

The Impact of Extrinsic Motivation on Athletic Performance

A Synthesis of the Research Literature

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Abstract

Youth participation in sports include recreational, organized, informal programs as well as Olympic hopefuls. These young athletes can have positive or negative experiences from their participation in sports. Perhaps an important aspect of what makes those experiences either positive or negative is how they are motivated to participate in these activities. Motivation in these young athletes can come in various ways. One main theme found in the literature that has a direct influence on their experiences is extrinsic motivation. It is important to understand how these athletes' performances are affected by outside influences, such as parents, coaches and peers. This synthesis of the research of literature examines how extrinsic motivation impacts athletic performance.

Keywords: Extrinsic Motivation, Performance, Athletes, Parents, Peers, Coaches

Chapter 1

Introduction

In today's society there are about 30- 45 million youth participating in some sort of sport (Brenner, 2007). These sports can range from recreational, organized sports, travel and Olympic hopeful training opportunities. For young athletes, sports can be a positive or a negative experience. During an athlete's career, an athlete is subjected to three types of motivation. Halbrook et al. (2012) concluded that the three types of motivation are intrinsic, extrinsic and amotivation. Intrinsic Motivation is considered participation without contingencies (Halbrook et al., 2012). Amotivation arises when athletes can no longer determine a motive for why they continue to participate in the sport (Halbrook et al., 2012). But some athletes are sometimes motivated through outside factors which is called extrinsic motivation. Extrinsic motivation is an important element affecting youth sport participation (Wendling et al., 2018). Extrinsic motivation is when an individual participates in order to gain rewards, usually materialistic or to avoid punishment (Halbrook et al., 2012). A great example of an athlete receiving extrinsic motivation is Michael Phelps. Phelps mentions several times in his autobiography that his mother was one of the most important elements in his athletic success (Rodis, 2013) through extrinsic motivation. In addition, Gillet et al. (2019) concluded that extrinsically, coaches' behaviors are relevant determinants of athletes' motivation as well.

Extrinsic motivation can be perceived in three different perspectives: identified regulation, introjected regulation and external regulation (Gillet et al., 2009). Identified regulation is found to be one of the most self-determined forms. Identified regulation involves the athletes to engage in an activity of their own decision, even if it is not an activity they find attractive in itself (Gillet et al., 2009). Identified regulation occurs when the athlete is motivated

by a certain task, an example would be a swimmer trying to decrease their times for the championship meet. Introjected happens when behaviors are performed to avoid negative feelings or to obtain social approval (Gillet et al., 2009). An example of which this occurs is when an individual begins to act out such as the class clown. The final form of extrinsic motivation is external regulation. External regulation refers to behaviors that are regulated by rewards, such as money, trophies and etc. (Gillet et al., 2009).

One theory that helps explain the concept of motivation in athletics is the use of the Self-Determination Theory. The Self - Determination Theory provides a complex yet practical understanding of motivation in sport (Readdy et al.,2014). With the Self- Determination Theory it classifies motivation into three different types. One of the three is extrinsic motivation (Ngien-Siong Chin et al.2012).

Extrinsic motivation can appear in the lives of athletes in many different ways. An athlete's extrinsic motivation can come from peers, coaches and parents. Since they want to see that their athlete or child is succeeding in their given sport. One of the most common sources of extrinsic motivation comes from coaches (Wendling et al, 2018.). One of the strongest relationships in a young athlete's life is their relationship with their coach. Alexandria et al. (2015), concluded that as their coaches became more verbally aggressive towards their athletes that there was improvement in the athlete's performance. This is one way athletes are impacted by extrinsic motivation.

Jowett (2008) concluded that coaches' motives have a huge impact on athletes' satisfaction and performance. An athlete's focus is on their performance. Performance outcomes carry an irrational sense of importance (Appleton and Hill, 2012).

Parents interact with their children in a variety of ways during a sport experience (O'Rourke et al., 2014). Parents often influence their children by offering technique advice, transportation and purchasing equipment. With just a few of these influences, parents can significantly shape their child's internalization of motivation as they relate to sports (O'Rourke et al., 2014).

The last form of extrinsic motivation comes from peers. A primary motive for participation among youth comes from social acceptance and approval of peers (Wendling et al., 2018). Viir and Koka, 2012 found that children require a higher need of support to enhance his/her motivation to participate.

Statement of the Problem:

A review of the literature shows extrinsic motivation and how it impacts athletes and their performances. By reviewing the literature on the subject matter; it will allow those who coach, teach or even parents to understand how extrinsic motivation can impact their performances.

Purpose of the Study:

The purpose of this synthesis project is to review the literature on how extrinsic motivation impacts athletes performance.

Research Question (s):

- 1.) How does extrinsic motivation impacts an athlete's performance?
- 2.) How does extrinsic motivation from coaches impact a player's development?

