Athletic Burnout in High School Students: A Social Perspective

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ABSTRACT

Current scholarship on athlete burnout focuses on elite and college athletes, overlooking burnout among highschool level athletes. Prior research concludes that high levels of social support have the potential to decrease the severity of burnout levels among elite and collegiate athletes, leading to the question of whether there is a similar correlation among highschool athletes. Utilizing existing methods for exploring athlete burnout among collegiate and elite athletes, this paper examines if burnout levels are correlated to levels of social support in high school student-athletes, and provides recommendations to prevent burnout among this population. According to this framework, high school athletes are likely to experience burnout if they have a low social support network and a lack of autonomy. A sample of 52 female and male high school-aged athletes from New Jersey participated in this study, which used the Athlete Burnout Questionnaire (ABQ), Sport Climate Questionnaire (SCQ), and personal interviews. The quantitative data, analyzed using Pearson's r Correlation Calculator, indicates that there is a negative correlation between social support and the development of athlete burnout among high school student-athletes (r=-.6716), which was further triangulated with the qualitative interview results. These findings suggest that increased social support has the ability to mitigate the severity of athlete burnout; thus to decrease the prevalence of burnout in high school athletes, coaches and athletic directors must enhance their athlete's social support network and resources.

Introduction

As athletics have become a dominant part of adolescent lives, the term burnout has raised concern among athletes, coaches, and the entirety of the athletic community. Being a new phenomena, athlete burnout has been understudied, but is the frequent topic of discussion and debate among sports psychology researchers. Numerous accounts exist of athletes who have struggled to find the motivation and energy to continue participating in their sport or athletes who have stopped participation due to environmental or individual factors. Not only is athlete burnout a detrimental syndrome that is harming athlete mental health, but it is causing athletes to withdraw from their sport and lose their sense of happiness and place within their athletic community. The growing cases of athlete withdrawal from their sports career coupled with the adverse psychological impacts confirm the importance of investigating this phenomena to prevent burnout and its negative consequences among athletes.

Definitions

The term athlete burnout has evolved with the emergence of various models. Within the sports science discipline, researchers have defined athlete burnout as a psychological syndrome characterized by a reduced sense of accomplishment (RA), emotional and physical exhaustion (E), and a devaluation of one's sport involvement (D) (Raedeke 1997). RA is defined as the tendency to negatively evaluate one's sporting achievements. E is the depletion of emotion and physical resources resulting from competition and D is the development of a cynical attitude towards sports participation (Gustafsson et al, 2017).

Literature Review

Within the sports science discipline, researchers have conceptualized athlete burnout in a multitude of models. The first model was developed by Ron Smith (1986) who viewed burnout as associated with chronic stress. Following this model, Schmidt and Stein (1991) developed their Sport Commitment Model which was soon investigated by Raedeke (1997) who used this model to create his Sports Entrapment Theory. Following these perspectives, Jay Coakley (1992) developed his Unidimensional identity Development and External Control Model in which he explored how the social organization of a sport contributes to burnout. To build off of this model, the Self Determination Theory (SDT) was created, viewing burnout as a lack of satisfaction of individuals' three basic psychological needs (Ryan and Deci, 2002). The most recent model of burnout is the Integrated Model (Gustafsson et al, 2017) which characterizes burnout as a multidimensional syndrome, combining all the models above.
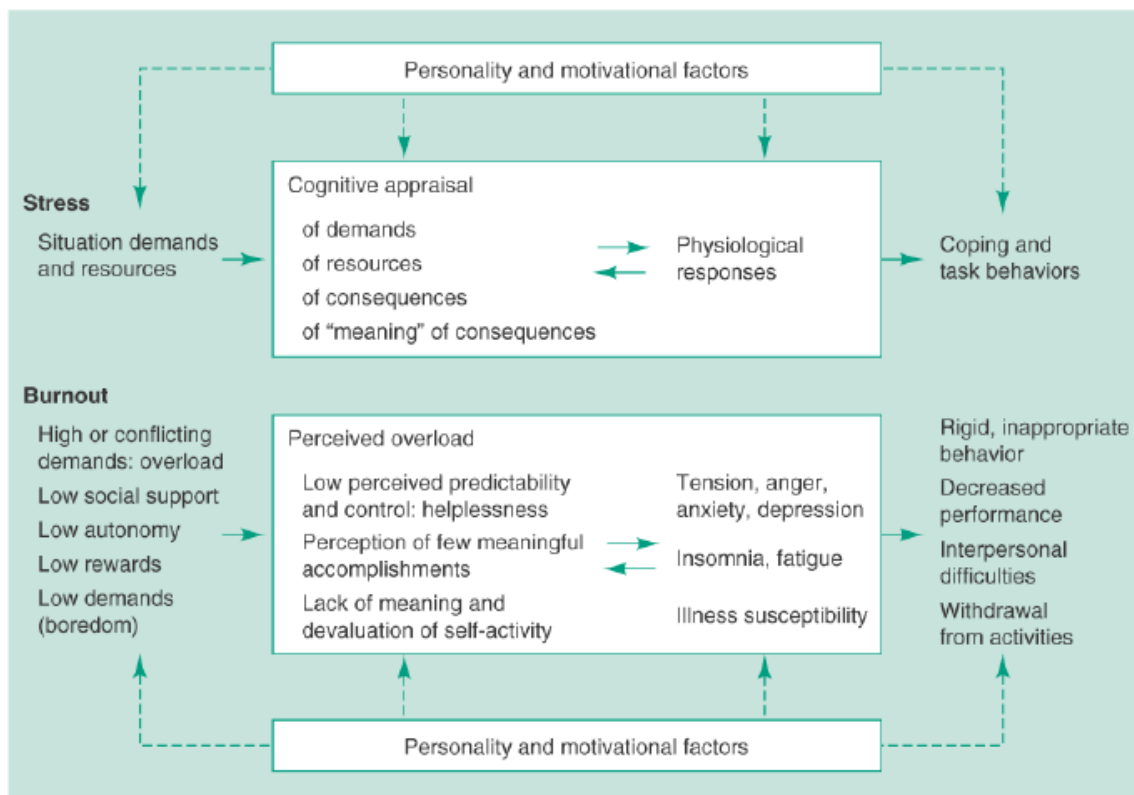

Figure 1: This figure depicts Smith's Cognitive Affective Stress Model. This model characterizes burnout into four stages: situational demands, cognitive appraisal, physiological response, and behavioral responses. It was adapted from (Smith, 1986).

Stress Perspective

In 1986, Smith developed his Cognitive Affective Stress Model, conceptualizing burnout in a stressed based perspective. This model characterized burnout into four stages of stress as shown in Figure 1. Smith hypothesized that when

stress-related costs rise so high that they exceed the benefits of sports involvement, athletes will experience burnout (Smith, 1986). As he rooted his model in the stress perspective, Smith believed that burnout was the outcome for athletes who were unable to effectively cope with the stress involved in sports training and competition (Elkund and DeFreese, 2015). Several researchers have used Smith's framework findings that high levels of stress manifest into high levels of athlete burnout for elite and professional athletes (Gould, 1996) (Shirom, 1989). While Smith's model identifies stress as the root cause of burnout, other researchers have argued that burnout is a multidimensional syndrome that stems from more than just stress (Coakley, 1992)(Gustafsson et al, 2017).

