriented individuals tend to attribute success to effort, cooperation, and intrinsic interest, whereas ego-oriented individuals believe that success is due to superior ability and outsmarting others" (Smoll et al., 2007, pps. 24-25).

Definition of success "resides in developing one's skills, learning the sport, enjoying participation, and giving maximum effort, not necessarily in wins and losses" (Breiger et al., 2015, p. 396).

Failure: defined by motivational climate, namely ego-oriented, losing is failing "The ego-involved person will define success when s/he demonstrates superior performance to others and will also gain a sense of competence when this is achieved" (Tudor & Ridpath, 2018, p. 292).

Mental Toughness: "mental toughness has been defined as the ability to cope with the demands of competition and training better than one's opponent" (Drees & Mack, 2012, p. 378).

Assumptions:

1. The participants in all studies answered surveys truthfully and that the methods of data collection were trustworthy.

2. The studies, having been recent and peer reviewed, were trustworthy.

3. All scales, inventories, and methods of measurement in the studies were valid and trustworthy.

4. The data was analyzed honestly and accurately according to the methods described in the studies.

5. All studies used in this synthesis answered or related directly to one of the research questions.

Limitations:

1. Some studies were limited to a specific sport when measuring resiliency (wrestling) while others used a sample representing many sports.

2. Some studies were conducted in the United States, while others were conducted in the United Kingdom and in Spain.

Delimitations:

1. All studies were related to resiliency in athletes.

2. All studies used in the critical mass were published within the last 10 years from 2010-2020.

3. All studies used were peer-reviewed and published in scholarly journals.

4. All studies used in the critical mass were data-based studies.

5. Some studies were only used for introduction (classics).

6. All studies received prior approval to be used in the critical mass.

Chapter 2

Methods

The purpose of this section is to present the methods used in researching and synthesizing the information in this paper relevant to resiliency, the factors that affect resiliency, and the ways to strengthen it.

Data Collection

The data collection for this synthesis was thorough and painstaking. The research for this synthesis began more than a year ago when the researcher was investigating the possible long lasting negative effects of losing in competition, particularly in a championship game. While mining the SUNY-Brockport library databases of *SportDiscus*, *Academic Search Complete*, and *Physical Education Index* for relevant literature on that topic, a variety of combinations of keywords were used until the results were narrowed down to a manageable number of more relevant articles. For example, when a search of "losing, psychology, and athletics or sports or athletes" was performed in *SportDiscus*, it yielded 779 results, many of which were irrelevant to the topic. The combinations of keywords were then changed and another search performed for "athletics, psychology, losing," yielded 250 results. The same keyword searches were executed for the remaining database, and it was decided that this combination was yielding the most relevant results. The results for *Academic Search Complete* were also narrowed to 112 articles from an initial list of over 1,000, by changing the order of keywords in the same way the order was changed in the *SportDiscus* search. The same held true when searching the *Physical Education Index* database. The results were narrowed to 206 articles from 578 simply by changing the order of keywords.

The abstracts of each article were read thoroughly, and it was determined that there was not much research on the desired topic of the long-lasting effects of losing in sporting competition. There were many articles relating to losing in athletics and coping mechanisms, and intervention techniques that can be implemented by coaches in order to foster peak performance. There was not much information, however, on the long-lasting effects of failure in athletics, specifically in the personal lives of athletes. Certain athletes come to mind when thinking of devastating losses due to individual performance. The one that comes to mind first and foremost is Buffalo Bills kicker Scott Norwood who missed a game-winning field goal in the Super Bowl. His franchise went on to lose three more Super Bowls after that missed kick. How is Norwood now, psychologically speaking?

Because it was felt that this topic needed to be studied more, and the literature seemed to support that fact, the researcher revised his question based on the literature and decided to investigate the relationship between resiliency and the athlete.

So when searching for the critical mass for this synthesis, the researcher again used a similar keyword search but limited his search to the EBSCOhost databases *Academic Search Complete* and *SportDiscus*. The first search done for the new set of research questions was a keyword search using "losing, psychology, and athletics" which yielded 416 results. Because the researcher was looking for a critical mass that fit the criteria, the search was limited to full text articles between the years of 2010-2020, which were peer reviewed and published in scholarly journals. These same parameters were subsequently used for the rest of the keyword searches. When adding these filters, the number of articles was reduced to 59.

While searching through the articles, the title was the first clue on whether or not the study could be related to the topic to be studied or whether or not it could answer one of the

research questions. Then the abstract of each study and the purpose statement was read. If either

the abstract or purpose of the study mentioned anything to do with mental training, coping

strategies, motivational-climate, or resiliency, the article was chosen to be read thoroughly to

determine if it could be relevant to the topic of study.

As the research was conducted and the literature scrutinized, several articles were read

that discussed coaching techniques, the development of motivational climates, the

implementation of cognitive intervention therapy, and the implementation of psychological skills

training programs. It was clear from the literature that athletes who were products of good

motivational climates and who participated in mental skills training had a better opportunity for

prolonged and sustained success. The literature, however, does not focus on athletes who did not

have the privilege of being parts of these types of programs.

After searching through the first 59 articles, the researcher then did a search using the

keywords "resiliency, sports, and psychology." The same parameters were used to fit the criteria

required for the critical mass. This search yielded 131 article published within the last 10 years

and peer-reviewed. The researcher noticed many of the same articles appear that appeared in the

first search. This time the researcher jumped to the back of the list and realized that the

studies/articles towards the back were not as relevant to the keyword searches. The researcher

skimmed through titles and abstracts.

Another keyword search was done on the words "resiliency, sports, and coping," and this

search yielded 19 results. The researcher then performed another search for the keywords

"psychology, losing, and sports," and that search yielded 233 peer-reviewed articles published

within the last 10 years. That was too many articles to skim through, so the researcher then tried

searching the keywords, "sports, coping, and losing," which yielded 14 results. Another keyword

search was conducted on the words "resiliency and sports" which yielded 499 results with only

168 fitting the parameters for the critical mass.

The researcher read every abstract of articles deemed to be potentially relevant to one or

more of the research questions. As the researcher began to select articles for the critical mass that

fit the parameters, and after reading them closely, it was noticed that many of the same

researchers were often cited in more than one study. Another keyword search was done on the

words, "resilience, sports, Fletcher and Sarkar." The researchers David Fletcher and Mustafa

Sarkar were repeatedly cited in many studies mentioning resiliency, so many of their studies

were read with a few selected for the critical mass.

The researcher then began analyzing each article utilizing a 12-step analysis that

determined purpose, methods, participants, analysis, results, and discussion. This information

was recorded in an article grid (see Appendix A). As the researcher performed the 12-step

analysis for each article that was selected, it was realized that some of them did not fit the criteria

for the critical mass (not based in data), and some of them did not answer the research questions.

These articles were not used for the critical mass. There were other articles and studies that were

read by the researcher that did fit the parameters of the critical mass and did answer a research

question but were still not used for the critical mass. This decision was made if the article only

answered one of the research questions.

As the researcher continued to search for and secure articles for the critical mass, it was

decided that the best ones were ones that answered two or more of the research questions, and as

the search continued, many studies were found that could answer three or more of the five

research questions. It was recorded on the article grid the research questions that each study

answered.

This process of searching for articles for the critical mass for this synthesis was time-consuming, deliberate, and purposeful. Ten articles were finally selected, analyzed, and placed in the article grid (see Appendix A). Although the researcher is aware that there are many more articles that could be used for the purpose of this synthesis, the ones selected were thought to best answer the research questions holistically and provide a good insight on the topic.