Operational Definitions:

- 1.) Motivation- mobilizes, orientates and maintains behavior, and is responsible for organized and efficient behavior as well as for physiological arousal (Syemes et al., 2017).
- 2.) Intrinsic Motivation - participation without contingencies (Halbrook et al., 2012).
- 3.) Amotivation- when athletes can no longer determine a motive for why they continue to participate in the sport (Halbrook et al., 2012).
- 4.) Extrinsic Motivation- participating to gain rewards, usually materialistic and to avoid punishment (Halbrook et al., 2012).
- 5.) Self-determination Theory- a motivational theory that is useful for understanding individuals' motivation, its causes, and its consequences (Readdy et al.,2014).

Delimitations:

- 1.) This review of literature only examined impact of extrinsic motivation has on athletic performance.
- 2.) Articles reviewed focused on athletes of various ages involved in sports.
- 3.)Articles are limited from The College at Brockport State University of New York, Drake Memorial Library published from 2009 to present.

Chapter 2

Methods

The purpose of this chapter is to review the methods used during the collection of data on how extrinsic motivation impacts an athlete's performance. The studies collected for this synthesis were located using the EBSCO database from The College at Brockport's Drake Library. Within the EBSCO database the following databases were searched: SPORTDiscus and Academic Search Complete.

Within these databases a total number of 10 articles met the criteria for inclusion as part of the critical mass within this literature review. In order for an article to meet the criteria for selection in this synthesis it must have been published between 2009- present, this will provide the synthesis with the most up to date and current information available. Other criteria for selection included scholarly and peer reviewed articles that were full-text. Having scholarly and peer reviewed articles provides more validity within the articles and better overall quality. Other articles or sources selected as part of this literature review provided context about the topic, background information and supplemental information to complete the review. All articles and sources are appropriately cited in the reference section of this paper.

In order to gather valuable articles for this synthesis certain keywords and phrases were used when searching the database. The first keyword searched was "Extrinsic Motivation" that resulting in 291 hits. The next keyword that was used was "athletes", and reduced it to 85. The last key word used was "performance", decreasing it to 26 articles.

Articles that were selected for use in this synthesis were full text, scholarly and peer reviewed articles. Also, when selecting articles for use in this synthesis it was important that

each article selected had valuable information that pertained to how extrinsic motivation impacts an athlete's performance.

Specific criteria were used in order to be a part of the literature review. All of the articles selected were based on how extrinsic motivation impacts athletes performance. Participants in the studies reviewed were individuals who participated in a wide variety of different sports and physical activities. The age ranged from children, adolescents, college, and professional athletes.

For this synthesis a total number of ten articles were used to compile data on the topic of how extrinsic motivation impacts athletic performance. Articles came from a variety of journals including *International Journal of Sports Science and Coaching*, *Journal of Applied Sport Psychology*, *Brazilian Journal of Kineanthropometry & Human Performance*, *European Journal of Sport Science*, *Cognition Brain Behavior: An Interdisciplinary Journal*, *Journal of Sports Science and Medicine*, *International Journal of Coaching Science*, *Journal of Clinical Sport Psychology*, and *The Journal of Physical Education and Sport*.

The critical mass for this synthesis is comprised of 3,017 participants. Within the 10 articles used for the literature review, there were a total of 1,717 male, 1,300 female. These groups consisted of collegiate and professional athletes and coaches from swimming, wrestling, tennis, and handball.

Data were analyzed using the following methodologies for the studies under review: Perceived Motivational Climate in Sport Questionnaire, Conceptions of the Nature of Athletic Ability Questionnaire-2, Sport Motivation Scale, Parent-Initiated Motivational Climate Questionnaire, and the Group Environment Questionnaire.

Chapter 3

Review of Literature

The purpose of this chapter is to review the literature on how extrinsic motivation impacts athletes performance. During this project, 10 peer-reviewed articles were selected to create this synthesis. The information retrieved from the articles was taken and broken down into sections in order to compare the articles. These sections were divided into motivation, peers, performance, development and parents and coaches. The articles used an assortment of athletes all at various skill levels from beginners to Olympic hopefuls.

Motivation

The importance of motivation has been brought to the fore front in numerous occupations, especially in coaching, because it influences how people think, feel and behave (Occhino, Mallett, Rynne& Carlisle, 2014). Halbrook, Blom, Hurley, Bell & Holden (2012) conducted a study to determine if gender and motivation type were related to the athletes' perceptions of team cohesion. Halbrook et al. (2012) found that there are three types of motivation: intrinsic, extrinsic and amotivation. Among these three types of motivation, extrinsic motivation can be divided up into three types: integrated, identified and introjected regulation (Halbrook et al., 2012). In the study conducted by Halbrook et al. (2012), 15 teams from large Midwestern Universities participated in the study. Among the 15 teams, there was a total of 253 participants in which 135 were males and 118 were females. The demographics of the study consisted of athletes that aged from 18- 23 years and represented eight team sports and seven individual sports. The following instruments that were used during the study: The Group Environment Questionnaire (GEQ) and The Sport Motivation Scale (SMS) served two different purposes; the GEQ's purpose was to measure the perceptions of team and social cohesion. While,

the SMS served to assess the prominent motivation types. Halbrot et al. (2012), concluded that that was no motivational difference between male and female athletes. Another conclusion made by Halbrot et al. (2012), was that motivation levels of the athletes had a strong influence on cohesion of the athletes.