Sports Commitment Perspective

For many years, most burnout models identified stress as the root cause of burnout (Cordes and Dougherty, 1993)(Smith, 1986), however (Schmidt and Stein, 1991) developed the Sports Commitment Model to exhibit that burnout is not solely a reaction to stress. According to Figure 2, if athletes are not satisfied with their sport involvement due to high costs and low rewards, but feel unable to withdraw due to their invested time and efforts, they will be vulnerable to high levels of athlete burnout.
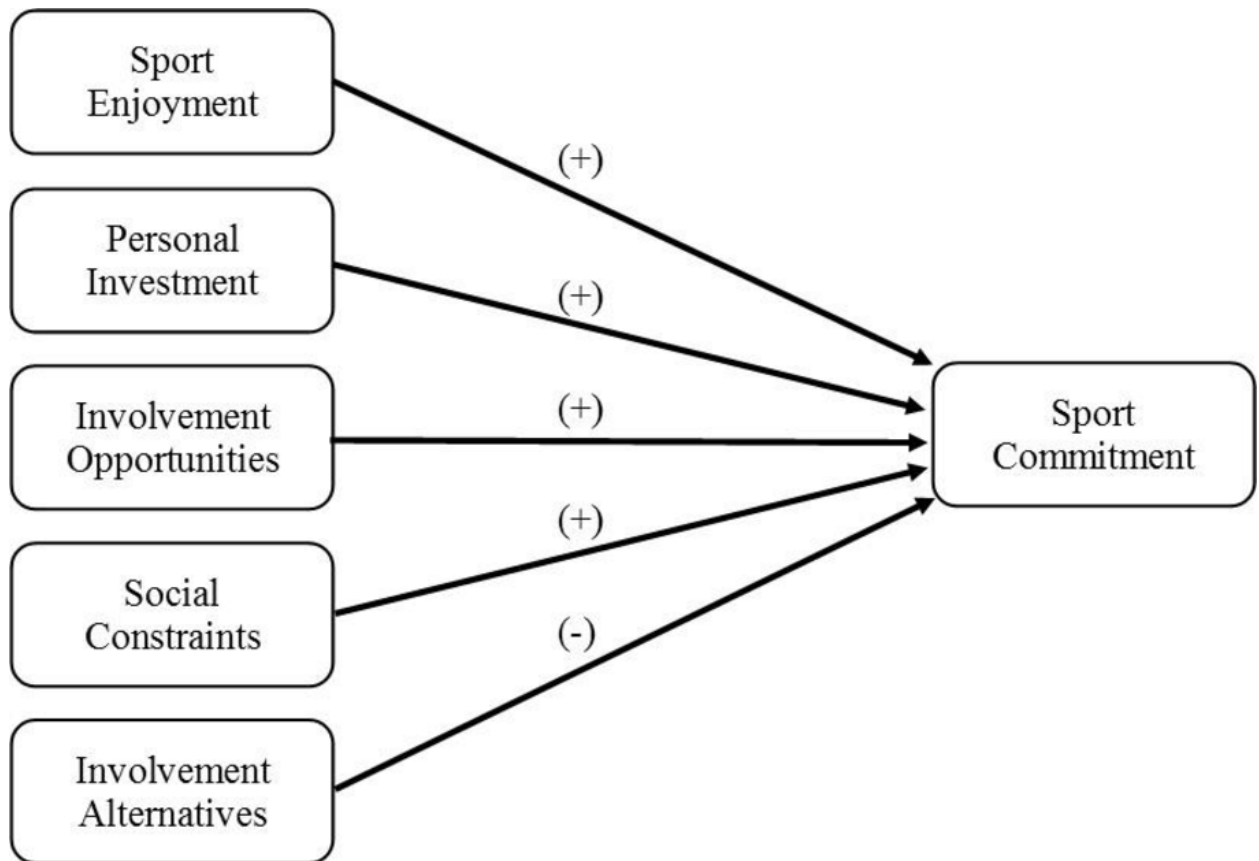

Figure 2: This figure shows the Sports Commitment Model developed and adapted from (Schmidt and Stein, 1991). This model concludes that sports commitment depends on five stable positive and negative components related to the

sport: an athlete's satisfaction with their sport, rewards and costs associated with the sport, perceptions and attractiveness of potential alternatieve activities, social constraints, and convictions about the resources they have invested.

Based upon this model, (Raedeke, 1997) developed his Sports Entrapment Theory which included two types of commitment: attraction-related and entrapment-related commitment. Raedeke characterized attraction-related commitment when athletes see their involvement rewarding, therefore, want to be involved in the sport. Conversely, entrapment related commitment was when athletes do not find the activity rewarding, however, they feel that they must maintain their involvement (Akhrem and Gazdowska, 2016). It was proposed that if athletes participate because they felt obliged to participate rather than participation being a personal choice, they would experience higher levels of burnout (Raedeke, 1997). Obligations to maintain involvement in sports include a lack of alternatives, too much invested time and resources, and that an athlete's self identity may be tied to their sport (Gould and Whitely 2009). To confirm his Sports Entrapment Theory, Raedeke conducted a study on adult swimmers, discovering that athletes were likely to experience burnout if they exhibited characteristics reflecting involvement in sports for entrapment-related reasons rather than attractive-related reasons. This perspective emphasizes that such athletes who are locked into the role of being an athlete are more vulnerable to high levels of burnout, and this burnout occurs when they do not want to participate, but feel obliged to maintain involvement.

Social Perspective

While most burnout models identify stress as the main cause, sports sociologist Coakley conceptualized burnout as a social issue with his Unidimensional Identity Development and External Control Model (Coakley, 1992). According to Coakley, the roots of burnout travel beyond chronic stress and should be perceived as a social issue rather than as a personal failure. Coakley noted that the social structure of a sport has the ability to create a lack of decision making and control within athletes, contributing to a sense of powerlessness. This sensation causes athletes to be vulnerable to high levels of burnout and eventually lead to the withdrawal from sports. Several researchers have used the frameworks of Coakey's social perspective to determine that a lack of personal control in an athletic environment resulted in high levels of athlete burnout in elite athletes (Aoyagi et al, 2011). Other studies found that high levels of social support increased athlete motivation and resulted in lower levels of burnout in collegiate weightlifters (Gu and Xue, 2022). When coaches showed controlling behaviors with a lack of autonomy support, collegiate and elite athletes were more likely to experience higher levels of athlete burnout (Black and Smith, 2007). Moreover, studies within the sports science discipline found a negative correlation between high levels of social support and the development of burnout among senior level athletes (DeFreese and Smith, 2013), further supporting Coakley's social perspective. Therefore, through the application of Coakley's Model it was determined that high levels of support and autonomy had the ability to mitigate the severity of burnout levels in older populations of athletes.