Chapter 3

Review of the Literature

The purpose of this chapter is to review the literature used in the critical mass which consists of 10 studies. Of those studies, six of them were related to the personal qualities of athletes which affect resiliency. Two studies focused on coping strategies that could improve resiliency, and two studies focused specifically on how someone's level of mental toughness has an impact on resiliency.

Personal Characteristics

In their 2012 study, Fletcher and Sarkar investigated the relationship between resiliency and optimal sports performance in Olympic athletes. They did this by using 12 Olympic champions (male n=8, female n=4) who played a range of different sports. After getting ethics approval, the participants were informed by email of the purpose of the study. The researchers used a purposive sample in which they recruited Olympic athletes because those athletes showed an increased ability to withstand pressure. The final sample of 12 Olympic athletes all won medals spanning four different decades. The researchers ended up with a diverse sample that included different gender, races, and ages so they could compare the emerging themes appropriately.

The researchers developed an interview guide that was shaped with open-ended questions, and they conducted a life history interview, so they could investigate the experiences that helped the Olympic athletes to develop resiliency. The interviewers asked questions related to what personal characteristics the athletes had that helped them withstand pressures of athletic competition. Subsequent questions were then developed from what was learned. After the interviews, which all ranged in time from 66-98 minutes, they were transcribed verbatim. The

researchers took a grounded theory approach, in which the data collected from an interview helped shape questions for the next, especially when it was possible to code and analyze the data before conducting the next interview.

After the interviews were transcribed, each transcript was read multiple times to give the researcher with an overall sense of the data. Each interview was then open-coded and categories were identified. As data analysis progressed, the researchers used axial coding, in which they began looking at the relationships identified that led to high levels of resiliency. The researchers used a constant comparative method where they continuously compared each relationship that emerged to another. The researchers wrote memos throughout the entire process as themes and comparisons emerged.

As the researchers conducted this qualitative study, they ensured methodological rigor by practicing reflexivity. They did this to eliminate any potential bias related to their assumptions and consistently checked the incoming data against these assumptions. This was done through constantly looking at the data and following a scientific process. Several themes emerged as a result of this study, and the researchers were able to identify that many personal characteristics work together to have an effect on resiliency. They found that positive personality, motivation, confidence, focus, and perceived social support had positive impacts on resiliency by allowing the athletes to appraise a stressor to not be a significant threat.

The rest of the studies in this category affirmed that personal qualities affect resiliency, but were more geared to understanding the effects of coaching styles and training programs on an athlete's resiliency.

Sagar, Busch, and Jowett (2010) also investigated how specific personal characteristics could affect one's level of resiliency. Their study had two main purposes. The first purpose was

to assess the dimension and levels of fear of failure. The second purpose was to examine, through qualitative inquiry, the experiences of players who were assessed to have high fear of failure. Their study used a mixed-methodology approach in which they investigated the dimensions and levels of fear of failure and how this fear and experience impacts resiliency.

This study had a total of 81 participants who were all volunteers and between the ages of 16-18; they were all from the northern and southern regions of England and were from one of four soccer academies. They had all been playing for a range of eight-12 years. The researchers obtained ethical approval from the university and then approval from the directors of each club. The researchers then visited the academies to explain the purpose of the study and seek volunteers. They were asked to provide informed consent, and the athletes that were under 18-years-old needed parental consent as well.

The data for this study was collected in two phases. The first phase was quantitative, and the volunteer participants were asked to fill out a survey. The Performance Failure Appraisal Inventory (PFAI) was used to measure and identify players with high fear of failure (Sagar et al., 2010). The inventory is a 25-item survey that measures beliefs associated with the consequences of failure.

After the inventory was given, the researchers moved on to the second phase of the data collection. From the inventory, they were able to identify athletes that exhibited a high fear of failure. They then chose one athlete from each of the four academies that reported feeling negative consequences of failure more than 70% of the time for the follow-up interview. The second phase of data collection was a qualitative inquiry in which the researchers conducted in-depth interviews that focused on the athletes' fear of failing and the experiences that led to that.

The second author contacted the four selected players by phone to ask them to participate in the interview and to further explain the purpose.

An interview guide was used to conduct semi-structured interviews that gave the interviewer freedom to ask the questions in different orders depending on the responses. All athletes were asked the same questions, just not necessarily in the same order. The interview was divided into four sections. The first and second sections of the interview were focused on asking questions to get a better idea of how the athletes perceived success and failure and how they appraised their responses to this perceived failure. The third and fourth sections of the interview focused on how the players coped with failure and what they thought about possible future failures.

The interviews were all transcribed verbatim and analyzed inductively and deductively. The researchers ensured trustworthiness and credibility by doing member checks and asking the athletes to read the transcripts and verify their accuracy. The researcher met with each of the participants after the interviews and asked them if they agreed with the emerging results and themes, and then each participant responded in writing to some of the emerging themes. The four players that exhibited the most fear of failure were found to all employ avoidance-based coping strategies, and it was found that they were affected negatively by these strategies. It was found that they did not exhibit the personal qualities needed to respond in a positive way to their failures or to stressors. The data was verified by the participants, and after the member checks, it was found that they all agreed with the results.

In another study conducted by Sagar and Jowett (2012), the researchers' purpose was to investigate how athletes are affected by the coach's communication. This study was also conducted in Great Britain and has a large sample of 324 athletes (Male n=165 and Female

n=159). The athletes were between the ages of 18-28 and had a range of between one and 14

years of experience with a mean of 7.36 years of experience (Sagar & Jowett, 2012). All the

participants in the study represented participation in a variety of team and individual sports.

Approval was obtained from the ethics committee and from the coaches that were to

participate in the inquiry. The coaches that were chosen were given informed consent, and

responses were obtained from 264 male coaches and 61 female coaches. All participants in this

study were given an open-ended survey, and the data was analyzed deductively and inductively.

First the demographic survey was computed to derive statistical information, and then the written

responses were all transcribed and analyzed to find emerging themes.

The researchers used reflexivity throughout the entire study and they ensured the rigor of

data analysis by maintaining an audit trail, "which is a record of the analytical decisions and

processes that allowed us to verify rigor and to minimize interpretive bias" (Sagar & Jowett,

2012, p. 154). Their consistent reflexivity helped to eliminate bias and to ensure the

trustworthiness and credibility of the data.

The data was coded and grouped thematically, and it was found that a coach's

interactions with athletes, whether positive or negative, has an effect on the athletes. When

athletes perceived negative emotions from a coach, it caused negative emotions in reactions in

the athletes, which has potential to diminish their self-worth. Perceiving positive emotions from

a coach after a loss had the opposite effect that allowed athletes to restore feelings of self-worth

and respond positively. These personal interactions and characteristics of coaches and athletes

have tremendous potential to impact resiliency.

Tudor and Ridpath (2018) also conducted a study that was aimed at investigating the

relationship between coaching and the development of resiliency. In their study, they aimed to

investigate how motivational climates (task or ego-oriented) can lead to success and whether

they predict academic or sport motivation. They used a sample size of 310 Division I athletes at a

large Midwestern university. The researchers gained approval from the athletics committee and

the Institutional Review Board (IRB) of the university, then from the school's athletic director.

They received verbal consent from the coaches, and then written consent. Pseudonyms were used

and then the participants were given numbers to protect anonymity.

The study was conducted with a series of three questionnaires. A demographic

questionnaire was first given to determine age, sport, and scholarship status of the participants.

They were then given The Perceived Motivational Climate in Sports Questionnaire (PMCSQ-2).