Extrinsic Motivation

Readdy, Raabe and Harding (2014) conducted a study that evaluated the effects of an off-season extrinsic reward system on basic psychological needs and fulfillment and motivation of a collegiate football player. The Readdy et al. (2014) consisted of 85 student-athletes from a university football program. Out of these 85 student-athletes, 60 of them volunteered to participate in the quantitative portion of the study and 13 also completed the qualitative interview. Instruments that were used during this study included the a modified version of the SMS and then the Basic Need Satisfaction at Work Scale (BNSWS). The SMS and BNSWS looked at the correlations between the eight variables of interests. These interests included amotivation, external regulation, introjected regulation, identified regulation, intrinsic motivation, autonomy, competence and relatedness. During the study the Division I football program introduced the Champions Club (CC). The purpose of this club was to optimize the motivation for the student athletes (Readdy et al., 2014). Readdy et al., (2014) found that the athletes were really affected by the Championship Clubs reward program, one athlete stated that "Maybe not, because I mean that's like winning a championship with no trophy" (pg. 166). Readdy et al., 2014 stated that the athletes were not just interested in the tangible rewards, they were also interested in the social rewards as well. Other conclusions of Readdy et al., (2014) revealed that there are positive and negative viewpoints towards extrinsic motivation that the players could receive.

In addition, Szemes, Szajer & Tothl (2017) conducted a study that aimed at revealing how sport motivation and motivational climate affects swimmers. The study consisted of 18 licensed para swimmers, in which 10 of them were very successful during the 2016 Summer Paralympic Games in Rio. These participants were awarded one gold, three silver and five bronze medals during their participation in the Paralympic Games (Szemes et al., 2017). The instruments used during this study consisted of the SMS and the Perceived Motivational Climate in Sport Questionnaire (PMCSQ-2). The PMCSQ-2, provided the measures of perceived motivational climate and motivational structure through a five-point and seven-point rating scales. The results of the study showed that athletes scored higher in extrinsic and intrinsic than amotivation (Szemes et al., 2017). In this study, it displayed that for these athletes intrinsic and extrinsic motivation is required to reach their maximal performance. Other results founded that the men on the team had a higher rate of intra- team member rivalry compared to the female team members (Szemes et al., 2017). Also, a balance between these two factors will prevent burnout, amotivation and severe anxiety (Szemes et al., 2017).

Similar results were found in the Gomez- Lopez, Merino-Barrero, Manzano-Sanchez & Valero-Valenzuela 2019 study on high performance. The purpose of this study was to see the results of different motivational climate profiles to compare to the participants' beliefs of sport ability, motivational orientation and the intention to be physically active. Participants in this study consisted of 444 high performance handball players. The demographics of the participants were 233 males and 211 females, ranging between 16 and 17 years of age (Gomez- Lopez et al., 2019). Gomez- Lopez et al. (2019) found that individuals with higher scores in extrinsic motivation had a more stable and gift entity ability belief and have a lower intention of being physically active. With the higher scores in extrinsic motivation, "it can be stated that the

majority of these players feel motivated by instrumental reasons or reasons coming from external, non-task-related sources, such as receiving prizes or awards." (p. 547).

Parents and Coaches

O'Rourke, Smith, Smoll & Cumming (2019) looked at how the relationships between coaches and parents impacted the motivational climates of young athletes in self-esteem, performance, Anxiety, and autonomous motivation. The study was conducted to see if coaches or parents are more influential towards their young athletes. The study's participants consisted of 238 competitive swimmers with 97 boys and 141 girls all aged between 9-14. The measures used during O'Rourke et al. (2019) study was the Parent Initiated Motivational Climate Questionnaire-2 (PIMCQ-2). It assessed the athletes on three subscales: success without-effort, worry-conducive behaviors and then a learning and enjoyment.

Both coaches and parents play an influential role when it comes to the lives of young athletes. O'Rourke et al. (2019) states that coaches can influence between 10 to 30 children, where parents may only influence their own children. The coaches' influence can be found within the practice. Coaches mostly influence the motivation of the athletes during times of instruction or assessment (O'Rourke et al., 2019). Parents mostly influence the motivation of the young athlete through the child's participation and how they learn. O'Rourke et al. (2019) concluded with the current findings that parents and coaches are both very important when influencing the young athletes, just in different areas of the athlete's experience.