Self Determination Theory

Following the breakthrough of Coakley's Social Model, (Ryan and Deci, 2002) developed the Self Determination Theory (SDT). As evident in Figure 3, the SDT contends that individuals have three basic psychological needs: autonomy, competence, and relatedness.
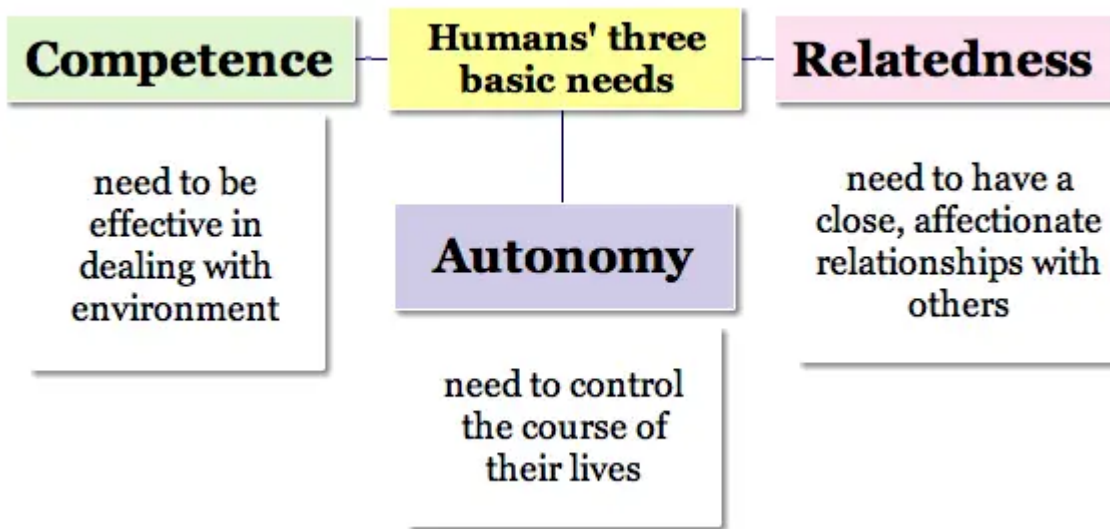
Figure 3: This figure is the Self Determination Theory(SDT) that presents and defines an individual's three basic psychological needs. This was developed and adapted from (Ryan and Deci, 2002).

In the context of athlete burnout, the SDT presents that when an athlete's three basic psychological needs are not met, their psychological well being will be diminished, and they are vulnerable to high levels of burnout. (Hodge and Londsale, 2009) applied the SDT to athlete burnout in their study of elite rugby players, confirming that the satisfaction of needs was linked to lower burnout levels. A multitude of studies found similar results with the SDT and athlete burnout where there was a link between needs satisfaction and athlete burnout in elite and collegiate athletes (Choi et al, 2020)(Perreault et al, 2007)(Sheldon and Niemiec, 2006).

Perfectionism Perspective

While the major representations of burnout consist of the models above, researchers acknowledge that perfectionism and other personality factors are critical factors in the development of athlete burnout. Perfectionism is defined as striving for flawlessness, setting exceedingly high standards, and critical evaluations of one's performance (Hill et al, 2010). Researchers found that in elite and collegiate athletic environments, highly perfectionistic athletes had the highest burnout levels (Gustafsson et al, 2008)(Stenling et al, 2014)(Olsson et al, 2021.) In other studies, researchers found that burnout is not only rooted in self perfectionism, but also demands from coaches and teammates to perform perfectly (Hill et al, 2010) (Hewitt and Flett, 1991). Perfectionism is categorized by many researchers as a contributing factor to the development of athlete burnout as setting unrealistic expectations can create high critical expectations of self and one's self worth (Appleton et al, 2009).
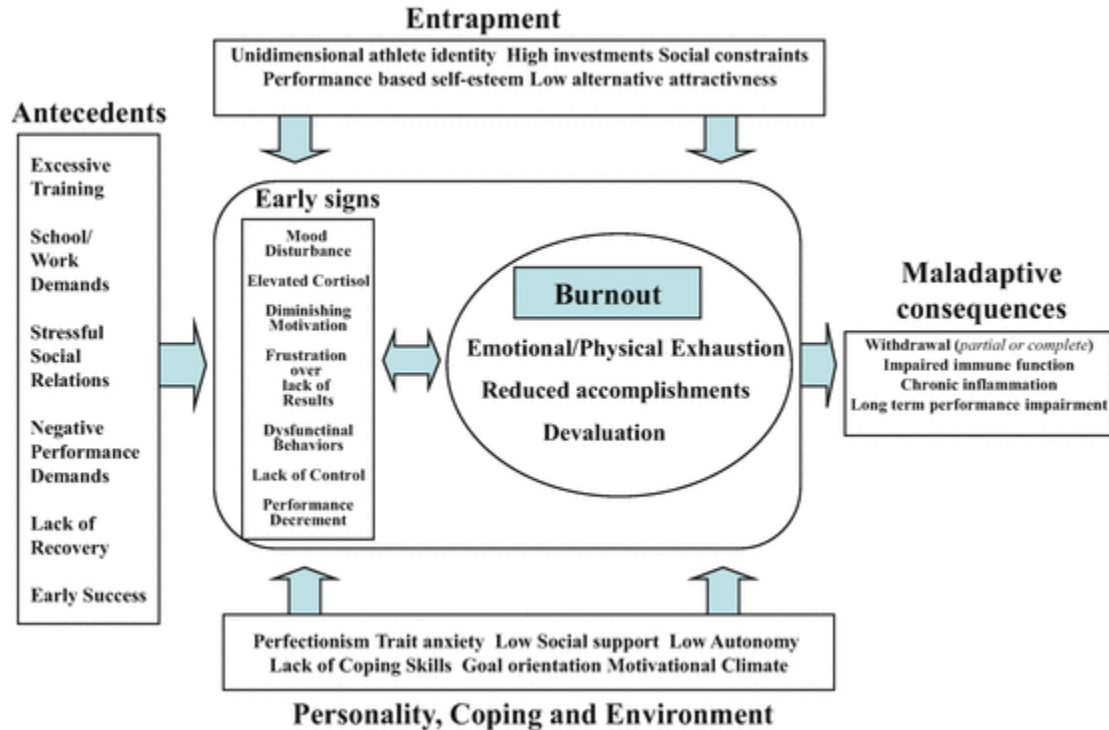
Figure 4: This shows the Integrated Model of Athlete Burnout developed and adapted from (Gustafsson et al, 2017). This model characterizes burnout by integrating Smith's Cognitive Affective Stress Model, Raedeke's Entrapment Theory, the Perfectionism approach, the Self Determination Theory, and a multitude of other individual and environmental factors into one representation of athlete burnout.

Multidimensional Perspective

The most recent model of burnout is the Integrated Model (Gustafsson et al, 2017) which characterizes burnout as a multidimensional psychological syndrome as seen in Figure 4. To support this model, researchers in the sports science discipline found that stressors such as high sporting demands, a lack of recovery, and high expectations from coaches all contributed to the development of burnout in Swedish elite athletes (Johanssan et al, 2008). Other researchers found that academic demands, social relationships, overtraining, and performance based self esteem all contributed to high levels of burnout in collegiate athletes (Morano et al, 2022). Thus, this model emphasizes that athlete burnout is a complex interaction between a variety of factors.