And the last questionnaire given was the Student Athlete's Motivation toward Sport and

Academics Questionnaire (SAMSAQ). The surveys were sent out to the university, and the data

was collected during team meetings during the Winter Sports season, 2014. One of the

participants was then dropped because of a statistical outlier for a total sample size of n=309, of

which the male participants were Male, n=178 and Female, n=131. This sample was diverse and

had participants of different ages, from different teams, male, female, and white and non-white.

"Cronbach's alphas were calculated for the responses in this study. The alpha coefficients

range from 0 to 1, and higher coefficients indicate a high level of consistency on the scale"

(Tudor & Ridpath, 2014, p. 299). The measures were found to be internally consistent with

previous studies and had Cronbach alphas of .8 or higher. This confirmed the validity of the

measures.

It was found that mastery-oriented motivational climates can lead to success and can also

determine how an athlete defines and experiences failure. Athletes that reported being part of

mastery or task-oriented climates had a greater concept of self in regards to being competent. So,

it was clear that task-oriented motivational climates improve self-worth and are consistent with problem-based coping. This lends itself to promoting higher levels of resiliency in athletes.

Hill et al. (2019) conducted a study that further investigated how an athlete's personal characteristics and perception of failure impact resiliency. Their study had two purposes. Its first purpose was to investigate the short and long-term effects of choking in sport and, if possible, how negative affect can be reduced. They also wanted to explore the perceived short and long-term consequences of this failure.

There were a total of 11 participants in their study that were all golfers from the southwest region of England. They ranged in age from 23-50 and of the 11, n=10 were male and n=1 were female. They all played competitively for a minimum of four years, and there handicap scores ranged from 6-18 with a median of M=10.91. Each participant self-reported a minimum of one episode of perceived choking in the two years prior to the study being conducted. Of the 11 golfers, n=8 reported multiple choking events, and n=3 reported a singular choking event (Hill et al., 2019).

This was a qualitative study which utilized a descriptive phenomenological approach. After the researchers obtained ethical approval, they recruited participants that fit the limitations of the study. They approached golf clubs with large member bases in southwest England and explained the purpose of their study. They then distributed information about the study to the members of the clubs if permission was granted. The nature of this inquiry was aimed at understanding these perceptions of choking and what negative affect it had on the athletes. The researchers collected data through interviewing and sought to understand the phenomenon on a deep level.

After the in-depth interviews, the interviews were transcribed, and the data was analyzed in four steps. The researchers practiced reflexivity throughout to ensure the trustworthiness. This was the purpose of bracketing assumptions and preconceptions in the first steps of the analysis. The second and third steps involved reading and re-reading the interviews and open-coding the data into categories. The fourth step involved the use of memos throughout the process to challenge their own analysis and preconceptions.

It was found that all participants in the study reported negative short-term effects of perceived failure. Some reported positive long-term effects, and some reported negative long-term effects. In the short-term, all athletes in the study reported poor emotional control and attentional control. They also reported lowered self-confidence.

In the long-term, n=7 participants reported positive outcomes, and n=4 reported negative outcomes. The participants that reported positive outcomes said that the experience of the failure allowed them to perform better under pressure in later competitions. This response and ability to appraise the choking episode differently and perform under pressure is the definition of resiliency.

The sixth and final study that was grouped in this category also focused on qualities that could improve resiliency. In their study, Morgan, Fletcher, and Sarkar, sought to explore the psychosocial enablers that promote team resiliency (2019). This was done as an ethnographic qualitative study that lasted for an 11-month long rugby season. The researchers spent the entire season with the semi-pro winning team and collected their data through observations, interviews, field notes, and the use of a reflexive diary that enhanced trustworthiness. There were n=27 participants who were all male (Morgan et al., 2019).

The researchers used a mix of unstructured and semi-structured interviews. They also used spontaneous conversations, specifically exploring the feelings of the participants after the team lost. Because of the nature of the study and the time the researchers spent with the team through the 11-month period, there was good rapport which aided in the freeness and openness of the responses from the participants. The researchers also observed the team three times per week for a total of two-eight hours per observation, over an 11-month period (Morgan et al., 2019).

The analysis of the data was ongoing and not a particular stage in this study, which often happens in ethnography (Morgan et al., 2019). NVivo10 software was used to organize and manage all the transcribed data derived by written and oral means. The analysis of the data yielded the emergence of five main themes that help team resilience. It was found that all of the following contributed to strengthening team resilience: 1. Inspiring and motivating team members to excel, 2. Develop team self-regulation through ownership and responsibility, 3. Cultivating togetherness and team identity (team building), 4. Exposing team to challenging training and stressors, and 5. Promoting enjoyment and keeping positive outlook during adversity or stress (Morgan et al., 2019). The process of reflexivity was carried out throughout the study by using a reflexive diary and writing memos. The notes were constantly compared throughout the research.

Coping Strategies

Someone's level of resilience greatly impacts the coping strategies that they employ, and two studies in the critical mass specifically focused on these strategies and their relationship with resilience even though others like Hill et al. (2019) and Sagar et al. (2010) mention these strategies. Secades et al. (2016) specifically studied the relationship between resiliency and

coping strategies in sports. The purpose of their study was to investigate the relationship between a person's resilient qualities and coping strategies at two different points in the season. They assumed that coping strategies would change when athletes were exposed to stressful stimuli (Secades et al., 2016).

This study was done quantitatively through the use of the Spanish version of the validated ISCCS, a 35-item measure divided into 8 categories and using a 5-point scale. This tool measures the task-oriented, emotion-oriented, and distraction-oriented coping strategies used in a sport context (Secades et al., 2016). There were 235 participants in this study of which n=126 were male and n=109 were female, all ranging in age from 15-35 years and playing a variety of different sports. Institutional ethical approval was given, and the participants all signed informed consent.

The participants also completed the Spanish version of the Spanish resilience scale, which consisted of 25 items using a 7-point scale. Scoring higher than 145 was considered having high resilience, 121-145 was having a moderate level, and below 121 showed a low level of resilience. The data was collected at two points during the season. The first time right about mid-season and the second time immediately following the most important competition near the end of the season. The data was all then analyzed statistically accounting for variances by using the multivariate analysis of covariance (MANCOVA). Additionally, a Bonferroni test was used to show differences. SPSS software was then used for statistical analysis (Secades et al., 2016).

Pearson correlation coefficients were also used and showed that there was a positive correlation between task-oriented coping strategies and resilience and a negative correlation with emotion-oriented and distraction-oriented strategies (Secades et al., 2016).

Arnold, Fletcher, and Daniels (2017) also conducted a study on coping strategies that had

two main purposes. The first purpose was to investigate the negative and positive effects of

stressors that come from an athlete's organization, and the second purpose was to affirm their

hypothesis that problem-based coping strategies had positive effects, while avoidance and

emotion-based strategies had negative effects (Arnold et al, 2017).

They utilized a very large and diverse sample of n=414 athletes, of which n=197 were

male and n=217 were female. The participants ranged in age from 18-66 years with a mean of

M_{age}=25.99 years. There were a total of n=34 sports represented, and the participants had a range

of experience from 2 months-56 years. There was a wide range of performance level ranging

from club to international. The researchers received ethical approval and then recruited the

participants either directly or through coaches or organizations.