Although Alexandra, Steffanis, & Vassilis (2015) looked at how coaches' verbal aggressiveness, perceived by the athletes of basketball team sport, is related to athletes' intrinsic-extrinsic motivation. The Alexandra et al. (2015) study comprised of 180 Greek teen basketball athletes. The demographics of the 180 Greek teen basketball athletes consisted of 144 boys and

36 girls, with ages ranging from 15-19 years. The participants in this study completed the Verbal Aggressiveness Questionnaire and an Intrinsic and Extrinsic Motivation Scale, composed of four factors: intrinsic motivation, identified regulations, external regulation and amotivation. One result from the Alexandra et al. (2015) research was that verbal aggression from a coach had a positive correlation on extrinsic motivation.

Peers

Peers play an important role in extrinsic motivation. Wendling, Flaherty, Sagas & Kaplannidou (2018) state that with the excitement and challenge of competition, the development of close friendships creates a desire for one to seek social approval from their peers. The Viira and Koka (2012) study compared students who had participated in organized sports after school for different periods of time to students who had not. The results by Viira and Koka (2012), concluded that participation in organized after school sports is an important factor related to the competency of students in physical education. Results of Viira and Koka (2012) also suggested that boys and girls were happier when participating in afterschool programs, compared to the boys and girls that did not participate.

Similar results were found in the research of Wendling et al. (2018). The purpose of this study was to identify the underlying structure of components affecting sport participation among youth athletes from the United States (USA.). The demographics of Wendling et al. (2018) consisted of 1,258 travel/elite youth athletes; 566 of the participants were boys, while the remaining 692 were girls. Instruments used during the study were the Participation Motivation Inventory (PMI). The PMI found that eight out of the 23 items were deemed important to what motivates youth athletes. These eight items were: "to have fun", "for the excitement and challenge of competition," "to stay in shape and get exercise," "to win games and tournaments,"

"because my parents wanted me to," "to be part of a team and interact with others," " I play elite sport to get noticed and praised by others," and " I really like my current club coach" (Wendling et al., 2018, p. 661). The results provide important implications because they demonstrate that a combination of interpersonal relationships, intrinsic motivation, and extrinsic motivation can create an environment that promotes sustained participation in elite youth sport (Wendling et al., 2018). Wendling et al., (2018) also found that elite athletes are extrinsically motivated to perform since many of the tasks are repetitive and demanding, but overall found as being a valuable and useful resource.

However Szemes et al., (2017) found that extrinsic motivation not only affects athletes individually but also the team as a whole. The purpose of this study was to see if the motivation climate differed among members on a Hungarian National Wrestling team based on the age-groups of the wrestlers. There were a total of 59 male wrestlers that participated in the study, from 10 to 28 years old. The measures that were used during Szemes et al. (2017) consisted of the SMS and the PMCSQ-2. Szemes et al. (2017) assessed age, sport motivation and perceived motivational climate of the participants. Szemes et al. (2017) concluded that there were subtle changes in the individuals motivations as the wrestlers got older. Another conclusion was that the cohesion of the team was greatly impacted by outside factors. These factors consisted of scholarship status, starter versus non-starter status, and team member seniority status (Szemes et al., 2017). Extrinsic motivation was also found to have a greater impact on the younger athletes as opposed to the athletes that were in the older age groups (Szemes et al., 2017)

Performance

Appleton and Hill (2012) conducted a study that investigated whether motivation regulations mediate the relationship between socially prescribed and self-oriented dimensions of perfectionism and athlete burnout. They found that performance outcomes carry an irrational sense of importance. During the study by Appleton and Hill (2012), the participants consisted of 231 elite junior athletes, where 204 of the athletes were males and 27 being female athletes. All the athletes that participated had competed in a sport for an average of eight and a half years. The measures that were used during the study were the Child And Adolescent Perfectionism Scale (CAPS), Sport Motivation Scale (SMS) and the Athlete Burnout Questionnaire (ABQ). Appleton and Hill (2012) found positive correlations between extrinsic motivation and socially prescribed perfectionism. Socially prescribed perfectionism is when externally-imposed goals are focused upon gaining social recognition and validating (Appleton & Hill, 2012). Extrinsic motivation and socially prescribed perfectionism revealed to have a positive correlation (Appleton & Hill, 2012).