Gap

As all the athlete burnout research in the sports science discipline was centered around a combination of collegiate and elite athletes in the aforementioned studies (Raedeke, 1997) (Olsson et al 2021)(Aoygi et al, 2009)(Gould and Whitely, 2009)(Choi et al, 2020)(Perreault et al, 2007), it was evident that there was a gap in exploring athlete burnout among high school athletes. Researchers in the sports science discipline noted that "in future studies, it is necessary to verify whether the same effects of coaching behavior can be obtained among high school student athletes in order

to reproduce the results of the present study" (Akhrem and Gazdowska 2016). Similarly, another study noted that future research should focus on younger athletes as it can further the goal of "minimizing burnout in younger athletes who choose to invest time and effort into their sport participation" (Eklund and DeFreese 2015). This illustrates the necessity of research involving high school athletes to determine if similar relationships within burnout would be produced as they were in older athlete populations, as well as to prevent the development of athlete burnout in a younger population. Therefore, the essential question in my research is: To what extent is there a correlation between the social climate of a sport and the prevalence of athlete burnout among high school student athletes? The social climate of a sport refers to available social support resources and an athlete's perception of their relationship with coaches and teammates (Gardner et al, 2016). There is value in this inquiry as there has been no studies in the sports science discipline researching the relationship between athlete burnout and social support among high school athletes. As athlete burnout is a syndrome that is detrimentally impacting all athletes, this is valuable research for coaches and athletic directors of high school sports to understand if increased social support structures within their sporting climates are beneficial to mitigate the effects of burnout.

Methodology

A Descriptive Research method was utilized as it is a mixed method approach which combined a quantitative questionnaire and a qualitative interview to determine the correlation between athlete burnout and social support. This method was utilized as several studies in the sports science discipline used a combination of quantitative and qualitative investigations in their inquiries (Olsson et al, 2021)(Freeman et al, 2011)(DeFreese and Smith, 2013)(Gu and Xue, 2020). Through this method, surveys were conducted on athletes to determine their perception of social support using Sport Climate Questionnaire (SCQ) and level of burnout using Athlete Burnout Questionnaire (ABQ). From gathering this data, a correlational analysis was performed to determine if there is a relationship between these two variables. Qualitative investigation was incorporated by conducting interviews with participants to gain a greater understanding of the athlete burnout phenomenon in their life. This descriptive method enabled me to combine both statistical correlation analysis and investigative interviews to fully understand the athlete burnout relationship to social support. As a correlational research method is incorporated into a descriptive method, this method combines correlational studies with interviews to examine athlete burnout through multiple methods. Unlike a correlational method which only includes doing a statistical analysis of a correlational relationship, this method also included observations and interviews which was helpful for my inquiry to obtain personal experiences and direct quotes from athletes to understand the full scope of athlete burnout. This method was aligned well to my inquiry as I was able to obtain numerical data and observational data which strengthened my understanding of the social support and athlete burnout relationship. This method also provided data from multiple means of investigation to support my final conclusion.

Measuring Athlete Burnout

		MOI	Almost Never	Rarely	Sometimes	Frequently	Almost Always
1	I am accomplishing many worthwhile things in my sport	RA	1	2	3	4	5
2	I feel so tired from my training that I have trouble finding energy to do other things	E	1	2	3	4	5
3	The effort I spend in my sport would be better spent doing other things	SD	1	2	3	4	5
4	I am not achieving much in my sport	RA	1	2	3	4	5
5	I feel overly tired from my sport participation	E	1	2	3	4	5
6	I don't care about my sport performance as much as I used to	SD	1	2	3	4	5
7	I am not performing up to my ability in my sport	RA	1	2	3	4	5
8	I feel "wiped out" from my sport	E	1	2	3	4	5
9	I am not into my sport like I used to be	SD	1	2	3	4	5
10	I feel physically worn out from my sport	E	1	2	3	4	5
11	I feel less concerned about being successful in my sport than I used to	SD	1	2	3	4	5
12	I am exhausted by the mental and physical demands on my sport	E	1	2	3	4	5
13	It seems that no matter what I do, I don't perform as well as I should	RA	1	2	3	4	5
14	I feel successful at my sport	RA	1	2	3	4	5
15	I have negative feelings toward my sport	SD	1	2	3	4	5

Figure 5: The image above is the Athlete Burnout Questionnaire (ABQ), which was developed and validated by (Raedeke, 1997). This measure was utilized to determine the level of athlete burnout among the sample population of high school athletes. The ABQ has 15 items, separated into three subscales, reduced sense of accomplishment, RA, emotional and physical exhaustion, E, and devaluation, SD. The same questions that appear in this validated ABQ above were used in the current research, in addition to the Likert Scale ranging from 1(Almost Never) to 5(Almost Always).

In all scholarly sources reviewed analyzing the connection between a factor and athlete burnout, the ABQ in Figure 5 was used to measure the level of burnout in the studied population (Nixdorf et al, 2020)(Goodger et al, 2007)(Shang and Yang, 2021)(Black and Smith, 2007). Raedeke validated that the ABQ should be used over other questionnaires such as the Eades Athletic Burnout Inventory (EAB) as it displays internal consistency reliability and test-retest reliability among athletes. Furthermore, the ABQ was validated through a study of elite rugby players which also produced test-retest reliability (Cresswell and Eklund, 2005). The EAB was not used as it had a number of theoretical and psychometric shortcomings, as well as unsatisfactory internal consistency, revealing weak factors within the structure. It was also displayed that the EAB blended burnout syndrome facets and antecedents in certain subscales, which ultimately complicated an interpretation of the obtained data (Akhrem and Gazdowska 2016). Based on these conclusions, the ABQ was used as it displayed consistent validity among studies and it was the main measurement used to measure burnout in the sports science discipline.

Measuring Social Support

The Sport Climate Questionnaire (SCQ) developed by (Deci, 2009) was utilized to determine the perception of athletes' level of social support. The SCQ has 15 items with a high SCQ score indicating high levels of social support and vice versa. The SCQ was derived from the Center of Self Determination Theory where all academic use is permitted as long as authors are cited. In the sports science discipline, all inquiries concerning autonomy and self determination utilized the SCQ to determine the level of perceived autonomy support in the sample population (Freeman et al, 2011) (Perreault et al, 2007)(Hodge and Lonsdale, 2008). Specifically, (Smith, 2007) used the SCQ in her population of collegiate athletes to determine their level of autonomy support from their coaches. She noted that the questionnaire produced retest reliability, illustrating its validity, which is why it was utilized in this research.

Interviews

Interviews were conducted to achieve a qualitative investigation of the athlete burnout versus social support relationship. Several sources in the sports science discipline used qualitative investigation to study athlete burnout in collegiate and adult athletes (Uftring et al, 2020) (DeFreese and Smith, 2013) (Gustafsson et al, 2008)(Smith, 2003). My interview questions were adapted from a study interviewing collegiate athletes who withdrew from their sport due to burnout symptoms (Gustafsson, 2007). However, as these questions delved into the athlete's symptoms leading up to and after sport withdrawal, the questions were altered to fit the needs of the studied population in the present tense. The interview questions were altered from "Did you find your coach was supportive?" to "Do you find that your coach is supportive?" This study utilized 30 questions, but only ten of the questions were used as I chose the ones that were the most centered around social support and burnout rather than the aftermath of withdrawal. Interviews were used to overcome a questionnaire-only limitation. If questionnaires were only used, the data could exhibit contradicting patterns and unclear relationships between the two variables. In this case, interviews would be beneficial to determine if the relationship between social support and athlete burnout exists among high school athletes. Furthermore, interviews could triangulate the quantitative and qualitative results in order to confirm the relationship found between burnout and social support.