Informed consent was signed, and the researchers collected data through the use of three

measures that were given online n=276 or in paper n=138. The first measure was the OSI-SP, a

23-item scale that measured organizational stressors over the previous month. The participants

were also given the Modified COPE (MCOPE) measure which is a 12-strategy scale that asks the

participants to rank their levels of coping on a 5-point Likert scale. The final measure was the

Positive and Negative Affect Scale (PANAS), a 20-item scale that asked participants again to

rank from 1-5 what they felt the affect was in different scenarios (Arnold et al., 2017).

Multiple regression analysis was then used to plot the data, and it was found that the

stressors had significant negative affect but no positive affect. It also became evident that

negative affect increased as the level of stress increased. It was found that problem-focused

coping strategies had significant main positive effect on positive affect while emotion-focused

strategies had significant main positive effect on negative affect, and avoidance-focused

strategies had no main effect on negative affect (Arnold et al., 2017).

Mental Toughness

Two studies in the critical mass used mental toughness measures, and both studies have

implications to better understanding resiliency, particularly emotional resiliency. The first of

these studies conducted by Meggs et al. (2014) had two interesting purposes. The first purpose

was to prove the validity of the Sport Mental Toughness Questionnaire (SMTQ), and the second

purpose was to prove the hypothesis that a person with a particular type of personality (positive-

integrative self-organization type) has greater mental toughness and emotional resiliency.

The study was done using volunteers from an opportunity sample, from which n=105

athletes were chosen, n=65 of them male, from the United Kingdom. The athletes ranged in ages

from 18 year and older, and 74% of the sample were between the ages of 18-25. The athletes

participated at all different levels including school, national, and international. They all had been

playing for five to 14 years with a mean of M=7.5 years. The SMTQ was used, which is a 14-

item questionnaire that measures mental toughness derived from three subscales, confidence,

constancy, and control (Meggs et al., 2014).

The researchers posted an online questionnaire to the participants, and after giving

informed consent, they completed a self-descriptive attribute task, then they were asked to

complete a DI measure, which measured a person's ability to remain positive and have good self-

concept (Meggs et al., 2014). The participants then completed the SMTQ in that order.

The data was then analyzed using hierarchical multiple regression analysis that regressed

the scores into three categories, (1) compartmentalization (2) proportion of negative beliefs (3)

DI (Meggs et al., 2014). The data revealed that those with positive self-concept had higher

mental toughness scores and higher level of control than one with a negative self-concept. Also, those with positive self-concept had higher confidence. Athletes with positive self-concept were able to exhibit higher levels of control and confidence in stressful situations, and particularly had high levels of emotional resiliency.

The second study that used a mental toughness assessment was conducted by Drees and Mack (2012). Their study had two purposes. The first one was to examine the mental toughness of high school wrestlers and to measure whether or not it changed over the course of the season, and the second purpose was to examine the relationships between the metal toughness ability and age, experience, grade-level, practice time, and success. The study was conducted using mixed methodology, but most of the data was quantitative.

The participants were high school wrestlers from Iowa, n=63, and n=54 completed the post-survey, so n=9 were dropped from the final results. They ranged in age from 14-18. Because of the age of the student-athletes, the researchers, after having approval from the IRB, the athletic directors, and the wrestling coaches, sent a letter home with each member of the wrestling team at three different high schools. The letters explained the study and asked parents to sign the informed consent.

The researchers gave the athletes the Mental, Emotional, Body, Toughness Inventory (MeBTough), a 43-item self-report scale before the season and at the end of the season before the playoffs. Two Cronbach alphas were done to examine internal consistency, a paired sample t-test calculated if there was significant difference between pre-test and post-test, and a one-way analysis of variance (ANOVA)-compare mental toughness post-test by grade level (Drees & Mack, 2012).

It was found through a Pearson correlation that older wrestlers had higher mental toughness scores, which translated to more wins. It was also found that there was no significant increase in mental toughness over a short period of time, and that mental toughness promotes success and higher levels of resiliency. The only significant difference in mental toughness in regards to age were the seniors having higher mental toughness than the freshmen, which suggests that resilience is impacted by experience and age.

Chapter 4

Results

The purpose of this chapter is to report the results the literature in regards to the relationship between resiliency and the athlete. The 10 studies used in the critical mass were chosen based on their ability to answer the research questions that guided this synthesis. The following five research questions guided this synthesis:

Research Questions:

1. What are factors that impact resiliency in athletes?

2. What impact do coaches have on an athlete's resiliency?

3. Do psychological skills training programs have an impact on the resiliency of athletes?

4. What role does resiliency play in helping athletes respond to loss in a positive way?

5. How can athletes be helped to become more resilient?

What are factors that impact resiliency in athletes?

Most of the studies (n=9 out of 10), in part, answered this question. It was found that using task-oriented or problem-oriented coping strategies helped athletes improve emotional resiliency and overall psychological well-being (Secades et al., 2016; Hill et al., 2019; Arnold et al. 2017). Also it was found that mental toughness contributed to high levels of resiliency in athletes (Drees & Mack, 2012), but mental toughness was found to be a result of being exposed to stressful situations.

Meggs et al. (2014) concluded that positive self-concept related to higher levels of mental toughness, higher confidence, and a higher level of control in terms of the response to stressors. They also concluded that positive-integrative personality types have particularly high levels of

mental toughness and emotional resiliency. Someone who exhibits an integrative personality type is more likely to identify positive self-aspects amidst adversity, as opposed to someone who has a compartmentalization personality type. A positive integrative personality can integrate positive self-concepts even when making mistakes in competition. To explain it simply, someone of this personality type will not dwell on the negative and can stay focused on the task. This is very different from someone who compartmentalizes negative stimuli. For example, an athlete who compartmentalizes will succeed when everything is positive because the athlete will be more likely to focus on positive self-traits like confidence and ability. Likewise, negative self-aspects can be compartmentalized and can dominate the athlete when faced with adversity, perceived failure, or stressors. Compartmentalization leads to emotional reactions and decreased self-confidence when mistakes are made. Resiliency and mental toughness is affected by someone's concept of core self, which can be a result of everyday interaction in life and not just in sport (Meggs et al., 2014).

Fletcher and Sarkar (2012) found that positive personality, motivation, confidence, focus, and perceived social support impact resilience by influencing challenge appraisal and meta-cognitions, and that it was necessary to experience stressors in order to learn from the pressure. Findings suggest that many different personal characteristics interact to affect resiliency, and it is important to look at the construct holistically, and not just in the realm of sport. Resilience can be affected on both an intra- and inter-personal level. Someone's resiliency is a product of their metacognitive processes and how they appraise stressors.

What impact do coaches have on an athlete's resiliency?

A total of seven of the 10 studies in the critical mass were able to partly answer this question or give suggestions on what coaches can do to improve resiliency. Fletcher and Sarkar

(2012) explored the relationship between resilience and optimal sports performance, by studying

12 Olympic athletes. They found that these athletes had high levels of resistance and were able to

capably withstand pressure. They concluded that many psychological factors protect top athletes

from the negative effect of stressors. These factors include positive personality, motivation,

confidence, focus, and perceived social support. It was found that these factors impact resilience

by influencing challenge appraisal and meta-cognitions (Fletcher & Sarkar, 2012). In other

words, when an athlete is faced with adversity or a stressor, the athlete appraises the stress in a

way that forces a reaction. It is more likely for an athlete to react to a stressor positively and have

positive affect if the stimulus is appraised in such a way that it allows the athlete to do so.