Gillet, Berjot & Gobance (2009) found similar results in their study. The purpose of the study was to test a motivational model of sport performance based on the hierarchical model of intrinsic and extrinsic motivation (Gillet et al., 2009). The participants in the study were 90 French national tennis players between the ages of 13-14. All of these athletes were among the top 159 best tennis players in France, in their respective age groups (Gillet et al., 2009). During the study, tennis players completed the Sport Motivation Scale (SMS) at the start of their season and then two years later completed the SMS again. During this time frame of two years, the athletes participated in an average of 118.5 matches, about 57 matches per season. Gillet et al. (2009) concluded that sport performance was positively affected by motivation through the perceptions of competence, autonomy and relatedness. A result of this study revealed that sports

performance was positively impacted by extrinsic motivation (Gillet et al., 2009). Gillet et al., (2009) also suggested that more studies should be conducted on motivation and performance with other athletes in other sports and older tennis players. Motivation could be more unstable during the athletes adolescent years of participants, compared to those of an adult athlete's participation in their respective sport.

Coincidentally, Moen, Federici & Skaalvik (2014) also found a correlation between extrinsic motivation and performance. The purpose of this study was to have an increase in the understanding of the relationship between goal orientation, motivation and burnout among elite junior athletes. Four hundred and ten elite junior athletes from seven different elite sports gymnasiums were asked to participate in this study conducted by Moen et al. (2014). From this sample of four hundred and ten elite athletes, a total of 211 participants, 123 males and 88 females agreed to participate in the data collection, with the range of the athletes being from 16 - 19 years (median age was 17.2 years of age). The instruments used during the study conducted by Moen et al. (2014), consisted of the Athlete Burnout Questionnaire (ABQ), and the Situational Motivational Scale (SIMS). The athletes were from a variety of different sports such as cross country skiing, biathlon, shooting, ice hockey, bicycling and track and field. Results of this study concluded that extrinsic motivation encouraged athletes to work harder among other performance-oriented athletes.

Development

Adolescent years are key periods of time for young athletes to commit to becoming regular participants of physical activity or to completely abandon physical activity (Almagro, Saenz-Lopez & Moreno, 2010). The purpose of the Almagro et al. (2010) study was to test the coach-athlete relationship based on intrinsic and extrinsic motivation. The demographics of the

Almagro et al (2010) study consisted of 608 athletes involved in soccer, basketball, volleyball, swimming, tennis or judo. Of this sample of 608 athletes, 109 were girls while the other 499 were boys all ranging from the 12 to 17 years of age. The adolescents participated in the Autonomy- Supportive Coaching Questionnaire (ASCQ), Basic Psychological Needs in Exercise Scale (BPNES) and the Intention to be Physically Active Scale (IPAS) (Almagro et al., 2010). The ASCQ, studied nine total items grouped into two dimensions: interest in the input from athletes and praise for what the athlete chooses to do in practice. The BPNES, examined four items that were measured on a likert scale from one being not true at all, to five being very true. The IPAS measured five items that measured the participants intention of being physically active. Results of Almagro et al.(2010) found a positive correlation between praise for autonomous behavior and the basic psychological need for autonomy. The Almagro et al. (2010) study reinforced the importance of the coach and the autonomy support construct experienced by athletes, and their adaptation to athletic practice. Another result of this study by Almagro et al. (2010) was that there should be a greater stand taken against the lack of responsibility by adolescent athletes during practice.

Summary

Extrinsic motivation can be seen as a positive experience in multiple different aspects of sports. The purpose of this chapter was to review the literature on how extrinsic motivation has an impact on an athlete's performance. The first part reviewed what motivation and extrinsic motivation are involved in an athlete's life. The second reviewed how parents, coaches and peers can have either a positive or a negative impact on an athlete. The last section examined at how extrinsic motivation impacts an athlete's development and performance. After reviewing the literature on these areas, it is concluded that extrinsic motivation has a greater impact on younger

athletes opposed to older athletes. Also, extrinsic motivation can be positive or negative depending on the perceptions of the athlete.

Chapter 4

Results, Discussion and Recommendations

The purpose of this chapter is to present the results of the review of literature on how extrinsic motivation impacts athletic performance and how these results align with the purpose research questions which guided this synthesis project. In addition, recommendations for future research as it relates to how extrinsic motivation impacts athletic performance are presented.

The results of this review of the literature revealed that extrinsic motivation has both a positive and negative effect on an athlete's development and performance. A study by Alexandra et al. (2015) revealed how verbal aggression from coaches lead to a positive correlation with extrinsic motivation. The data also suggests that extrinsic motivation can negatively affect the cohesion of a team. An example is described by Szemes et al. (2017) where they found that factors such as starter versus non-starter and team member seniority status can impact motivation among athletes and teammates.

Discussion

Interpretations

As part of this literature review, several research questions were posed. The following two research questions were looked at in the review of literature:

- 1.) How does extrinsic motivation impacts an athlete's performance?
- 2.) How does extrinsic motivation from coaches impact a player's development?

The first research question, revealed numerous results, however, specifically, Szemes et al. (2017) revealed that extrinsic motivation can have an impact on team cohesion. Unlike the other studies, this study focused on the team and how extrinsic motivation impacts the team as a whole. This can be divided by starters versus non- starters, seniority, scholarship status and so

on. This can help drive the athletes to achieve their goals or negatively affect the athletes to resulting in the athletes quitting the sport as well.