Participants

Participants included 52 high school athletes from a suburban high school in New Jersey, ranging from freshman to seniors. This sample had extensive experience in their sports as they had competed in their sport for an average of 10 years and recalled their experience in competitive sports for at least 4 years. Only athletes playing a sport at their high school were selected as the social climate within high school sports teams and club sports teams differs greatly. Studies have indicated that high school athletes experience lower social climate profiles in high school sports than in club sports (Gardner, 2016)(Kerdijk, 2016).

Procedure

Prior to administering the questionnaire, three high school athletes rated each item for face validity and readability. After receiving their feedback, one item of the SCQ was modified. The same sample of athletes was used to pilot test the questionnaire, ensuring that the questions were suitable for the sample.

Athletes from all sports at the high school were contacted with information regarding the study. If the athlete wanted to participate, they would be administered the questionnaire. Prior to delving into the questionnaire, athletes were asked to complete an individual and parental informed consent that included the purpose of the research and anonymity rights. In providing an overview of the study, athletes were told that the purpose was to determine their levels of burnout and social support to explore the correlation between the two variables. All 52 of the sample agreed to participate and signed both informed consent forms.

At the end of the questionnaire, participants had the option to indicate if they wanted to partake in an interview. If they chose to, they provided their email address and were informed that their questionnaire results would remain confidential. The interview section included ten questions delving into participants' perceptions of their social support and burnout symptoms.

Data Analysis

The quantitative data was analyzed in accordance with the approach recommended by (Anderson and Gerbing, 1988), also utilized by sports science researchers analyzing correlations involving athlete burnout (Choi et al, 2020) (Raedeke, 1991). In accordance with (Raedeke, 1997) the internal consistency of each burnout scale (RA, E, D) was tested ensuring that the measurements were reliable for the sample. To confirm appropriate variability of the sample, percentages of participants who scored greater than a 3.0 for each burnout subscale were calculated, testing for varying burnout levels. This enabled the demonstration that the data collected contained enough variability to achieve the assumption of normality. The variability of the SCQ was also assessed to ensure there were a range of social support levels. The means of the ABQ and SCQ scores were calculated to describe the sample as a whole. Correlational analysis using Pearson's *r* Correlation Calculator was conducted to examine the relationship between SCQ and ABQ.

Pearson's Correlation Coefficient, *r,* was utilized to assess the strength and direction of the relationship between the variables. Pearson's *r* was used over other correlation coefficients such as Spearman's Correlation Coefficient (SCC) since Pearson's *r* is used when both variables are normally distributed which was applicable in this study (Mukaka, 2012). This method assigns a value between -1 and 1 to *r*; a total negative correlation is -1 and a total positive correlation is 1. Four correlational analyses were conducted and a value for Pearson's *r* and *p*, the statistical significance were determined. The Pearson's *r* Correlation Calculator (Social Science Statistics, 2018) was used to conduct the correlations. In each correlation, the SCQ score was used as the independent variable and the total ABQ score or subscale (RA, E, D) score as the dependent variable.

To analyze the qualitative data, each interview was independently analyzed through an idiographic thematic case study approach (Patton, 2002). The key points of each interview were analyzed for raw data themes and content similarity (Gustafsson, 2007). Qualitative data was organized into two themes: high and low social support. A table was made justifying why each interview fell under its specific theme by pulling key phrases from the interview notes. Tables were made comparing the qualitative themes to their corresponding ABQ scores. A final table was made combining all the quantitative and qualitative data to triangulate the results.
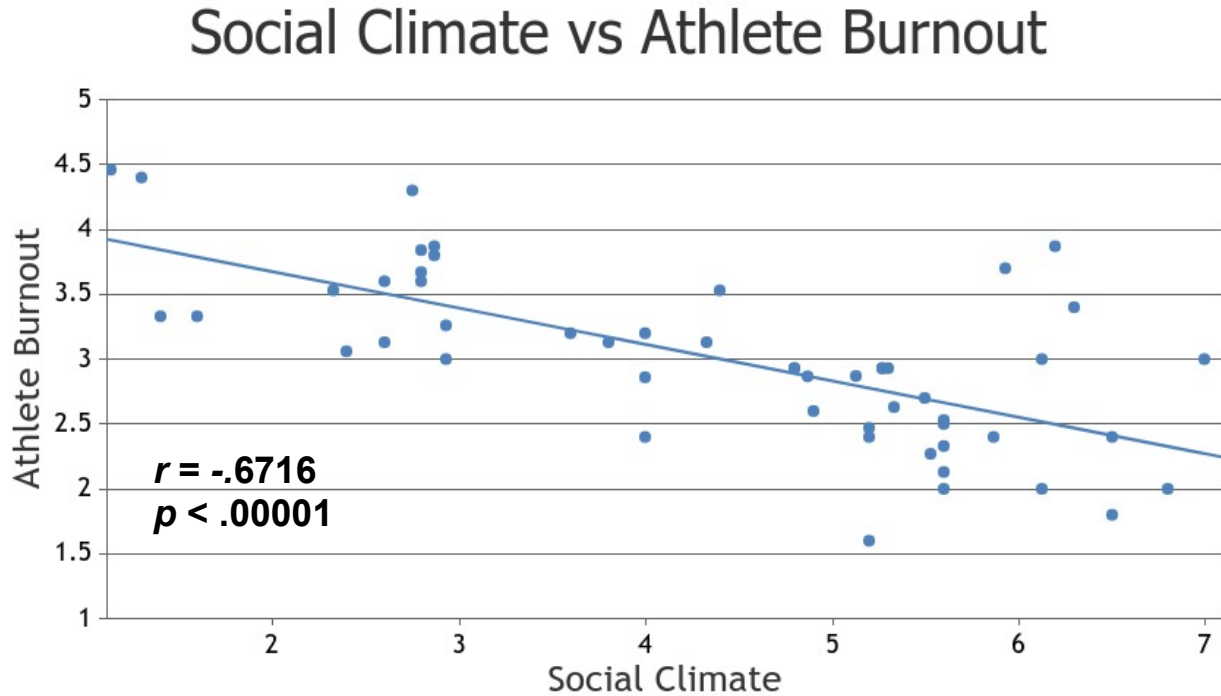
Results

