# Coach authentic leadership connected with performance satisfaction and psychological well-being of team: The mediating role of team cohesion and psychological capital

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#### **Abstract**

In today's world, the psychology of sports and exercise is a crucial factor to study for attaining the higher performance and productivity of athletes. The purpose of the current work is to examine the effect of authentic leadership on team performance satisfaction and psychological well-being. Moreover, the nucleus aim of the current study is to investigate the effect of authentic leadership, performance satisfaction, psychological wellbeing, while mediating by team cohesion and psychological capital. There is a growing indication ascertaining the positive effects of sport and exercise leaders engaging in authentic leadership. However, researchers have limited knowledge of how authentic leadership is related with athletes' performance satisfaction and psychological wellbeing, the supporting system(s) that illuminate such associations, and modifications in relationships within a sports sector. The data is accumulated through administrated a survey questionnaire, it is more as a suitable method to generate under present study because it will give accurate data on numerical figure bases that can be valued certainly and that is free from any type of the ambiguities. The simple random sampling technique is used under this study for selecting the sample from large population. By using simple random sampling technique, the questionnaire is administered to distributed among 250 female athletes of different team groups in China. Out of from 250 questionnaires, 200 questionnaires were received back from athletes. The nature of the study is cross sectional as only one- time data is collected from athletes. This study used the Smart PLS software for analyzing the relationship among variables such as authentic leadership, performance satisfaction, psychological well-being, team cohesion and psychological capital. The outcome of the study reveals that authentic leadership has a significant and positive relationship with performance satisfaction and psychological well-being of the team players. Further, the psychological capital and team cohesion enhances the team performance satisfaction and psychological well-being. However, at the end, future limitations for further studies, practical implications for athlete practitioner, coach and policy-makers are provided at the end of the study.

**Keywords:** Performance satisfaction, psychological well-being, authentic leadership, team cohesion, psychological capital

# Introduction

In current economy, in recent years, sports psychology has gained more importance vis-à-vis attaining for gaining better the best performance of athletes because of its effect on the physical performance, psychological well-being, health and fitness of athletes. The sports psychology is the scientific study of the people and individuals and their behavior in the context of sports and exercise, and application of this knowledge practically. The sports psychology involves the affect (emotions, feeling), behavior, and cognition (Gill, Williams, & Reifsteck, 2017). Further, the knowledge of the coaches of sports and exercise is enhanced by using sports psychology asnd they can deliver the best

knowledge about the sports to their team members and the general public. Mostly, people try to understand the sports psychology due to two main reasons: first, to understand that how sports psychology affects the physical performance, and secondly, how sports psychology affects the psychological development, health and well-being of athletes (Weinberg & Gould, 2018).

Today the sportToday, sport psychology is more popular than ever before. Studying historical trends, it is clear that women have traditionally been less involved in sports and exercise activities. When researcher look back the history of sports and exercise the women are less involve in the sports and exercise

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activities. This is not a different history of any field; the women are not getting equal chances as men. However, if when women participate in sports, female involve in sports and exercise they face more professional obstacles for their career development as compare to their male other counterparts. Additionally, the sports activities are facilitating the players into creating ae network with other team players and attaining the best results (performance and well-being) by generating team cohesion and through psychological capital.

In contemporary sports industries, how to enhance the psychological well-being of sports members, coaches, and personnel has become an come to be important topic (Kim, Kim, Newman, Ferris, & Perrewé, 2019). An emergent track of sport managing examination has initiated to discourse discuss issues related to the relationship between sport activities and well-being outcomes. Owing to concreteness to execute good in sport groups, sportspersons are at risk threat for of mental health problems such as anxiety, depression, burnout and fatigue etc., in a competitive sports background (Rice et al., 2018). Further, competition in the field continues to become on reach extreme levels and such intensification of environment has provoked innumerable sport settings with serious encounters such as stabbing and tamper with to destructions..

In sports scenarios, job satisfaction is one of most highly explored outcome of the sports among different populations. Job satisfaction of athletes is defined as one of the emotional reaction of the employees on job and work experience. While the performance of the employees is, enhanced by ensuring the satisfaction of the employees on a particular job. Previously, mostly studies on the satisfaction under the sports context are done on the intercollegiate athletics. Nowadays, researchers related the performance satisfaction with the behavior of co-players and leadership style. Recent research shows that authentic leadership influences the performance satisfaction of athletes. The psychology of sports plays an important role for enhancing their performance; the more the employee emotionally, cognitively and behaviorally feels satisfied with the team players, the more they get satisfaction from their performance. The employees who have a solid psychological link with their task reportedly are feeling more happy and joyful in the job (Kim et al., 2019; Kim, Kim, & Won, 2018).