The second research question also had multiple results about parents and coaches. One conclusion that was presented was that coaches and parents both have a strong influence on their athletes (O'Rourke et al., 2019). Expectations from coaches, parents and the athletes' fellow peers make the athletes feel they need to live up to these standards. Similarly, many athletes may experience a loss of motivation in their given sport due to these standards set by coaches, parents or peers. This could eventually lead to athletes having an increased risk of burnout or leaving the sport in its entirety regardless if they are just starting out in the sport or they are elite.

Implications

Does extrinsic motivation impact athletic performance? The answer to this is yes, extrinsic motivation can have a huge impact on all athletes of all skill levels. This impact can come from coaches, parents or their fellow peers. Wendling et al. (2018) found that with the excitement and challenge of competition; the development of close friendships creates a desire for one to seek social approval from their peers. O'Rourke et al. (2019) found that coaches can influence 10 to 30 children during the course of a practice. With all this in mind, one may see how extrinsic motivation from coaches, parents and peers can have a powerful influence on young athletes.

Recommendations

In reviewing the data base on how extrinsic motivation impacts athletic performance the following limitations were noted regarding the studies under review:

- 1.) Researchers only examined the impact on how extrinsic motivation has on athletic performance.

2.) Critical mass only focused on a small sample of 3,017 athletes in which 1,717 were male athletes, 1,300 were female athletes.

3.) Articles are limited from Drake Memorial Library published during 2009 and present.

Based on these limitations and other insights related to the literature, the following recommendations for future research should be considered:

1.) Conduct studies to examine if intrinsic motivation has similar impacts as extrinsic motivation.

2.) Conduct studies to examine if parents and coaches have the same impact in non-athletic settings, for example, academics.

3.) Conduct studies to examine how coaches are impacted by intrinsic versus extrinsic motivation.

These recommendations are suggested to include examining how coaches are impacted by extrinsic motivation, if parents have the same impact in an academic setting or which motivation, either extrinsic or intrinsic, has a greater impact on an athlete's development and performance.

Summary

The purpose of this literature review was to determine how extrinsic motivation impacts athletic performance. Delimiting variables were used to do an exhaustive data-based search which yielded ten articles. These articles were then systematically used to determine how extrinsic motivation impacts athletic performance. Research also revealed that extrinsic motivation can play an influential role on the athletes, such as the young athletes wanting to be socially accepted by their fellow peers.

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Appendix A

Author	Title	Source	Purpose	Methods & Procedures	Analysis	Findings	Recommendations Research
Gómez-López, M., Merino-Barrero, J. A., Manzano-Sánchez, D., & Valero-Valenzuela, A. (2019).	A cluster analysis of high-performance handball players' perceived motivational climate: Implications on motivation, implicit beliefs of ability and intention to be physically active	<i>International Journal of Sports Science & Coaching</i>	The purpose of this study was to uncover the different motivational climate profiles to compare differences on their implicit beliefs of sports ability, motivational orientation, and intention to be	Participants were 444 high-performance handball players aged between 16 and 17 years from all the youth teams participating in the Spanish handball championships by region (233 males and 211 females). Instruments- Perceived Motivational Climate in Sport Questionnaire	Questionnaire was answered voluntarily and anonymously during the players' resting time at their accommodation facilities, taking approximately 30 min. Descriptive and correlation analysis of all variables included in the study were conducted.	Findings revealed the great relevance that coach-created motivational climate may have for players' enhanced wellness and performance and, above all, for sport practice promotion.	Future studies could analyze the effect of the motivational climate transmitted by the coach on peer created climate and how this climate determines players' sport ability beliefs.

			physically active, and finally to analyze the relationship of the gender with motivational climate profiles, in a large sample of high-performance handball players in Spain.	re (PMCSQ-2) Conceptions of the Nature of Athletic Ability Questionnaire-2 (CNAAQ-2) Sport Motivation Scale (SMS) Intention to be Physically Active Questionnaire.			
Gillet, N., Berjot, S., & Gobancé, L. (2009).	A motivational model of performance in the sport domain	<i>European Journal of Sport Science</i>	The purpose of the study was to propose and test a motivational model of sport	The participants were 90 French national tennis players aged 13-14 years. These players were	The questionnaire assessed their motivation for tennis at the beginning of the season. Two years later, they	Specifically, sport performance was considered to be a determinant and a consequence of	Future investigation should examine links between motivation and performance with athletes in other sports but also with older tennis players, because it