Quantitative Results

The purpose of this study was to examine the relationship between social support and athlete burnout among high school athletes. It was hypothesized that there would be a negative relationship between the two variables. In congruence with the proposed hypothesis, Figure 6 illustrates a moderate negative correlation **(r = -.6716)** between social

support and athlete burnout among high school athlete

Figure 6: In this correlation, the level of social support given by the Sport Climate Questionnaire score was the inde-

pendent variable and athlete burnout given by the Athlete Burnout Questionnaire score was the dependent variable. Each dot represents a participant in the sample (N=52). The blue line is the best fit line equation that was used to calculate the value of Pearson's *r* correlation and *p*, the statistical significance of the data. The value of *p* indicates that the correlation was statistically significant.
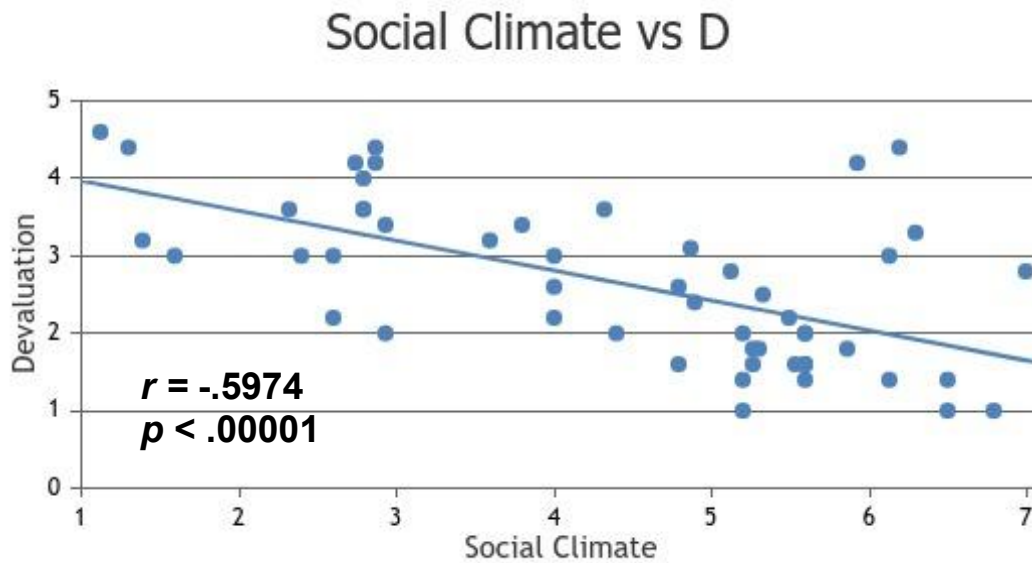
Figure 7: In this correlation, the level of social support given by the SCQ score was held as the independent variable and devaluation given by the D score of the ABQ was held as the dependent variable. Each dot represents a participant of the sample (N=52). The blue line is the best fit line equation that was used to calculate Pearson's *r* and *p*, the statistical significance of the data. Based upon the value of *p*, the correlation was statistically significant.
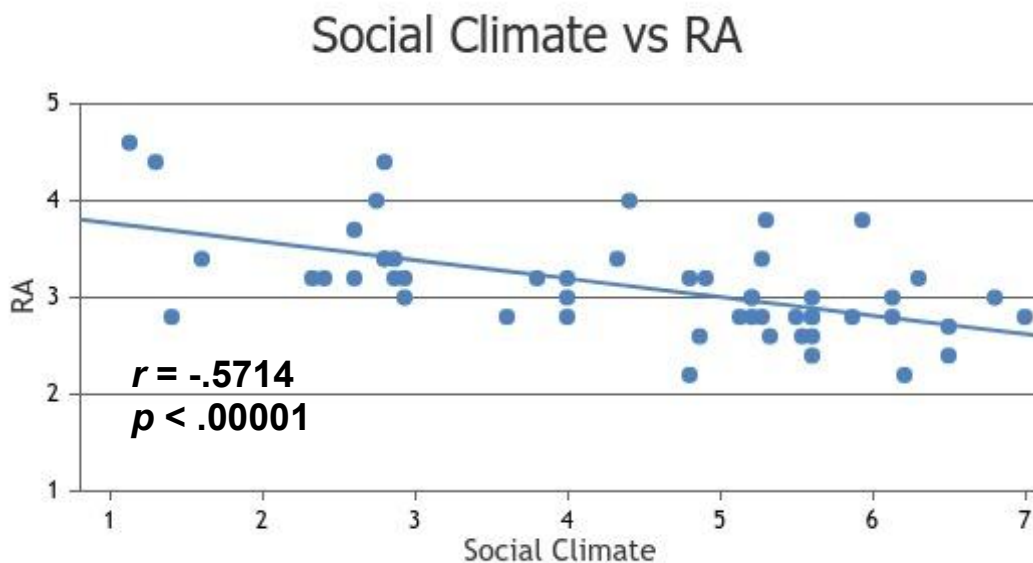

Figure 8: In this correlation, the level of social support, the SCQ score, was held as the independent variable and reduced sense of accomplishment, the RA subscale score of the ABQ, was held as the dependent variable. Each dot represents a participant of the sample (N=52). The blue line is the best fit line equation that was used to calculate

Pearson's *r* and *p*, the statistical significance of the data. The correlation was statistically significant as indicated by the *p* value.
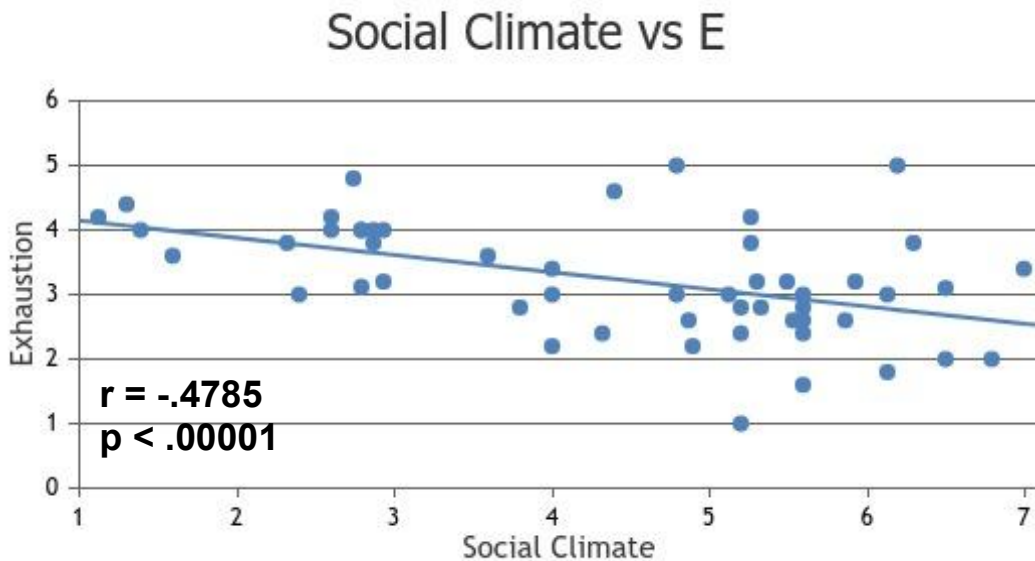

Figure 9: In this correlation, level of social support, the SCQ score, was held as the independent variable and emotional and physical exhaustion, the E subscale score of the ABQ was held as the dependent variable. Each dot represents a participant of the sample (N=52). The blue line is the best fit line equation that was used to calculate Pearson's *r* and *p*, the statistical significance of the data. Based on the value of *p*, the correlation was significant.