They concluded it was necessary for athletes to experience stressors in order to learn

from the pressure, and this experience over time allows them to react differently to stressors by

changing the cognitive response to the actual stimulus and by using problem-focused coping. It

was also suggested that athletes who experienced trauma in their personal lives were more likely

to develop skills that allow them to respond better when faced with challenges or adversity

during competition. Coaches can learn about these induced psychological responses and can

implement mastery-oriented climates that can focus on positive self-image. This would allow

athletes to not be as negatively impacted by the stressor. Coaches can also implement

psychological skills training programs, which can help athletes improve their resiliency and the

way they react to stressors. Fletcher and Sarkar (2016) also suggested that coaches can increase

resilience and sustained success by implementing mental fortitude training programs.

Secades et al. (2016) and Tudor and Ridpath (2018) recommended that coaches can help

athletes improve resiliency and self-worth by teaching task-oriented coping strategies. Tudor and

Ridpath (2018) focused more on the importance of developing a mastery-oriented motivational

climate and suggested that the motivational climate can and will determine how athletes define failure, and thus, how they respond to it. They also found that athletes in master-oriented (task-oriented) climates have a better concept of self in regards to being competent, so it is the coach's responsibility to improve an athlete's resiliency by creating climates that improve self-worth. Secades et al. (2016), likewise found that resilience correlated positively with task-oriented coping strategies. These findings suggest that coaches can focus on resilience training and teaching task-oriented coping strategies.

Arnold et al. (2017) also found that problem-focused coping had significant positive effect on positive affect. The purpose of their study was to investigate the effect of organizational stressors on performance, and their findings were consistent with the other findings that showed that problem or task-oriented coping improve resiliency and the athlete's concept of self-worth. Coaches have an enormous impact on an athlete's ability to be more resilient because the goal is to encourage the athlete to not be as threatened by perceived failure or challenges.

Morgan et al. (2019) sought to explore psychosocial enablers that promote team resiliency, and their study showed five emergent themes that helped to build team resiliency. These themes were the following:

1. Inspiring and motivating team members to excel. Coaches have the ability to implement a culture that would promote this type of team unity.

2. Develop team self-regulation through ownership and responsibility. Again coaches can develop this type of self-regulation by having clear expectations in the program and an environment that fosters autonomy.

3. Cultivating togetherness and team identity (team building). This is also the responsibility of the coach and can be developed through team building activities.

4. Exposing team to challenging training and stressors. This can sometimes be a

   challenge for coaches, but great coaches will attempt to simulate game-like

   pressure to affect the athlete's response to it.

5. Promoting enjoyment and keeping positive outlook during adversity or stress.

These themes are consistent with mastery-oriented and positive climates that can be

developed and implemented by coaches.

Additionally, Sagar et al. (2010) and Sagar and Jowett (2012), investigated the

significance of the fear of failure and the effect that a coach's communication has on athletes,

respectively. The Sagar et al. (2010) study found that fear of failure could affect an athlete's

overall well-being, performance, and behavior. They also found that all four players who

reported high levels of fear of failure and were interviewed employed avoidance-based coping

strategies that contributed to their poor performance and lower resilience.

An athlete's definition of failure is greatly affected by what is taught by the coach and the

program. Feeling shame and failure is a cognitive process, and this process can be changed by

one's definition of failure (Sagar et al., 2010). Coaches should strive to implement mastery-

oriented motivational climates and be positive. Self-concept is important factor in emotional

resiliency and mental toughness (Meggs et al., 2014), and one's concept of core self can be

impacted by their definition of failure.

Sagar and Jowett (2012) concluded that a coach's reaction to losses in particular has a

profound effect on their athletes. Coaches should strive to help their athletes maintain emotional

resiliency by promoting their self-worth and being mastery and task-oriented. After a loss,

coaches who are negative or blame the players can have a terrible effect on the athlete's

psychosocial well-being. It is suggested that a coach can model the most effective and beneficial

coping strategy of being problem-oriented. Coaches can also help athletes define self by defining success and failure.

Do psychological skills training programs have an impact on the resiliency of athletes?

There were a total of four studies which suggested that athletes can benefit greatly from psychological skills training programs. Overall, it is suggested that coaches should implement these types of training programs in order to improve an athlete's overall performance and self-worth.

Arnold et al. (2017) suggest that when an athlete is faced with a stressor, it can have a potential negative effect on self-concept and performance. They found that coping strategies played a large role on an athlete's ability to appraise a stressor. Athletes who had developed beneficial coping strategies were not as threatened by the stressor. This appraisal allowed them to focus on the problem, which in competition could mean recovering from a mistake and staying focused on the next play or skill. Consistent with the answers to the first research question, it is suggested that the best way to help an athlete improve resiliency and respond well to a stressor is to teaching problem-based coping strategies. If an athlete is able to stay focused on the task instead of on the mistake or challenge, the athlete has a better chance of success in competition. Coping strategies can be taught through a psychological skills training program implemented by the coach.

Fletcher and Sarkar (2012) also suggest that resiliency is determined by how one appraises a stressful situation on a mega-cognitive level. A coach can affect this appraisal by building a mastery-oriented climate and by focusing on the task and on improvement, rather than on a mistake made during competition. This positive communication from the coach, as suggested by Sagar and Jowett (2012), can have a tremendously positive effect on an athlete's

overall well-being and self-image. Athletes can benefit from psychosocial training during and after their careers. It is the coach's responsibility to implement these training programs.

Secades et al. (2016) also concluded that task-oriented coping strategies help athletes to focus on the problem and to self-regulate more effectively. Conversely, emotion and distraction-oriented coping strategies take focus away from the problem and create unwanted results. This suggests that high resilience promotes task-oriented coping. Coaches can focus on resilience training and task-oriented coping strategies.

Hill et al. (2019) conducted a study in which they investigated the effects of choking in competition and perceived failure. All athletes reported poor emotional control and negative affect in the short-term as well as lowered self-confidence. They even state that "choking holds the potential to lower the wellbeing of athletes" (Hill et al., 2019, p. 19). Their findings suggest that athletes could benefit from psychological skills training programs.

What role does resiliency play in helping athletes respond to a loss in a positive way?

Many of the same studies that answered the first research question were very closely related to this research question. Fletcher and Sarkar (2012) suggest that resilience is defined by how an athlete appraises a stressful situation and what strategies they then employ in response. Athletes with higher levels of resiliency are more able to maintain a positive self-concept and not be affected as negatively by stressors.

Secades et al. (2016) found that high levels of resilience were related to task-oriented coping strategies, which allowed athletes to focus on the task at hand instead of dwelling on an error during competition, which leads to increased poor performance. The athletes with high levels of resiliency were more able to self-regulate and perform better in stressful situations.

Hill et al. (2019) found that all athletes studied experienced negative affect in the short-term after choking in competition. They also found that some athletes had positive long-term outcomes. The participants that reported positive outcomes said that the experience of the failure allowed them to perform better under pressure in later competitions. This is consistent with Fletcher and Sarkar (2012) where they suggest that personal characteristics and experience helps build resiliency, and that it is necessary to experience stressors in order to learn from the pressure.

Meggs et al. (2014) and Drees and Mack (2012) both investigated mental toughness. Drees and Mack (2012) found that mental toughness contributed to success and that the older and more experienced wrestlers had higher scores on the mental toughness measure. This is again consistent with Hill et al. (2019) and Fletcher and Sarkar (2012), and it is quite evident that resiliency and mental toughness is developed through experiences in life and in sport. Meggs et al. (2014) found that positive self-concept contributed to higher levels of mental toughness and emotional resiliency.

Morgan et al. (2019) found that positive psychosocial interactions contributed to team resiliency and that a positive motivational climate can also help athletes have better self-concept, which would help them respond to losses or poor performances in positive ways. Sagar et al. (2010) also found that positive motivational climates helped athletes to form a more positive definition of failure which helps to respond better to failure and stressors.