			performance based on the hierarchical model of intrinsic and extrinsic motivation.	among the top 150 in France for their respective age group. Questionnaire re-Sport Motivation, Basic Needs, Sports Performance.	completed the same questionnaire plus another designed to measure athletes' perceptions of competence, autonomy, and relatedness.	athletes' motivation.	is possible that motivation could be more unstable during adolescence.
Szemes, Á., Vig, P., Nagy, K., Géczi, G., Sipos, K., & Tóth, L. (2017).	Age-related differences in motivational climate and extrinsic-intrinsic motivational factors among members of the Hungarian national wrestling teams	<i>Cognition, Brain, Behavior: An Interdisciplinary Journal</i>	The purpose of the study was to investigate whether sport motivation and the perceived motivational climate of the members of the Hungarian	The study consisted of 59 male wrestlers. Participants were assessed on the following dimensions: age, sport motivation, and perceived motivational climate, under data collectors'	The data obtained during the study was analyzed with the SPSS v21.0 software. Internal consistency of the scales and homogeneity of the dataset were tested. First, the correlations between the	This study suggests that subtle changes in individual motivation and motivational climate occur as a function of increasing age.	Findings here support that the relationship between athlete motivation type and team cohesion may be mediated by other factors, other than gender. This study revealed that seniority, motivational climate, scholarship status, starter versus non-starter status, and type of sport can

			n national wrestling team varied depending on the age-group of the wrestlers.	supervision.	scales and their subscales were examined, and, finally, mean differences between the age groups were tested with one-way ANOVA.		impact team cohesion and an athlete's motivation type.
Moen, F., Federici, R. A., & Skaalvik, E. M. (2014).	Junior Athletes' Goal Orientation, Motivation, and Emotional and Physical Exhaustion	<i>International Journal of Coaching Science</i>	The purpose of the study was to increase our understanding of the correlations between goal orientation, motivation, and burnout.	Four hundred and ten elite junior athletes from 7 different elite sports gymnasiums in Norway, as defined by the national Olympic committee, were asked to participate voluntarily in an online	The data collected during the study was analyzed using confirmatory factor analysis (CFA) and structural equation modeling (SEM) using the AMOS 20 program. They first tested a measurement model of the	Sports itself have the potential to draw athletes toward a performance orientation. Coaches and athletes need to work toward a mastery orientation to develop their capacities in their sports.	Significantly, the effect of goal orientation on exhaustion is indirect by intrinsic and extrinsic motivation. A possible interpretation of these indirect effects may be that perceptions of goal orientation themselves do not necessarily promote or reduce exhaustion.

				questionnaire.	constructs using the CFA. Second, they explored relations between the variables using structural equation modeling.		
O'Rourke, D. J., Smith, R. E., Smoll, F. L., & Cumming, S. P. (2014).	Relations of Parent- and Coach-Initiated Motivational Climates to Young Athletes' Self-Esteem, Performance Anxiety, and Autonomous Motivation: Who Is More Influential?	<i>Journal of Applied Sport Psychology</i>	This study of 238 competitive swimmers (ages 9–14 years), compared the strength of relations between athletes' late-season perceptions of coach	Parent-Initiated Motivational Climate Questionnaire-2, coach-initiated motivational climate using the Motivational Climate Scale for Youth Sports, Sport Anxiety Scale-2, Washington Self-Description	The research was designed to provide information on factors related to athletes' attitudes and outcomes from youth sport participation.	Correlation analysis showed that both coach- and parent-initiated motivational climates were significantly related to the outcome variables in the theoretically predicted directions. Although, the parent correlations were	The study focused on only postseason parent and coach influences and does not consider other factors during the season, such as team success and cohesion which could affect the outcome variables.

			and parent-initiated climates and their self-esteem, performance anxiety, and intrinsic-extrinsic motivation.	Questionnaire.		significantly higher for self-esteem and autonomous motivational regulation, highlighting the important role that parents have.	
Halbrook, M., Blom, L. C., Hurley, K., Bell, R. J., & Holden, J. E. (2012).	Relationships among Motivation, Gender, and Cohesion in a Sample of Collegiate Athletes	<i>Journal of Sport Behavior</i>	The purpose of this study was to determine if "gender and motivation type were related to athletes' perceptions of team cohesion.	In the study, 253 male and female collegiate athletes completed a demographic form, the Group Environment Questionnaire to measure perceptions of team social and	Using a correlational design in a convenience sample of Division I college student-athletes, the researchers assessed the relationships among gender, motivation type (i.e. SDC score),	Results contributed to a better understanding of athletes' motivation and group processes. Specifically, more intrinsically motivated individuals perceive higher levels of social and	Results contributed to a better understanding of athletes' motivation and group processes more intrinsically motivated. Individuals perceive higher levels of social and task cohesion than teammates who were less intrinsically motivated. This study