Analysis of Quantitative Results

There were also moderate negative correlations between social support and the athlete burnout subscales (RA, E, D) as presented in Figures 7, 8, and 9. In general, D was the burnout symptom most associated with social support (r = -.5974) followed by RA (r = -.5714), then E with a weak negative correlation (r = -.4785). As devaluation had the greatest negative correlation with social support as seen in Figure 7, this indicates that feelings pertaining to a loss of interest and passion to continue in athletics are highly correlated to feelings of low social support. This demonstrates that low autonomy support from coaches causes athletes to feel a decrease in athletic motivation, ultimately resulting in burnout. With a value of r = -.5714 for the correlation between social support and RA as seen in Figure 8, this indicates that levels of social support play a significant role in an athlete's perception of their performance. Thus, low social support from an athlete's social network is associated with decreased feelings of athletic success. As the E subscale of burnout had the weakest negative correlation with social support, indicated by Figure 9, it can be concluded that a loss of physical or mental energy to perform in a sport does not have the greatest dependence on the social support levels in a sport.

As all three burnout subscales had a negative correlation with social support as displayed in Figures 7, 8, and 9, the quantitative results exhibit a clear relationship between the two variables. It can be concluded that high levels of social support can improve athletes' motivation and enthusiasm in their training, reducing negative feelings that could lead to burnout symptoms. As evident from Figures 7-9, social support is an essential resource that athletes must obtain from their sporting environments as it strengthens motivation and achievement. This concludes that coaches and teammates play a vital role in an athletes athletic experience as social support has the potential to impact athletes

psychological well being, as well as their performance levels via the development of burnout.

Qualitative Results

In accordance with the proposed hypothesis, the qualitative data further revealed a negative correlation between social support and athlete burnout in high schoolers. Five interviews experienced high levels of social support evident in Table 1 while three exhibited low social support as seen in Table 2 . As hypothesized, each interviewees' qualitative theme aligned with their ABQ score to confirm the negative correlation between social support and burnout. As seen in Table 1 all interviews under the high social support theme also had low levels of burnout as dictated by the ABQ score, conveying the negative correlation between social support and burnout. Evidenced in Table 2, the ABQ scores of each interviewee further display the negative correlation between social support and burnout as every interviewee who fell under the low social support theme had a severely high level of burnout.

Table 1: High Social Support Justification and ABQ Comparison

Interview	B	C	D	E	G
justification	-My sport is centered around the notion of a team -supportive and motivating teammates -Uplifting and encouraging environment -Positive leadership -High quality communication -I feel wanted	-Supportive coach -Team gives me confidence in my abilities -My opinion is valued -I do not feel any animosity in my team	-Supportive coaches and teammates who make me feel welcome -Encourage me to do my best -Always there cheering me on -Track is my happy place where I can enjoy my accomplishments	-Supportive teammates -Fun sporting environment -No pressure -I am motivated by my teammates -I feel that I have a say within my training	-Caring coaches -Fun and enthusiastic teammates -Always count on my teammates -Encourage me to do my best -Uplifting environment filled with lots of communication -I can express choices in my training
ABQ score	1.80	2.40	2.40	1.60	2.47

Table 1: This table illustrates the justification of why interviews B, C, D, E, and G fell under the theme of high social support and the comparison of the qualitative theme to the quantitative ABQ score. The phrases apparent in the table are direct phrases taken from the notes of each interview. Not all phrases and key notes taken appear in this table; only those that clearly justify why these participants are experiencing high levels of social support and autonomy control. The ABQ scores of each participant are provided to further display the alignment of qualitative and quantitative data in support of the correlation between social support and athlete burnout. The ABQ is scored on a scale ranging from 1-5; an ABQ score of 3.0 or greater indicates high levels of burnout.

Table 2: Low Social Support Justification

Interview	A	F	H
Justification	-It was not a welcoming environment -My coach did not care about my mental health -I felt a loss of energy to continue caring and playing -My opinion did not matter in training or practices -My coach was restrictive and only cared about winning	-Lack of communication -Coaches were not supportive -I felt powerless and restricted -I experienced a loss of energy to continue participating	-Low support from coaches and teammates -I feel excessive pressure to perform up to high expectations -My opinion was not valued -I felt a severe loss of motivation and energy -I felt no power within my training and my coach dictated all my events
ABQ score	3.87	4.46	4.30

Table 2: This table illustrates the justification of why interviews A, F, and H fell under the theme of low social support and a comparison of their quantitative ABQ score and qualitative interview theme. The phrases apparent in the table are direct phrases taken from the notes of each interview. Not all phrases and key notes taken appear in this table; only those that clearly justify why these participants are experiencing low levels of social support and autonomy control. The ABQ score of each participant from the quantitative investigation is provided to triangulate the findings. An ABQ score of 3.0 or greater indicates high levels of athlete burnout.

Analysis of Qualitative Results

Both the qualitative themes and quantitative scores for each interviewee in Tables 1 and 2 align to support the negative relationship between social support and athlete burnout. As evident from Tables 1 and 2, coach-athlete relationships with high quality communication are critical for an athletes positive perception of their sporting environment. When coaches emphasize their athletes' needs and opinions, as seen in Table 1 athletes feel a stronger sense of belonging within their sport. Conversely, when coaches restrict their athletes choices and do not value their opinions, as evident in Table 2 athletes feel a loss of motivation and are susceptible to higher burnout symptoms. The interviews exhibit that high levels of social support provide athletes with the resources they need to excel in their sport and overcome adversity. As the formation of a strong social support network provides athletes with motivation in sport, it creates the desire to maintain engagement and strive to reach team and individual goals. The findings of the interviews in Tables 1-2 indicate that burnout can develop and exist among different levels of severity as evidenced by the ABQ scores, and these levels are influenced by social support.

Table 3: Triangulation of Results

Interview	A	B	C	D	E	F	G	H
Interview theme	low social support	high social support	high social support	high social support	high social support	low social support	high social support	low social support
SCQ score	2.87	6.5	4.0	6.50	5.20	1.13	5.20	2.75
SCQ meaning	low social support	high social support	high social support	high social support	high social support	low social support	high social support	low social support
ABQ score	3.87	1.80	2.40	2.40	1.60	4.46	2.47	4.30
ABQ Meaning	High burnout	Low burnout	Low burnout	Low burnout	Low burnout	High burnout	Low burnout	High burnout

Table 3: This table illustrates the triangulation of qualitative and quantitative data regarding all interviews. For each interview, the qualitative theme that each interview falls under is provided, along with their level of social support, indicated by their SCQ score and the athlete burnout level, indicated by their ABQ score from the questionnaire data. A score of 3.5 or higher on the SCQ indicates high social support, whereas a score less than 3.5 indicates low social support. A score of 3.0 or higher on the ABQ indicates high burnout, whereas a score less than 3.0 indicates low burnout. The highlighted data points exhibit the lowest SCQ score and highest ABQ score out of all the data.