Sagar and Jowett (2012) explored the importance and impact of the way a coach communicates with the athletes. It was found that athletes do recognize positive and negative interactions, and positive interactions have a significant positive effect on performance (Sagar & Jowett, 2012). Perceiving negative emotions from a coach caused negative emotions and

reactions in athletes including feeling down and having lower self-worth. Perceiving positive

emotions from a coach after a loss had the opposite effect. It allowed athletes to restore feeling of

self-worth and respond positively and gain motivation. Perceived reserved emotion from a coach

also had a positive effect on players and allowed them to restore self-worth. This shows that a

coach's interactions with his or her players and the motivational climate have significant impact

on how athletes respond to losses. The Tudor and Ridpath (2018) study also found that

motivational climate had a significant impact on how athletes respond to losses.

How can athletes be helped to become more resilient?

Meggs et al. (2014) found that positive self-concept contributed to higher levels of mental

toughness and emotional resiliency. Tudor & Ridpath (2018), Morgan et al. (2019), and Sagar et

al. (2010) suggested that developing a task-oriented or mastery-oriented climate can help athletes

have a better concept of self. This, in addition to their definition of failure, which is affected by

the motivational climate developed by the coach, can improve an athlete's overall well-being,

their resilience, and their response to stressors.

Drees and Mack (2012) found athletes with high mental toughness scores have higher

levels of resiliency, and Fletcher and Sarkar (2012) found that positive personality, motivation,

confidence, focus, and perceived social support all impact resilience by influencing challenge

appraisal and meta-cognitions. Sagar and Jowett (2012) found that positive communication from

the coach helped athletes maintain a high level of self-worth which improved performance.

Arnold et al. (2017) found that greater stress correlated with greater negative affect and

problem-focused coping strategies has significant main positive effect on positive affect. As a

result of all these finding, it can be concluded that positive self-concept is at the core of having a

high level of resiliency. Coaches need to strive to develop mastery-oriented coaching climates,

remain positive, and implement psychological skills training programs that teaching problem and task-oriented coping strategies.

It is also clear from the literature that resiliency is very complex and an athlete's personal qualities, along with their experiences and exposures to pressure and negative stimuli, greatly impact one's level of resiliency (Fletcher & Sarkar, 2012; Hill et al. 2019). Athletes will benefit from psychological skills training programs and resilience training.

Chapter 5

Conclusion/Future Research

Many articles and studies were read and investigated to get a better understanding of the relationship between resilience and the athlete. From the literature, a total of 10 studies were selected to be included in the critical mass to answer the research questions. Three main conclusions can be drawn from the literature; they are outlined below.

Conclusion

First, it was found that many internal and external factors work together to affect an athlete's level of resiliency (Fletcher & Sarkar, 2012; Arnold et al., 2017). Fletcher and Sarkar (2014) identified the major difference between extant resilience research and resilience as it applies to a sports performer. Extant resilience research looks at negative life events (external factors) that are associated with negative outcomes, such as the death of a loved one or experiencing sexual abuse as a child. These external factors can have an impact on an athlete's response to stressors during competition. Other psychological phenomena like mental toughness and coping (internal factors) are also discussed. Having high levels of mental toughness and the ability to implement beneficial coping strategies are factors that impact overall psychological resilience (Fletcher & Sarkar, 2014). All these factors work together to impact an athlete's level of resiliency.

The second conclusion drawn from the literature is that mastery-oriented motivational climates can shape an athlete's definition of success and affect the athlete's concept of self (Sagar et al., 2010). It was found that a coach's reaction to losses in particular has a profound effect on their athletes (Sagar & Jowett, 2012). Coaches should strive to help their athletes maintain emotional resiliency by promoting their self-worth and being mastery and task-oriented.

Positive psychosocial interactions contributes to resiliency, and positive motivational climates can also help athletes have better self-concept, which would help them respond to losses or poor performances in positive ways (Morgan et al., 2019). A positive self-concept is important to overall well-being, and athletes in a task or mastery-oriented climate are more likely to use task-oriented coping strategies which can improve resiliency and self-concept.

Finally, the use of task-oriented coping strategies is positively correlated with high levels of resiliency and mental toughness (Drees & Mack, 2012; Meggs et al., 2014; Sagar et al., 2010). Top sports performers utilize task-oriented coping strategies and are able to focus on the task and not be negatively affected by a stressor during competition. Using task-oriented or problem-oriented coping strategies helps athletes improve emotional resiliency and overall psychological well-being (Secades et al., 2016; Hill et al., 2019; Arnold et al. 2017). Athletes can learn from the experiences of pressure, and this experience over time allows them to react differently to stressors by changing the cognitive response to the actual stimulus and by using problem-focused coping (Fletcher & Sarkar, 2012). Findings also suggest that coaches can increase resilience and encourage sustained success by implementing mental fortitude training programs to teach problem-focused coping strategies (Fletcher & Sarkar, 2016).

Future Research

"In the majority of sport resilience studies, it is worth noting that the authors have identified a need for a measure of psychological resilience in athletic performers to advance sport psychologists' understanding of this area" (Fletcher & Sarkar, 2014, p. 1420). Psychological resilience in athletes is a fairly new area of study, and it needs to be studied further. Without being able to measure these levels in athletes, it is very difficult to quantify the difference.

Additionally, researchers should investigate athletes who have been exposed to the same types of personal major adversity, like the death of a loved one or a serious injury. Are these athletes able to exhibit higher levels of resiliency because of these experiences? Fletcher and Sarkar (2012) found that the 12 Olympic athletes they studied who had athletic success were not too negatively affected by stressors. They were all found to be able to remain grounded in the moment and focused on the problem.

This suggests, along with the findings of several other researchers, that implementing psychological skills training programs and teaching effective coping strategies can help athletes increase their levels of resiliency, have a better concept of self, and improve performance (Meggs et al., 2014; Arnold et al., 2017; Fletcher & Sarkar, 2012, 2014, 2016). The effects of such training programs should be investigated further, and being able to quantify the change in levels of resilience would be beneficial to all coaches and athletes.

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Sagar, S. S., Busch, B., & Jowett, S. (2010). Success and failure, fear of failure, and coping

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Secades, X. G., Molinero, O., Salguero, A., Ruiz Barquin, R., de la Vega, R., & Márquez, S.

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Appendix A

Synthesis Article Grid

Author/Title/Citation	Purpose	Methods & Procedures	Analysis	Findings	Discussion & Recommendations
Arnold, R., Fletcher, D., & Daniels, K. (2017). Organisational stressors, coping, and outcomes in competitive sport. *Journal of Sports Sciences*, *35*(7), 694–703. https://doi-org.brockport.idm.oclc.org/10.1080/02640414.2016.1184299 **RQ 1,2,3,5**	This study had two purposes. The first purpose was to investigate the negative and positive effects of organizational stressors. The second purpose was to affirm the hypothesis that problem-based coping strategies have positive affect, while emotion-based and avoidance-based had negative affect.	-414 sports performers participants (197 male, 217 female) -Age 18-66 (M$_{age}$ 25.99, SD 9.95) -34 sports 2 months-56 years (experience) -Range in performance level -Recruitment of participants/informed consent Data collection: online n=276, paper n=138 23 item OSI-SP-measured organizational stressors participants encountered -MCOPE scale given to measure coping -PANAS positive and negative affect scale	Regression analysis used	Organizational stressors had significant negative affect but not positive affect or performance satisfaction Greater stress=greater negative affect Problem-focused coping had significant main positive effect on positive affect Emotion-focused significant main positive effect on negative affect Avoidance-focused coping had no significant effect on negative affect	The findings show that different stressors can affect someone in a positive or negative way depending on that person's perceived degree of the stressor. When a person is faced with a stressor, it could have a negative effect on their well-being but does not necessarily affect their performance. Coping strategies play a large role in the positive or negative affect. It was found that problem-based coping strategies had positive affect, while emotion-based ones (lack of control) had negative affect. Avoidance-based coping strategies did not have significant affect.