				task cohesion, and the Sport Motivation Scale to assess prominent motivation types and position on the SDC.	and perceived team cohesion. All statistical analyses were run using SPSS 17.0.	task cohesion than teammates who were less intrinsically motivated.	exclusively utilized NCAA Division I collegiate athletes; thus, the results may differ for athletes involved in other levels of competitive sport participation.
Szemes, Á., Szájer, P., & Tóth, L. (2017).	Sport motivation and perceived motivational climate among members of a national para-swimming team	<i>Cognition, Brain, Behavior: An Interdisciplinary Journal</i>	This study aimed to reveal the sport motivation and perceived motivational climate of these swimmers in comparison with similar data obtained from	Participants completed the questionnaires in paper-and-pencil format under data collectors' supervision after a training session in September 2016. The obtained data were processed by means of the SPSS v. 22.0	The study revealed several similarities as well as differences between the two groups. The main findings suggest that while they do not differ from their non-disabled counterparts in terms of extrinsic motivation or amotivation, disabled	The study revealed that the athletes do not differ from their non-disabled counterparts. In terms of extrinsic motivation or amotivation, disabled athletes are mostly driven by higher intrinsic motivation.	N/A

			non-disabled swimmers. The sample included 18 members of the Hungarian national para-swimming team.	software.	athletes are mostly driven by higher intrinsic motivation.		
Almagro, B. J., Saenz-Lopez, P., & Moreno, J. A. (2010).	Prediction of sport adherence through the influence of autonomy-supportive coaching among Spanish adolescent athletes	<i>Journal of Sports Science and Medicine</i>	The purpose of this study was to test a motivational model of the coach-athlete relationship, based on self-determination theory and on the	The study consisted of 608 athletes involved in soccer, basketball, volleyball, swimming, tennis or judo.	Participants completed Autonomy-Supportive Coaching Questionnaire (ASCQ), Basic Psychological Needs in Exercise Scale (BPNE S) and the Intention to be Physically Active Scale (IPAS).	A positive correlation between praise for autonomous behavior and the basic psychological need for autonomy.	Reinforcement in the importance of the coach and the autonomy support construct experienced by athletes, and their adaptation to athletic practice.

			hierarchi cal model of intrinsic and extrinsic motivatio n.				
Wendling, E., Flaherty, M., Sagas, M., &Kaplanidou, K. (2018).	Youth athletes’ sustained involvement in elite sport: An exploratory examination of elements affecting their athletic participation	<i>Internati onal Journal of Sports Science & Coaching</i>	The purpose of this study was to identify the underlyin g structure of compone nts affecting the sport participat ion of 1258 elite youth athletes from the USA.	The sample consisted of 1258 travel/elite youth sport athletes from the USA (566 boys and 692 girls.	The data collected through the study was examined by the principal component analysis (PCA) of the 23 items was performed to summarize most of the original set of observed variables and to investigate the underlying structure of the components affecting	Among the responses to what they like best about playing elite/travel sports. The main themes that emerged were the competition opportunitie s, fun, socializing and meeting new people, traveling experiences, and thrill of play.	Understanding how key elements affect participation, as perceived and experienced by elite youth athletes, may subsequently impact their enjoyment and intentions to quit sport is critical for the decision- making and programming purposes of coaches.

					elite youth sport participation. Second, mean differences of retained components were evaluated by age, gender, and race using a MANOVA. Third, the relationships between elite youth athletes' sport enjoyment, turnover intentions and those key identified components were analyzed with three separate hierarchical		
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					multiple regressions.		
Readdy, T., Raabe, J., & Harding, J. S. (2014).	Student-Athletes' Perceptions of an Extrinsic Reward Program: A Mixed-Methods Exploration of Self-Determination Theory in the Context of College Football	<i>Journal of Applied Sport Psychology</i>	This study used a mixed-methods design to evaluate effects of an off-season extrinsic reward system on basic psychological need fulfillment and motivation of collegiate football players.	In the study 85 student athletes participated. The participants answered questionnaire packets, which were completed at the beginning and end of the CC, included a demographic form, the Sport Motivation Scale modified to assess football motivation.	A mixed-methods approach was chosen for this research. First, bivariate correlations between the eight variables of interest (the five motivational regulations of amotivation, external regulation, introjected regulation, identified regulation, and intrinsic motivation as well as the three psychological needs of autonomy, competency,	Deductive and inductive analysis of the interviews and focus groups with 13 of the participants in the CC revealed four higher-order themes: (a) behaviors reinforced by the CC are not necessary connected to successful on-field performance; (b) CC rewards are enjoyable, but not inherently motivating;	Offered that any extrinsic rewards, including performance-contingent incentives such as those used in this study, would undermine intrinsic motivation. Through initiation, the interview results suggested a middle ground, since the rewards were not necessary to create or maintain motivation but were also not detrimental. They revealed both positive and negative views of the incentives players could receive.

					and relatedness).	(c) program effectiveness is heavily influenced by individual differences; and (d) other CC considerations.	
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