In similarly, previous literature are discussing the coaching leadership which effectively and efficiently improves the athlete behavior for getting better

productivity with, only a fewer studies that discusses the coaching leadership from with the perspective of athletes' well-being and their satisfaction. In the context of sports context mostly studies done on the leadership beginning from mid 1990smid-1990s, the studies discuss the sports management and psychology of sports with different leadership style, with some studies devoting remarkable efforts on transactional, transformational and charismatic leadership for gaining the benefits by fulfilling goals of the team (Welty Peachey, Damon, Zhou, & Burton, 2015). In For recent times, the scholar of sports management must bear in mind bearing in minds that the follower's development as an outcome of athlete leadership. The behavior of the leader influences the followers and develops their social psychology aspects and changes the behavior of followers about the team performance (Kim et al., 2018). While other evolving optimistic leadership approaches have in recent times been embraced in game areas (e.g., Burton & Welty Peachey, 2013; Burton & Welty Peachey, 2014), sport management scholars have concentrating little research focusing headed for authentic on authentic leadership. This is regrettable as the authentic leaders are understood to play an important role in for enhancing the psychological well-being performance satisfaction of female athletes.

Authenticity is the a word from the Greek philosophy language, denoting its shows the reliability, genuineness, and trustworthiness of a person the person with itself. Authentic leadership is needed in the contemporary times where the policies for related to how to do work is not working properly, wherever the best leaders will be see-through with their targets, having a continuous connection between their promoted values, actions, and behaviors of athletes. Authentic leadership best represents the convergence of positive organizational behavior. Similarly, the authentic leader is self-assured, optimistic, resistant, crystal clear, morally/ethically sound, future-oriented, and gives importance to emerging connections to be leaders. The authentic leader is true to him or her-self and the displayed behavior positively changes or improves acquaintances the followers into leaders themselves (Gill, Nisar, Azeem, & Nadeem, 2017).

Authentic leadership represents a was acquaint with as an evolving type of constructive leadership that gives emphasis to the ethical and moral behaviors of leaders (Hoch, Bommer, Dulebohn, & Wu, 2018). Based on the previous literature, authenticity ias "a root construct in leadership theory (Luthans & Avolio,

2003) a leader's authenticity can be imparted with other leadership theories such as transformational, servant, and spiritual leadership". On the other hand, Hoch et al. (2018) distinguished authentic leadership, uttering positing that it shows an important role predominantly in forecasting affective commitment and trust. Moreover, authentic leadership is different from other leadership styles and behavior which in turn change the behavior of followers and the followers become more self-aware and regulate their behaviors such that they which move towards the selfdevelopment of the followers (Luthans, Youssef, & Avolio, 2015). Although, an authentic leaders creating positive outcomes on for their followers behavior such as performance satisfaction, organization citizenship behavior, cohesion of the followers, well-being.

In this regard, McDowell et al. (2018) described that authentic leadership has a positive influence on athlete's psychological capital and engagement of the athletes with intercollege sport students. With the findings of their study, the authentic leadership enhances the psychological capital, performance, satisfaction and well-being of the team members. The psychological capital is considered as a desirable ability of team players, and refers to it is positive state of the players where their performance and attitude show display the positive and favorable results (Luthans, Youssef, & Avolio, 2015). Furthermore, the psychological capital of athletes point out to the positive psychological conditions through this which they can control their mind, confronting problems, focusing on pursuing goals of self-development. pursuit in the journey of development. In today's competitive sports environment, the mental wellbeing in daily life, the promoting behavior and attitude of the sports team are highly correlated with psychological capital of sports teams (McDowell, Huang, & Caza, 2018). One of the notable initiatives related to psychological capital demonstrated that it is not only the outcome of the authentic leadership but also considered a as predictor of developmental outcomes of the follower such as well-being and performance of the followers. Discriminating psychological capital among team members, which can be predisposed by the authentic behaviors of captains, has the impending inclination to mitigate stress levels and clear the way for overwhelming hindrances to value-added performance (McDowell et al., 2018).

The leadership plays an important role into enhancing the team's performance. In this regard, the team performance will be enhanced by getting proper leadership support. Cohesion is described as "a dynamic process that is reflected in the tendency for a group to stick together and remain united in the pursuit of its instrumental objectives and/or for the satisfaction of members' affective needs" (Carron, Widmeyer, & Brawley, 1985). Similarly, the unity of team members enhances the level of team motivation, which ultimately improves their well-being and productivity of the team. Team cohesion is the state of the team members where they perform within a team with unity. For instance, when players are receiving proper guidance from athlete leaders such as coach and captain, their behavior towards team common team goals will boost up.

Our study was aimed at examining the relationships between a coach's authentic leadership athletes' 'performance satisfaction, while mediating psychological well-being psychological capital and team cohesion. Based on the above mentioned aim, purpose the following are the key objectives of the study are enlisted of the current study:

- To examine the association authentic leadership and performance satisfaction of team.
- To investigate the relationship of authentic leadership with psychological well-being of team.
- To examine the relationship of authentic leadership with psychological capital.
- To determine the effect of authentic leadership with team cohesion.
- To what extent the psychological capital mediates the relationship with authentic leadership, performance satisfaction and psychological wellbeing.
- To what extent the team cohesion mediating the authentic leadership, association with performance satisfaction and psychological wellbeing.

Based on the above mentioned objectives, the following are the research question of the study:

- authentic leadership aeffects performance satisfaction?
- Do authentic leaders impact the psychological well-being of the team?
- Does authentic leadership affect the team
- Does authentic leadership affect the psychological capital of the team?
- How team cohesion has a mediator effect vis-à-vis the authentic leadership, performance satisfaction and psychological well-being of the team?