Author/Title/Citation	Purpose	Methods & Procedures	Analysis	Findings	Discussion & Recommendations
Drees, M.J., & Mack, M.G. (2012). An examination of mental toughness over the course of a competitive season. *Journal of Sport Behavior, 35*(4), 377-386. Retrieved from s3h. **RQ 3,4,5**	The first purpose of this study was to examine the mental toughness abilities of high school wrestlers and if it changed over the course of a season. The second purpose was to examine the relationships between the high school-age wrestlers' mental toughness abilities, age, grade level, wrestling experience, practice time, and wrestling success.	This was a mixed methodology scientific study, which was mostly quantitative. 63 Iowa high school wrestlers-54 completed post-study questionnaire. 9 dropped. Age 14-18 years Mental, Emotional, Body Toughness Inventory (MeBTough) 43-item self-report scale Demographic questionnaire-age, grade, experience, practice time, success	2 Cronbach alphas to examine internal consistency Paired sample t-test calculated if there was significant difference between pre-test and post-test A one-way analysis of variance (ANOVA)-compare mental toughness post-test by grade level	Pearson correlation found older participants had higher mental toughness scores and translated to more wins. Individuals with winning records had higher t-test post scores than ones with losing records. Mental toughness promotes success and higher levels of resiliency. No significant change in mental toughness over a short period of time.	Recommends additional research to investigate mental toughness and the validity of the MeBTough Inventory. It is suggested that resiliency is impacted by experience and age. The seniors had higher mental toughness than the freshmen, and it was the only significant difference between the age groups. The research is consistent with the fact that mental toughness is not necessarily developed through sport, but rather through experience. Coaches should implement psychological skills training programs, and resiliency is learned mostly through life's experiences.

Author/Title/Citation	Purpose	Methods & Procedures	Analysis	Findings	Discussion & Recommendations
Fletcher, D., & Sarkar, M. (2012). A grounded theory of psychological resilience in Olympic champions. *Psychology of Sport and Exercise*, *13*(5), 669–678. https://doi.org/10.1016/j.psychsport.2012.04.007 **RQ 1,2,3,4,5**	The purpose of this study was to explore relationships between psychological resilience and optimal sports performance.	12 Olympic champions Male n=8 Female n=4 Range of different sports Methodological congruence Purposive sample-gold medalist sought because of their ability to withstand pressure. Ethics approval-participants informed by email of the purpose of study Grounded theory approach—interviewed regarding experience of withstanding pressure	Interviews transcribed Open, Axial, Selective Coding	Many psychological factors protect top athletes from negative effect of stressors. Positive personality, Motivation, confidence, focus, perceived social support impact resilience by influencing challenge appraisal and meta-cognitions. Necessary to experience stressors in order to learn from the pressure. The experience over time allows them to react differently to the stressor by changing its appraisal and by using problem-focused coping.	Many different personal characteristics interact together to affect someone's resiliency. It is important to look at resiliency holistically, and not just in the realm of sport. Resilience can be affected on an intra and inter-personal level. Top champions had significantly different challenge appraisal levels than the common athlete. Resiliency cannot just be looked at from one of its aspects like coping, hardiness, or mental toughness. Resiliency is determined by how one appraises a stressful situation on a mega-cognitive level. Athletes can benefit from psychosocial training during and after their careers.

Author/Title/Citation	Purpose	Methods & Procedures	Analysis	Findings	Discussion & Recommendations
Hill, D. M., Cheesbrough, M., Gorczynski, P., & Matthews, N. (2019). The consequences of choking in sport: A constructive or destructive experience? *Sport Psychologist*, *33*(1), 12–22. doi: 10.1123/tsp.2018-0070 **RQ 2,3,4**	The first purpose was to investigate short and long-term effects of choking and how negative affect can be minimized. The second purpose was to explore the perceived short and long term consequences of choking (failure).	This was a qualitative study that was done through individual phenomenological interviews and grouping data into themes. Descriptive empirical phenomenological study. 11 golfers Male n=10 Female n=1 23-50 years At least 4 years played competitively. Single choking event n=3 Multiple choking event n=8…within last 2 years	Data analyzed in 4 steps: 1. Bracket assumptions and preconceptions 2. Reading and re-reading transcripts 3. Open coding/Themes 4. Memos and notes used through process for reflexivity	All participants reported negative short-term effects, while some reported positive long-term effects and negative long-term effects. All athletes reported bad emotional control and negative affect in the short-term and lowered self-confidence. Some athletes that bounce back after perceived choking have higher levels of mental toughness. Negative	Strategies should be implemented by coaches that promote positive reflection after poor performance. Also, athletes will benefit from psychological skills training or resiliency training. "Choking holds the potential to lower the wellbeing of athletes" p. 19

Author/Title/Citation	Purpose	Methods & Procedures	Analysis	Findings	Discussion & Recommendations
Meggs, J., Ditzfeld, C., & Golby, J. (2014). Self-concept organisation and mental toughness in sport. *Journal of Sports Sciences*, *32*(2), 101–109. **RQ 3,4**	The purpose of this study was to provide further construct validity to the Sport Mental Toughness Questionnaire (SMTQ) and to prove the hypothesis that positive-integrative self-organization have greater mental toughness and emotional resiliency.	105 athletes Male n=65 United Kingdom Volunteers from opportunity sample 18-25 years (74%) 26-35 years (10%) 36+ years (16%) --All levels including international, national, school --5-14 years of participation M=7.5 years SD 1.33 -SMTQ-14 item measures general mental toughness Derived from 3 subscales-confidence, constancy, control Likert scale 1-5 Approval from ethics committee of university Online questionnaire posted to recruited athletes…provide informed consent Completed self-descriptive attribute task, DI SMTQ	Hierarchical multiple regression analysis – Regressed SMTQ scores onto following measures: Compartmentalization Proportion of negative beliefs DI	Positive self-concept=higher level of global mental toughness No significant main effect in constancy. Positive self-concept=higher level of control than negative self-concept Positive self-concept=greater confidence	Athletes with positive self-concept had particularly higher level of control and confidence in stressful situations. Positive integrative personality has particularly high level of mental toughness and emotional resiliency. Resiliency and mental toughness is affected by someone's concept of core self, which can be a result of everyday interaction in life and not just in sport. This is relevant to athletics, because having this understanding can help coaches develop and implement better psychological skills training programs.