Analysis of Triangulation

As evidenced by Table 3, interviewees A, F, and H exhibit the theme of low social support throughout their interviews, which is parallel to their questionnaire data indicating low social support and high burnout. Similarly, participants B, C, D, E, and G exhibit the theme of high social support throughout their interviews, which is parallel to their questionnaire data indicating high social support and low burnout. This pattern among the data further confirms that there is negative correlation between ABQ and SCQ, and the lower the level of social support the higher the level of burnout. As seen in Table 3, Interview F exhibited the theme of low social support which is in accordance with its SCQ score, being the lowest of all the interviews. In congruence with these findings, Interview F also had the highest level of athlete burnout of all the interviews, emphasizing how athlete burnout levels are strongly correlated with social support. Both the quantitative and qualitative data align to support the negative correlation between burnout and social support among high school athletes.

Table 4: Coakley Model and SDT Confirmation

Interview	A	F	H
Justification	-My coach was **restrictive** and only cared about win-ning	-I felt **powerless** and **re-stricted**	-I felt **no power** within my training and my coach dic-tated all my events
ABQ score	3.87	4.46	4.30

Table 4: This table serves as a means of justification for the applicability of Coakley's Social Model and the Self Determination Theory to the population of high school athletes. It combines specific phrases from the low social support interview theme justification with each interviewees ABQ score. Only phrases that indicated feelings of a lack of satisfaction of the three basic psychological needs in the SDT or phrases supporting feelings of powerlessness and lack of control were included in the table. The ABQ score is also provided; a score of 3.0 or higher indicates high levels of athlete burnout.

Furthermore, this research confirms Coakley's representation of burnout (Coakley, 1992) in high schoolers, verifying that the social structure of a sport leads to burnout. Coakley acknowledged that the social structure of a sport restricts an athlete's development of self identity and leads to feelings of powerlessness, ultimately resulting in athlete burnout. Phrases within Table 4 highlight that the low social support interviews indicated powerlessness, supporting Coakley's portrayal of burnout. As Coakley suggested that powerlessness and a lack of social support lead to burnout, the low social support interviews further supported this model with their ABQ scores. Low social support interviews A, F, and H, had burnout levels of 3.87, 4.46, and 4.30 respectively, indicating high levels of burnout, confirming that Coakley's model is applicable within the population of high schoolers. This adds to the body of knowledge in the sports science discipline, exhibiting that social support is not only essential for older athletes, but also high school athletes for the prevention of burnout.

These findings also connect back to the SDT, indicating that if an athlete's three basic psychological needs are not met, they will experience high levels of burnout. The phrases in Table 4 emphasize the need for autonomy, one the basic psychological needs in the SDT, affirming the SDT and its applicability to the population of high school students. These phrases in Table 4 such as "no power," "powerless," and "restricted" all indicated that these athletes were not experiencing the satisfaction of their basic psychological needs, and according to the SDT, could be suscep-tible to high burnout levels (Ryan and Deci, 2002) In accordance with this theory, the ABQ results in Table 4 indicated that these participants did have high levels of burnout, illustrating that when an athletes psychological needs are not met, their psychological well being is diminished, confirming the SDT applicability to this population.

Discussion

When put in conversation with the athlete burnout literature, these findings are consistent with sports science research-ers who found a negative relationship between social factors and burnout in collegiate and elite athletes (Black and Smith, 2007). Specifically, (Gu and Xue, 2019), found a negative correlation between social cohesion and athlete burnout in adult athletes, while (Choi et al, 2020) found that positive coach-athlete relationships facilitated decreased burnout levels in collegiate athletes. In fact, my research findings fill the gap in the athlete burnout literature and add

to the body of knowledge in sports science discipline, exhibiting that in high school athletes there is a negative correlation between social support and burnout and the same relationship found in older athlete populations can be applied to high school athletes. These similarities of results within different populations of athletes illustrate the necessity for high levels of social support within all sporting environments regardless of age and level as social support has the ability to mitigate severe athlete burnout.

In all, both the quantitative and qualitative results align to support the negative correlation between social support and burnout among high school athletes and the applicability of various burnout models to high schoolers. These findings conclude that athletes withdraw from their sports if they view participation as an obstacle in developing personal autonomy, thus it is critical that athletes feel supported and have the ability to make decisions within their sporting environments. These results further reinforces the notion that athlete burnout is developed outside the common perception of stress and individual flaws, rooting itself in social factors (Coakley, 1992) (Ryan and Deci, 2002) such as within the support of coaches and teammates and available autonomy.

Limitations

While this research answers the question of whether there is a correlation between social support and athlete burnout among high school athletes, there are limitations to take into account. With a relatively small sample size of 52 participants, it may be difficult to determine if the outcome of the study is a true finding, if an inflated false discovery rate was evident, or if the correlation would be heightened if the sample size increased. Even though the sample size satisfied the conditions for minimum power required for such analyses, sample sizes of 300 participants or more are preferred (Tabachnick and Fidell, 2007). A larger sample size may have yielded more significant results, allowing for more precise estimates and correlations to generalize this population. Moreover, as this study collected questionnaire data and interview data over a two week time span, the data generated only described feelings of social support and burnout over a finite period of time. As feelings of social support are likely to fluctuate over the course of the competitive season, the current study only represents a snapshot of the burnout symptomatology during a specific time frame. As data was collected during the winter months, athletes could have been experiencing higher levels of burnout if they were towards the end of their winter season or lower levels of burnout if they were at the start of their spring season. Thus, these results only describe a particular population in a limited time frame where feelings of social support and burnout may vary over the athletic season.

Future Research

As this study utilizes a descriptive method set over a specific time frame, future research may seek to use a longitudinal study design that monitors the social support and athlete burnout relationship throughout different seasons. By obtaining social support levels of athletes a multitude of times throughout the athletic year, researchers will be able to explore the fluctuations of social support and burnout levels, as well as confirm the relationship between the two variables. A longitudinal method could examine the frequency of duration of athlete burnout symptoms, as well as shed light on the times of the season in which social support must be maximized. As there was limited time to obtain and analyze data, future research should delve into the relationship between social support and burnout among different sports and genders. As different sports emphasize different core values and have different team dynamics, research examining levels of social support among different sports could be useful in understanding the burnout phenomenon. Additionally, research exploring the need for social support in female sports teams versus male teams could be beneficial in determining if certain genders rely more heavily on social support from their teammates and coaches. This future research could help coaches of certain sports and genders determine if more social support in their athletic atmospheres could be beneficial in preventing the development of burnout in their athletes.

Conclusion

The present findings conclude that there is a negative correlation between the social climate of a sport and the development of athlete burnout among high school athletes. These conclusions confirm the value of social support in a high school sporting environment and encourage coaches to pay more attention to their athletes' social support network. As social support can help buffer the development of severe athletic burnout, coaches and athletic directors can use this data to integrate higher levels of social support into their climates such as affirmative praise and high quality team communication. As burnout is a syndrome that is detrimental to all athletes, this research is valuable information for all stakeholders within the athletic community to ensure they form positive social support structures within their sports. Therefore, in the context of athletics, social support is an essential component of an athletic environment that not only has the ability to decrease the severity of burnout levels, but cause an athlete to feel motivated and successful in their sport.

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