 How psychological capitals as mediator effect the authentic leadership, performance satisfaction and psychological well-being of the team?

Therefore, the present paper is broadly related with coach authentic leadership which enhances the performance satisfaction and psychological well-being of the female athletes. Moreover, the team cohesion and team psychological capital enhances the association between authentic leadership, and performance satisfaction and psychological well-being of the athletes. Further under the following below section of the study, the literature review of variables, methodology, results of the study, and the future research and limitations implications are discussed.

# **Literature Review**

#### **Performance Satisfaction**

Performance satisfaction is an important outcome of the authentic leaders, the authentic leader work with authenticity for achieving the common goals of the team. In competitive environment the team will be recognized on the bases of their productivity. The athlete performance can be evaluate on the win and loss ration of the team but the effectiveness of the sport organization are not related with win and losses of the teams, commonly its related with the satisfaction level of team players (Riemer & Chelladurai, 1998). Rather than use up the objective indicators of performance such as team positions, many sport psychologists be in favor of for the subjective classification and valuation of sport performance by the actual individuals who take part in sports (Males & Kerr, 1996). Performance satisfaction has been well thought-out as a characteristic of athlete satisfaction, which entails of numerous types such as personal conduct, training, team task support, team ethics, financial plan, and academic support amenities (Riemer & Chelladurai, 1998) A particular, self-reliant grading of performance satisfaction is constructive in that it developments the identification of the level of performance necessary from athletes in innumerable sports and positions (Nicholls, Taylor, Carroll, & Perry, 2016).

As compare to the team performance the individual performance is more important for getting the better results as team. The team performance receive more attention from the coach and media, the individual performance is the performance of the individual team member, the performance satisfaction of the athlete is the individual own athletic performance. Under this study the performance satisfaction is considered as the level of satisfaction the individual receive from their

own athletic performance. Similarly, the perceived satisfaction of the individual is designed through contemplation of the previous performance, the maximum performance and the learning the playing improvement skill (Riemer & Chelladurai, 1998). Moreover, the amusing emotional challenge appraisal and task oriented behavior of athletes considered as performance of athletes in sports environment (Nicholls et al., 2016).

Additionally, the quality of relationship between athlete and coach is mostly depends on athletic performance satisfaction, it is one of the desire outcome of the coach and athlete relationship (Jowett & Nezlek, 2012). Under the research setting, assessing the female athlete satisfaction with person own performance might also be a crucial to understand the coach-athlete relationship.

Psychological capital as self-efficacy construct influence the individual performance. The people with level of psychological capital motivate themselves and achieve the higher results in form of high performance. The motivated people achieve the team goals effectively and efficiently. Further, the individual made the smart realistic goals, that can be achieved through different ways with distinguish contingencies plans (Luthans et al., 2015). Similarly, the effective team members have strong belief on their abilities, that way they set the goals according to their abilities. It will change the behavior, attitude and cognition of people by putting efforts according their abilities for achieving particular goals (Newman, Ucbasaran, Zhu, & Hirst, 2014). Considerable flexibility and positivity help individual team members overwhelmed difficulties and expose chances to improve individual performance (Luthans et al., 2015). In view of that, athletes who have high levels of psychological capital may show equivalently high levels of athletic performance and are thereby likely to be satisfied with their activities. Additionally, team cohesion influences the performance satisfaction of individual team member of the team. Similarly, the team members have higher sense of team unity work as collective members for achieving the common goals of team. The team cohesion is major factor for the success of team, the individual will more satisfied from their performance when they work as unite team members. The team members get effective results and more satisfied when the put their efforts in united function for achieving the common goals (Pacewicz, Smith, & Raedeke, 2020). Thus, it can be hypothesized that:

H1: There is significant relationship with psychological capital and performance satisfaction.

H2: There is significant and positive association with team cohesion and performance satisfaction

Psychological Well-being

The authentic leaders develop the authenticity among members which ultimately improves the wellbeing of the employees through getting positive vibes from the coach authenticity. The coach authenticity move the sports sector towards the positive psychological well-being (Avey, Luthans, Smith, & Palmer, 2010). Previous study highlighted that the authenticity approach of the leaders is influential way of the leaders in measuring the psychological wellbeing of the team players. The well-being variable is divided into two broad types such as hedonic and eudemonic well-being (Ilies, Morgeson, & Nahrgang, 2005). Moreover, the eudemonic well-being considers broadly the motivational and behavioral factors, while the hedonic well-being related to particular happiness and cheerful feelings of the members. According to the human development concept, the overall effectiveness of the individual psychological activities included, under the psychological well-being of the employees.

Ryff and Keyes (1995), demonstrated the multidimensional model which consists of on six dimensions of psychological well-being. "Firstly, the dominant facets of psychological health, selfacceptance is related with a positive valuation of and assertiveness toward the athletes in spite of awareness of personal confines (Horn, Taris, Schaufeli, & Schreurs, 2004). Secondly, a positive association with others points to out an affirmative attitude of oneself on the way to constructing and keeping up with responsible relationships (Rogers, 2012). Thirdly, selfsufficiency is associated to with devising a distinctive sense of autonomy and an internal locus of valuation (Rogers, 2012). Fourthly, environmental mastery is one's aptitude to be able to lives andunderstand one's surroundings effectively in order to meet personal needs (Horn et al., 2004). Fifthly, purpose in life refers to a deliberation of life as determined and important, as indicated by gratitude of having somewhat to living for. Finally, personal growth point out the trend to constantly develop the personal prospective to grow by being open to new experiences and adapting behaviors to dissimilar social settings (Ryff, 1989). Each dimension helps articulate different challenges that people encounter as they strive to function positively in life (Ryff & Keyes, 1995)".