Author/Title/Citation	Purpose	Methods & Procedures	Analysis	Findings	Discussion & Recommendations
Morgan, P. B. C., Fletcher, D., & Sarkar, M. (2019). Developing team resilience: A season-long study of psychosocial enablers and strategies in a high-level sports team. *Psychology of Sport and Exercise*, *45*, 101543. https://doi.org/10.1016/j.psychsport.2019.101543 **RQ 1,4,5**	The purpose of this study was to explore psychosocial enablers that promote team resiliency.	Ethnographic study- season-long 11 months English semi-pro league-winning rugby team. Male n=27 Data collection: Observation, Interviews, Field notes, Reflexive diary Content data analysis used to identify themes.	Data analysis identified 5 key themes	5 themes emerged that help team resilience. 1. Inspiring and motivating team members to excel 2. Develop team self-regulation through ownership and responsibility. 3.Cultivating togetherness and team identity (team building) 4. Exposing team to challenging training and stressors. 5. Promoting enjoyment and keeping positive outlook during adversity or stress.	It was clear in this study that team resilience was built through many of the same strategies recommended to improve individual resilience, specifically keeping positive emotions. This study confirms that resilience is greatly affected by psychosocial interaction and can be strengthened by having the right climate of accountability and expectations in conjunction with a mastery-oriented climate.

Author/Title/Citation	Purpose	Methods & Procedures	Analysis	Findings	Discussion & Recommendations
Sagar, S. S., Busch, B., & Jowett, S. (2010). Success and failure, fear of failure, and coping responses of adolescent academy football players. *Journal of Applied Sport Psychology*, 22(2), 213–230. https://doi-org.brockport.idm.oclc.org/10.1080/10413201003664962 **RQ 1, 3, 4, 5**	This study had two main purposes. The first purpose was to assess the dimension and levels of fear of failure. The second purpose was to examine, through qualitative inquiry, the experiences of players who were assessed to have high fear of failure.	Mixed-methodology Survey (dimension and levels of FoF) -81 male soccer players from 4 British soccer academies -Volunteers -16-18 years -University ethic approval -Approval from soccer directors of 4 clubs -purpose of study explained to players -Informed consent/parents of those under 18 -Data collection in 2 phases QN-survey QR-interview PFAI-performance failure appraisal inventory 4 players (1 from each academy chosen for in-depth interviews)	PFAI-analyzed for descriptive indicators of levels and dimensions of fear of failure Interviews transcribed and thematic analysis…Coding	Fear of failure was found to affect overall well-being, performance, and behavior. The biggest fear was embarrassment. All four players that were interviewed employed avoidance-based coping strategies that contributed to their poor performance and lower resilience.	There was relatively low fear of failure for the whole sample, and the most common fear was shame or embarrassment for the perceived failure. An athlete's definition of failure is greatly affected by what is taught by the coach and the program. Feeling shame and failure is a cognitive process, and this process can be changed by one's definition of failure. Coaches should strive to implement mastery-oriented motivational climates and be positive. Self-concept is important factor in emotional resiliency and mental toughness (Meggs et al., 2014), and one's concept of core self can be impacted by their definition of failure.

Author/Title/Citation	Purpose	Methods & Procedures	Analysis	Findings	Discussion & Recommendations
Sagar, S.S., & Jowett, S. (2012). Communicative acts in coach–athlete interactions: When losing competitions and when making mistakes in training. *Western Journal of Communication*, 76(2), 148–174. Retrieved from a9h. **RQ 1,3,4,5**	Purpose was to investigate how athletes perceive and are effected by the coach's communication	324 British athletes Male n=165 Female n=159 18-28 years 1-14 years of experience M=7.36 years Variety of team and individual sports Responses referred to coaches Male n=263 Female n=61 that coached participants from childhood to time of study Approval from ethics committee and coaches and informed consent. All participants completed open-ended survey	Data analyzed deductively and inductively. Demographic survey computed for statistical information. Written answers transcribed and data had thematic analysis to identify emerging patterns. QSR NUDIST N6 used Coding of all data into categories, themes, similarities and differences. Audit trail to verify rigor and minimize bias. Reflexivity throughout.	Found that athletes recognize positive and negative interactions and that it has an effect on performance. Perceiving negative emotions from a coach caused negative emotions and reactions in athletes including feeling down and having lower self-worth. Perceiving positive emotions from a coach after a loss had opposite effect. It allowed athletes to restore feeling of self-worth and respond positively and gain motivation. Perceived reserved emotion from a coach also had a positive effect on players and allowed them to restore self-worth.	Positive communication and feedback is crucial for success. Coaches should be aware of communication methods to help build resiliency and develop good motivational climate. A coach's reaction to losses in particular have a profound effect on their athletes. Coaches should strive to help their athletes maintain emotional resiliency by promoting their self-worth and being mastery and task-oriented. After a loss, coaches who are negative or blame the players can have a terrible effect on the athlete's psychosocial well-being. It is suggested that a coach can model the most effective and beneficial coping strategy of being problem-oriented. Coaches can also help athletes define self by defining success and failure.

Author/Title/Citation	Purpose	Methods & Procedures	Analysis	Findings	Discussion & Recommendations
Secades, X. G., Molinero, O., Salguero, A., Ruiz Barquin, R., de la Vega, R., & Márquez, S. (2016). Relationship between resilience and coping strategies in competitive sport. *Perceptual & Motor Skills*, *122*(1), 336–349. https://doi-org.brockport.idm.oclc.org/10.1177/0031512516631056 **RQ 1,2,3,4,5**	The purpose was to investigate the relationship between coping strategies and individual resilient qualities at two points of the season. Assumed that coping strategies would change when exposed to potential stressful stimuli.	Spanish version of validated ISCCS-tool developed to measure task-oriented, emotion-oriented, distraction-oriented coping in a sport context-39 item, 5 point scale, 8 factors 235 participants M=126 F=109 15-35 years Various sports Informed written consent Spanish resilience scale, 25 items.7 point scale Higher than 145-high resilience 121-145-moderate Below 121-low resilience	Shapiro-Wilks tests MANCOVA SPSS Pearson Correlation Coefficient	Resilience correlated positively with task-oriented coping strategies and negatively with emotion and distraction-oriented. Relaxation/Mental Imagery high scores for high resilience During competition of 2nd test, emotion-oriented and distraction-oriented scores were significantly up, but resilience scores remained stable.	Resilience is different in everyone and level of resilience greatly affects coping strategies. Task-oriented coping lends itself to focusing on the problem and self-regulation while emotion and distraction-oriented take focus away from the problem. High resilience promotes task-oriented coping. Coaches can focus on resilience training and task-oriented coping strategies.

Author/Title/Citation	Purpose	Methods & Procedures	Analysis	Findings	Discussion & Recommendations
Tudor, M. L., & Ridpath, B. D. (2018). Does the perceived motivational climate significantly predict academic and/or athletic motivation among NCAA division I college athletes. *Journal of Contemporary Athletics*, *12*(4), 291–307. Retrieved from s3h. **RQ 1,3,4,5**	The purpose of this study was to investigate how motivational climates (task or ego-oriented) can lead to success and whether they predict academic or sport motivation.	310 Division I athletes at large Midwestern university -Approval from athletics committee and IRB…then school athletic directors -Verbal consent from coaches then written purpose of study -Pseudonyms used…given numbers to protect anonymity -Demographic Questionnaire to determine age, sport, scholarship status etc. -Perceived motivational climate in sports questionnaire (PMCSQ-2) -Student athlete's motivation toward sport and academic questionnaire (SAMSAQ)	Multiple regression procedures conducted.	A positive motivational climate that is master-oriented can lead to success. The motivational climate can and will determine how an athlete defines failure and how he responds. Athletes in a task or mastery-oriented climate are more motivated and have a better concept of self in regards to begin competent.	How can coaches develop the right climate that can promote growth and the correct perception and definition of failure and/or success? If task-oriented climates lead to higher degrees of motivation, then they will lead to higher degrees of perceived competence. Task-oriented climates mimic problem-oriented coping strategies that also lend to success and better concept of self.