In addition the psychological capital improvements can positively enhances the psychological well-being of members through accumulated positive

experience. The team members with high psychological capital such as high level of efficacy, hope, optimism, resilience have distinctive experience as thy achieve the team goals team goal with different ways, get more opportunities and deal with chasing mechanism mechanisms (Kim et al., 2019). Being an athlete, playing sports is the important involvements of players, and the positive experience of athletes as player enhances the psychological well-being of team members (Kim et al., 2019). Additionally, the authentic leadership's associatione with psychological capital it means authentic leaders enhanced the self-efficacy of players which ultimately improves the psychological well-being of the players. Based on the above mentioned arguments, it can be hypothesized

H3: Team psychological capital positively and significantly affects the psychological well-being.

H4: Team cohesion affects the psychological wellbeing of players significantly and positively.

# **Authentic Leadership**

In the modern world,d the authenticity is developed frequently theorised by different scholars and researchers, but the grounded history of authenticity is traditionally deemed to be a staple concept of Greek philosophy. The notable notion of authenticity is that as authentic leader, it was first used in the context of education where it proves that followers (student) perception related to authenticity is one of the important concepts (Henderson & Hoy, 1982). In the past history, authenticity can be defined as acting "one acts in accord with the true self, and expressing oneself in ways that are consistent with inner thoughts and feelings" (S. S. Gill et al., 2017). For attaining the positive organizational behavior, authentic leadership theory has been refined and applied on the origin of positive psychological movement (Luthans & Avolio, 2003), in which authentic leaders are persons who are well aware of about the do's and don'ts. Moreover, they are particularly intensively conscious about the way how they think and behave and others perceived that the authentic leaders know their followers behavior, moral values, knowledge, authentic strengths" (López, Alonso, Morales, & León, 2015).

Despite the need Even though, there is intense improvements for improvements available vis-avisrelated to authentic leadership theory model, it is pertinent to note but still that authentic leadership theory overlaps with other leadership theories such as

ethical leadership and transformational leadership etc. By using the meta-analytics technique, Banks, McCauley, Gardner, and Guler (2016) demonstrated scribed that authentic leadership and transformational leadership have large correlation between them. On the other hand, Banks et al. (2016) also emphasized that authentic leadership displays domination in evaluating group or organizational performance compared to transformational leadership. In the sports settings, where the main focus of the individuals is team performance, athe more positive athlete performance can be achieved leaded by the authentic leadership because beyond concentrating on performance, authentic leaders underline the importance of staying keep on true to ethical and moral values and moral values (Gardner, Avolio, Luthans, May, & Walumbwa, 2005). In fact, Banks et al. (2016) might not comprise outcomes that may support differentiate authentic leadership from transformational leadership in their meta-analysis. Particularly, the authentic leadership is more intensely associated to followers developing components such as creativity, ethics, morality and creativity (Banks et al., 2016; Gardner et al., 2005). Hence, in the current study's identification of the potential significance of authentic leadership, an expressive task is to define how authentic coaches are able to influence athletes' psychological capital, cohesion, satisfaction and well-being.

Authentic leadership has been divided into four dimensions which are as follows: 1) self-awareness, 2) transparency, 3) internalized perspective, 4) balanced processing. The First dimension of authentic leader is the "self-awareness", which shows the strength, weakness, opportunities and threats of individual itself. Under the self-awareness approach, the individual not only knows the value of,s and knowledge about, their self but also know how to influence others (Avolio et al., 2004; Rego et al., 2012). The second dimension is "relational transparency" under which the leaders are transparent and open towards their followers. Further, the third facet is "internalized moral perspective" which imitates leader morality policies which while indicatinge the virtutures and moral values of leader inner-self (Hoch et al., 2018). The fourth dimension is "balanced processing" which shows that leaders anayzied the other analyzeding data and their results of previous decisions before taking a final decision (Luthans & Avolio, 2003). Hence, it can be hypothesized that:

H5: Authentic leadership positively and significantly affects the psychological capital.

H6: There is positive and significant relationship with authentic leadership and team cohesion.

H7: There is positive and significant relationship with authentic leadership and performance satisfaction.
H8: There is positive and significant relationship with authentic leadership and psychological capital.
Team Cohesion as mediator

In today's world, wherein sports are playing an important role for the females, males and adolescents. The way the team work is very instrumental important, for winning as team is very crucial for every individuals of the team. While researchers discussing about the team and their common goals, there is also need to study the team cohesion. Similarly, it is one of the viable constructs of the sports team. For gaining the success, there is a need to create a unity among the individuals who work as team members. Cohesion can be defined as "the distinguish attributes of the individuals for achieving the success in the range of work, military and sports". Team cohesion is strength and interpersonal connection of the individuals for attaining the good from people as unite members (Pacewicz et al., 2020).

Conversely, authentic leader is a comparatively current concept, and there are hardly any studies investigating the associations between authentic leader and cohesion. In sports team the authentic leader and cohesion is first introduced by (Houchin, 2011). Based on the fact that the authentic leader is described by promoting diverse conducts related to the connection among group components, the current examination dedicated on safety and emergency teams suggests that authenticity of the leader will favor group cohesion (López et al., 2015). Another study highlighted that authentic leadership his as association with associated with the team cohesion, and had been it considered as an outcome and mediator of the study (Bandura, Kavussanu, & Ong, 2019). Under this study, team cohesion can be considered a as mediator among variable; the same variable can be am outcome of the authentic leadership, but under this study the team cohesion taken as mediator which boosts the association of authentic leadership, performance satisfaction and psychological well-being. Therefore, under this study it can be hypothesized that:

H9: There is positive and significant association among authentic leadership, performance satisfaction and psychological well-being while conciliating by team cohesion.

# Psychological Capital as mediator

Psychological capital is the state of the development of psychology; it is characterized by efficacy, hope, optimism and resilience. For gaining the competitive edge in current economy, there is need to find the people who have high psychological capital. Moreover, the psychological capital is the situation of evaluating their own actual position to the possible self (Luthans & Youssef, 2004). Similarly, psychological capital is the higher order variable and positive organization behavioral approach that is very important to develop the other outcomes as well. Additionally, through theoretical models and empirical tests, Luthans and Youssef (2004) have determined four constructs namely: hope, resilience, efficacy, and optimism.

Hope is the optimistic motivational situation of settle on attainable goals and developing specific plans for personal goals rather than a practice of wishful thinking (Luthans, Youssef, & Avolio, 2007), On the other hand, the people who are higher in their hopes prompted by goal-directed energy, set challenging but realistic goals. To obtain the academic achievements, athletic achievements and health related behaviors hope felt by athletes positively (Hofmann & Jones, 2005). In case of athletic high position of hope, the athletes develop the long term plans for covering the situation which occur due to any uncertain hardship. Efficacy is the construct of authentic leaders which pertain that to the level of confidence that the individual have on his/her abilities to do the task successfully under the given situation. The athletic performance in sports are largely depends on the athlete efficacy. The more the athlete confident about their abilities to do the required task the more the athlete get better performance with the sense of achievements that improves the mental abilities of the followers. Efficacy permits athletes to manage with performance stress and sustain the hard training indispensable to improving their skills (Jenkins, 2008). Efficacious athletes have a tendency to agree to take trials and strive to attain goals. Moreover, resilience is positive psychological capacity of athlete to recover them from hardship and failure of the games and also motivate the individuals to find better opportunities (Luthans et al., 2007). Under the sports setting resilience is the best attribute which considered as has been viewed as an indispensable component for overcoming harms or collapses (Fletcher & Sarkar, 2012). When athletes are facing the failure in bouncing back situation, the resilience trait of the athlete move the athlete from failure to winning position, they learn

and harmoniously display the positive changes by bouncing forward. The athletes who achieve the higher performance in sports sector, facing multiple stress and failure situations, by utilizing proactive coping strategies intended to balance their sports and daily lives they respond successfully (Galli & Gonzalez, 2015; Sarkar & Fletcher, 2014). The positive changes can be occurring in athlete life by overcoming the failure and creating the winning situation in future.

The optimistic individuals are individuals who perceive have attribute the positive events as permanent and personal and consider the negative events as external and situational. Under the view of sports psychology, for developing the physical and psychological well-being the optimism is one of the vital aspects of team members. Moreover, the players who have an optimism trait in their behavior they can overcome the every worse unfavorable situation; for example, leaving the coach and they can handle any uncertain situation.

Despite the importance the psychological capital, the authentic leaders play an important role in enhancing the psychological levels and components of athletes (Luthans et al., 2007; Rogers, 2012). The main motive of the authentic leaders is to provide proper trainings and develop the players, so their deep involvement in players' training and future developments foster them to provide proper feedback (Gardner et al., 2005). The outcome of this process (coach authentic leader and athlete) is the development of the followers' ability to realize the goal by building the willindividual will- power such as hope. By accepting the followers' advices and creating aproviding them decentralized decision- making processway, the leaders enhanced the efficacy behavior of the followers (Rogers, 2012). In the difficult and uncertain situations, the follower perceived that the leaders are available in the front end that encourages them followers to overcome the uncertain situations. By appreciating recognizing with followers and arousing positive emotions, authentic leaders encourage positivity in their followers such as feelings of optimism and hope (Gardner et al., 2005). McDowell et al. (2018), described the positive impact of a head coach's authentic leadership on athlete's psychological capital. Thus, it can be hypothesized that:

H10: There is positive and significant association among authentic leadership, performance satisfaction and psychological well-being while conciliating by psychological capital.

## Research Framework

Based on the purpose of study the following are research framework of study.

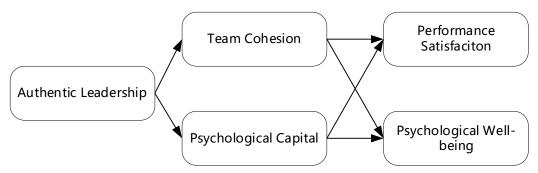


Figure 1: Conceptual Framework

# Methodology

The sample of the study is female athletes of China, the female athlete gain much attention in today's sports sector. One of the notable thing is that the females having equal importance in sports industries similar to other industries. With the passage of time In recent years, there has been a resurgence of studies focusing on female athletes. Mostly studies done on the female athlete because previously, fewer studies available on the female athletes. leadership enhances the positive behavior of female athlete towards the group cohesion and psychological capital, and enhances the psychological well-being and performance satisfaction of team members. The unit of analysis of the study is thr individual where data is collected from female athletes. Privacy of answers was assured and players have clear knowledge about that they can withdraw their participation for fulfilling the response at any time. The data will be collected only at one point of time from respondents. The current study is not following the time series data collection. So, the study will be a cross sectional one as compared to the longitudinal one. The singly single study does not cover the overall population of the sports discipline due to its size issue. That's why the sample of the study is selected that to represents the population.

There are different methods for selecting the sample size that create a generalized sample that represents the overall populations. Moreover, Kotrlik and Higgins (2001), can be enlightened one of sample size technique that sample size at least 20% of the whole population. Although very often, the total number of population is finite; in such cases, it becomes much easier to select the sample and collect data. For the finite population the (Krejcie & Morgan) table is used for selecting the sample size (Krejcie & Morgan, 1970). Conferring to Raune (2005) for sample size the scholar

essentials to usage the ratio, from the large population size there is small ratio sample size. However, in current situation the population was not limited. The 200 players was decided to collect the data as sample size in current study from female athletes.

Further, the sampling technique is decided after deciding the sample size. There are many sampling techniques are available but for the present study, the simple random sampling technique is used for collecting data from female athletes. Moreover, the data were collected from individuals through administered questionnaires. The questionnaire was be distributed through face to face distribution. The selfadministrated questionnaire has helped is save the time and cost of for the researcher. Similarly, the questionnaire consisted on two parts, the part A related with demographics such as age, gender, education and experience and part B related with all variables questions. The 5 point likert scale is used span from strongly agree to strongly disagree. Under this study the researcher adopted the questionnaire. The 16 items scale was used for measurement of authentic leadership; under this study, 9 items measured the authentic leadership (Walumbwa, Avolio, Gardner, Wernsing, & Peterson, 2008). Moreover, the 3 item scale is used for psychological well-being of athletes (Ryff & Keyes, 1995). Further, the 5 items scale is used for performance satisfaction of the team members (Loughead et al., 2016). By using 6 items scale, the cohesion can be measured (Eys, Carron, Bray, & Brawley, 2007). Also, the psychological capital can be measured under this study by using 8 items scale (Luthans et al., 2007). The smart PLS was used for data analysis. The results of the study are presented in the next section.

# **Findings**

## **Confirmatory Factor Analysis**

To validate the questionnaire, the confirmatory factor analysis was performed. As per Table 1 above, the values for the reliability of questionnaire for every single variable are 0.837, 0.869, 0.776, 0.807 and 0.887 respectively. As per the parameter, the scale is said to be reliable when the value of reliability is greater than 0.7. As per the table, all the values for reliability falls under the acceptable range, which thus establishing the scale reliability.

Furthermore, table 1 is also presenting the values for CR and AVE which are the determinants for the convergent validity. The values of CR and AVE should be greater than 0.8 and 0.5 respectively. As per the table, the values of CR for the variables namely; authentic leadership, psychological capital, performance satisfaction, psychological well-being and team cohesion are 0.879, 0.901, 0.851, 0.887 and 0.918, respectively, which satisfies the first criterion. Furthermore, as per the table 1, the values of AVE for the variables namely; authentic leadership, psychological capital, performance satisfaction, psychological well-being and team cohesion are 0.517, 0.604, 0.554, 0.724, and 0.691 respectively. Thus, these value is also satisfied the second criterion. Therefore, it is argued the convergent validity is established.

Constructs	Items	Loadings	Alpha	CR	AVE
Authentic Leadership	AL1	0.729	0.837	0.879	0.517
	AL3	0.754			
	AL4	0.407			
	AL6	0.753			
	AL7	0.731			
	AL8	0.795			
	AL9	0.786			
Psychological Capital	PC1	0.812	0.869	0.901	0.604
	PC2	0.736			
	PC3	0.69			
	PC4	0.808			
	PC7	0.791			
	PC8	0.817			
Performance Satisfaction	PS1	0.785	0.776	0.851	0.554
	PS2	0.827			
	PS3	0.838			
	PS4	0.828			
	PS5	0.289			
Psychological Well-being	PW1	0.867	0.807	0.887	0.724
	PW2	0.896			
	PW3	0.785			
Team Cohesion	TC1	0.875	0.887	0.918	0.691
	TC3	0.817			
	TC4	0.883			
	TC5	0.849			
	TC6	0.721			

To validate the questionnaire, the confirmatory factor analysis was performed. As per Table 1 above, the values for the reliability of questionnaire for every single variable are 0.837, 0.869, 0.776, 0.807 and 0.887 respectively. As per the parameter, the scale is said to be reliable when the value of reliability is greater than 0.7. As per the table, all the values for reliability falls within the acceptable range, thus establishing scale reliability.

Furthermore, Table 1 also presents the values for CR and AVE which are the determinants for convergent validity. The values of CR and AVE should be greater

than 0.8 and 0.5 respectively. As per the table, the values of CR for the variables namely; authentic leadership, psychological capital, performance satisfaction, psychological well-being and team cohesion are 0.879, 0.901, 0.851, 0.887 and 0.918, respectively, which satisfies the first criterion. Furthermore, as per Table 1, the values of AVE for the **Discriminant Validity** 

variables namely; authentic leadership, psychological capital, performance satisfaction, psychological well-being and team cohesion are 0.517, 0.604, 0.554, 0.724, and 0.691 respectively. Thus, these values also satisfy the second criterion. Therefore, it is argued the convergent validity is established.

Table 2:Fornell & larcker Criterion

	AL	PC	PS	PW	TC	
AL	0.	719				
PC	0.	563	0.777			
PS	(	).58	0.628	0.744		
PW	0.	575	0.676	0.613	0.851	
TC	0.	586	0.62	0.728	0.58	0.831

Table 2 illustrates the values for the Fornell & Larckers Criterion which is used as a determinant of discriminant validity. As per this criterion, the value of correlation of a particular variable must be greater than the others in the table. As per the table, all the **Cross Loadings** 

correlational values of a variable are greater than its correlation with others. Thus, discriminant validity is established.

**Table 3:** Cross Loadings

	AL	PC	PS	PW	TC
AL1	0.729	0.336	0.379	0.378	0.438
AL3	0.754	0.368	0.451	0.439	0.49
AL4	0.407	0.228	0.247	0.258	0.211
AL6	0.753	0.415	0.444	0.404	0.413
AL7	0.731	0.461	0.415	0.459	0.374
AL8	0.795	0.43	0.409	0.417	0.474
AL9	0.786	0.532	0.523	0.496	0.486
PC1	0.457	0.812	0.501	0.649	0.485
PC2	0.521	0.736	0.582	0.633	0.59
PC3	0.376	0.69	0.361	0.525	0.421
PC4	0.423	0.808	0.491	0.429	0.467
PC7	0.408	0.791	0.483	0.397	0.444
PC8	0.402	0.817	0.467	0.444	0.436
PS1	0.431	0.505	0.785	0.51	0.57
PS2	0.44	0.558	0.827	0.538	0.587
PS3	0.533	0.494	0.838	0.489	0.638
PS4	0.501	0.52	0.828	0.485	0.597
PS5	0.155	0.123	0.289	0.137	0.185
PW1	0.463	0.55	0.52	0.867	0.506
PW2	0.497	0.552	0.552	0.896	0.519
PW3	0.502	0.615	0.489	0.785	0.452
TC1	0.499	0.434	0.6	0.445	0.875
TC3	0.485	0.586	0.591	0.537	0.817

	AL	PC	PS	PW	TC
TC4	0.508	0.511	0.672	0.476	0.883
TC5	0.529	0.475	0.674	0.473	0.849
TC6	0.405	0.584	0.465	0.483	0.721

Table 3 is showing the values for cross loadings. The value of the loadings for a particular variable must be greater than 0.7 and all other variables vertically. As per Table 3 above, all the values falls within said range, thus strengthening discriminant validity.

## **Heterotriat-Monotrait Correlation Ratio**

Table 4: Heterotriat-Monotrait Correlation Ratio

	AL	PC	PS	PW	TC
AL					
PC	0.642				
PS	0.701	0.725			
PW	0.695	0.787	0.751		
TC	0.671	0.701	0.85	0.688	

The last and latest technique for discriminant validity was applied which is known as HTMT. As per this technique, the values for all correlations must be less than 0.85. According to findings presented in Table 4, all the correlational values are less than 0.85, therefore, discriminant validity is established. Figure 3 below shows the output of CFA, indicating showing the values of factor loadings for each item of measures used in the study.

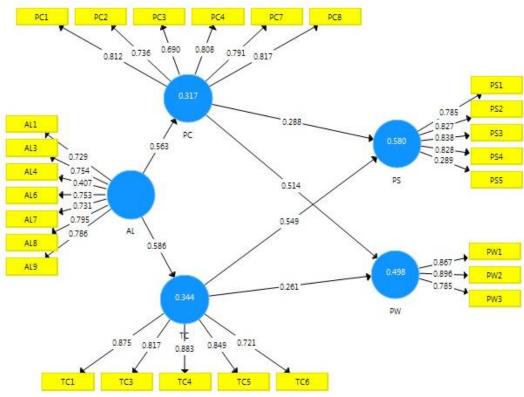


Figure 2: Measurement model **Structural Equation Modeling** 

Table 5 Direct Results

Relationships	Beta	SD	T value	p value	Decision
AL -> PC	0.563	0.029	19.294	p< 0.05	Supported

AL -> TC	0.586	0.028	20.835	p< 0.05	Supported	
PC -> PS	0.288	0.031	9.421	p< 0.05	Supported	
PC -> PW	0.514	0.032	16.037	p< 0.05	Supported	
TC -> PS	0.549	0.029	18.911	p< 0.05	Supported	
TC -> PW	0.261	0.035	7.559	p< 0.05	Supported	

Table 5 shows the results for the direct relationships between the variables of the study. Authentic leadership found to be significantly associated with psychological capital. The association is valued at 0.563. The association between the authentic leadership and team cohesion is valued at 0.586. It is the strongest of all the relationships. It means that a 1% change in authentic leadership will bring about a 58% change in team cohesion. The relationship is significant, thus, the hypotheses are accepted. In **Specific Indirect Effects** 

addition, the results also showed that psychological capital and performance satisfaction are significantly associated. The association is valued at 0.288. Moreover, the psychological capital is positively and significantly associated with psychological well-being valued at 0.514. Additionally, the team cohesion affect the performance satisfaction and psychological well-being with a value of 0.549 and 0.261 respectively. All the hypothesis are accepted.

**Table 6** *Mediation* 

Relationships	Beta	SD	T value	p value	Decision
$AL \rightarrow PC \rightarrow PS$	0.162	0.021	7.584	p< 0.05	Supported
$AL \rightarrow TC \rightarrow PS$	0.322	0.023	13.781	p< 0.05	Supported
$AL \rightarrow PC \rightarrow PW$	0.289	0.026	11.233	p< 0.05	Supported
$AL \rightarrow TC \rightarrow PW$	0.153	0.023	6.8	p< 0.05	Supported

Table 6 shows the results for the mediation relationships between the variables. As per the table, psychological capital is found to be a significant mediator between authentic leader and performance satisfaction which is valued at 0.162. Further, the results also signified team cohesion as a mediator between association of authentic leadership and performance satisfaction which is valued at 0.322. As per the table, psychological capital is found to be a significant mediator between authentic leader and

psychological well-being which is valued at 0.289. Furthermore, the results also signified team cohesion as a mediator between association of authentic leadership and psychological well-being which is valued at 0.153. Psychological capital and team cohesion both were found to be a significant mediator. Figure 4 below shows the output of structural equation modeling (SEM). It is representing through relational directions and path coefficients of the variables.

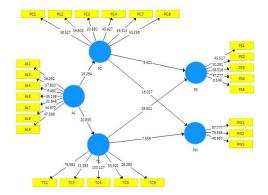


Figure 3: Strutural Model

Discussion

The nucleus aim of the current study is to examine the effect of authentic leadership on athlete performance

satisfaction and athletes' psychological well-being. Additionally, this study investigates how team cohesion and psychological capital act as as mediator effect for authentic leadership, psychological wellbeing, performance satisfaction of athletes. Previous literature shows that there is a positive relationship with authentic leadership, psychological well-being and performance satisfaction while mediating by psychological capital and team cohesion. Similarly, the self-efficacy and unity of an individual about a particular goal enhances their performance and fosters the well-being of athletes. The findings of the study shows that all hypotheses are accepted, showing positive and significant results. Further, the results indicate that the hypothesis H1 is accepted as they show a significant and positive association between athlete psychological capital and team performance satisfaction. Hypothesis H2 is also accepted which shows positive results with team cohesion and team performance satisfaction (Fransen et al., 2015; Hofmann & Jones, 2005). Moreover the hypothesis H3 and H4 is also accepted and supported by the findings which shows that team cohesion and psychological capital have positively and significantly related with team psychological well-being (Avey et al., 2010; Fransen, McEwan, & Sarkar, 2020; Kim et al., 2019). Additionally, the findings indicate that the hypothesis H5, H6, H7, H8 should also be accepted which indicated that authentic leadership relate positively and significantly with psychological capital, team cohesion, psychological well-being and performance satisfaction (Bandura et al., 2019; S. S. Gill et al., 2017; Hoch et al., 2018; Houchin, 2011; Ilies et al., 2005; López et al., 2015; McDowell et al., 2018). Moreover, the hypothesis H9 and H10 were also accepted and supported by the findings which show that psychological capital and team cohesion conciliates the relationship authentic among leadership, psychological well-being and athlete performance satisfaction (Haslam, Reicher, & Platow, 2020; Newman et al., 2014; Pacewicz et al., 2020; Sarkar & Fletcher, 2014).

## **Future Direction and Limitation**

The current study overcomes the gap of previous studies by focusing on female athletes of sports management. Despite its significance, this study has certain limitations. Only one time data is collected from the athlete; in future, data should be collected on different times to get a longitudinal view of athlete authentic leadership in different time scenarios. Further, this study is conducted on female athletes of China. Moreover, in future, research can be performed on the bases of comparison with different sports discipline or in the context of different developing countries such as Indonesia, Bangladesh, Chinaor Pakistan.

### **Practical Implications**

In the sports context, the findings of the study have a number of practical implications for coaches, team players and policy-makers in the area of sports. When team members perceive that their coach to be athleticsoriented, they are more motivated and set the smart goals to overcome a crisis situation, and hence, find the better opportunities for winning the game. compared to other leadership style, authentic leaders have behavior which is follower-centered. According to the results, followers are more involved with leader and work according to the leader's strategies which ultimately enhances the team cohesion. Moreover, it is important for the team captain to understand the behavior of individual athletes to enhance their performance and well-being.

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