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Basic Psychological Needs its impact on Sports Satisfaction, also the mediating role of dynamic relationship between Chinese Athletes and Coaches

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Abstract

This study aims to create a measure for sport's satisfaction and basic psychological needs in athlete and coach relation to providing evidence of initial reliability obtained from the measuring tool, Structural Equation Modelling. Basic Psychological Needs are affected by three dimensions: Competence, Relatedness, and Autonomy. For this study, a sample of 500 athletes and 500 coaches was collected from various athlete training centers in China. Autonomy, Relatedness, and Competence are considered natural psychological nutrients, and these nutrients play a significant role in the well-being, effective performance, and psychological development of athletes. The data was collected through self-administered and online questionnaires. The paper also discusses the Self-Determination Theory, as it supports the changes in the sport's satisfaction level and basic psychological needs of coaches and athletes. In this research study, smart PLS software used different analysis such as descriptive statistic, tree analysis, test statistical, and the PLS Algorithm model. Result founded that there are positive and significant relation in between basic psychological need and sport satisfaction. Also that there are positive but insignificant relation in between coaches athletes and sport satisfaction

Keywords. Sport's Satisfaction, Basic Psychological Needs, Chinese Athletes, Coaches, Dynamic Relationships, Athlete-Coach Relationship

Introduction

In the context of high-performance sports, the study focuses on contributing to the well-being of athletes, the relationship between athletes and coaches, considering that the Self-Determination Theory (Balaguer et al., 2017). The sports satisfaction scale developed by (Chen et al., 2015) has been tested in Peru, Brazil, China, The USA, and Belgium (Contreira et al., 2019). The study clarifies and constructs the psychological mechanism of BPN (Basic Psychological Needs) to reach the desired outcome for youth athletes. People should be less likely to thrive when basic psychological needs are undermined (Hagger & Chatzisarantis, 2017). The negative effect of stressors can be reduced by mental toughness (MT), as negative effects of maladaptive motivation can be buffered by Mental Toughness (Kinoshita, MacIntosh, & Sato, 2021).

In different life contexts, the theory of self-determination has been widely used to predict and explain players' motives, including competitive sports (Hagger & Chatzisarantis, 2017; R. M. Ryan & Patrick, 2009). To measure the sports satisfaction of athletes, no specific instrument has been developed in previous studies. Despite the popularity, a domain-related action is needed in the game context to improve understanding outcomes and antecedents for basic need satisfaction. The study aims to create a measure for sport's satisfaction and BPN and provide evidence of the accuracy of scores and initial reliability obtained from the measuring tool. Autonomy, Relatedness, and Competence are considered natural psychological nutrients, and these nutrients play a significant role in improving the ongoing performance, well-being, integrity, and psychological development of athletes (R. M. Ryan & Connell, 1989). This refers beyond gender, culture, and age (R. M. Ryan & Patrick, 2009). The Self-Determination Theory states that being the perceived source or origin of changes in the

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behavior of an athlete or coach refers to "Autonomy."Meanwhile, Competence enables a player to feel comfortable in ongoing interactions with other players and coaches. Thus, competence helps a player to use their abilities and explore opportunities. According to self-determination theory, competence makes people feel relaxed in a social environment. Relatedness refers to connecting with other people and peer groups (Pelletier, Rocchi, Vallerand, Deci, & Ryan, 2013).

The dynamic relationship counts the change between a coach and athlete lives and works together (Arraya, 2017). Basic Psychological Needs are affected by three dimensions: Relatedness, Autonomy, and Competence. The need to act according to players' interests while feeling psychologically independent is represented by Autonomy, which is stated by the Self-Determination Theory. The sense of skill and the ability to achieve the desired results is represented by Competency. At the same time, relatedness belongs to the need of people to connect with a social environment and feel close, committed, and relax (Aiken, 1985; Assor, Kaplan, & Roth, 2002). For example, when motivation is self-determined in players, it is a strong predictor of positive outcomes with all these three needs (Monteiro et al., 2018), enjoyment (Diogo Santos Teixeira et al., 2020), intention to continue playing sports (Gucciardi & Jackson, 2015), and perseverance (Warburton, 2020). In the sports field, the purpose of coaching is to train people for better performance.

Furthermore, for direct training in sports skills, coaches can enhance the performance of athletes and their motivation, such as psychological qualities (Cece, Lienhart, Nicaise, Guillet-Descas, & Martinent, 2019). For example, some researchers argue that coaches' pro-autonomy attitudes, including acknowledging emotions, encouraging actions, making choices, explaining tasks and rules, providing feedback, and involving ego in athletes (Warburton, 2020). Therefore, having no precise control over them reduces sports' satisfaction in players (Kinoshita et al., 2021). Generally, the empirical evidence states that autonomy creates a positive impact on generating intrinsic motivation in the west, resulting in supportive coaching style (Contreira et al., 2019). On the other hand, autonomy negatively impacts intrinsic motivation and generates an autocratic coaching style (Antonini Philippe, 2017).

Similarly, researchers studied the impact of coaching behavior in Taiwan and demonstrated the change of sport satisfaction among Chinese Athletes (R. M. Ryan & Deci, 2008). Therefore, their research states that intrinsic motivation was analyzed among Chinese Athletes, and it was positively associated with supportive coaching behaviors such as democratic behavior and positive feedback. Still, it was negatively correlated with autocratic behavior (R. M. Ryan & Deci, 2000, 2008; R. M. Ryan, Deci, Edward L, 2017). Coaching Behaviors can prevent or facilitate internal stimuli by creating unfavorable or favorable conditions for Relatedness, Autonomy, and competence; when based on the SDT. These needs can be met either through coaching in sports (Ram-Vlasov & Orkibi, 2021). In autonomy-related coaching style, coaches recognize individuality and encourage selection and action, promoting the players 'inner motivation because of the players' Autonomy. In contrast, a controlling and authoritarian style forces players to adopt external rather than internal stimuli (Monteiro et al., 2020).

1.1 Research Objective

The research objective is to adopt the correct tools for assessing the Basic Psychological Needs, and Sport Satisfaction in different contexts has increased over time (Vansteenkiste, Ryan, & Soenens, 2020). The study considers fulfilling needs and satisfaction an important aspect of the consequences of maximum human action or failure, respectively. Their assessment has also been a key topic in the game context (Rocchi & Pelletier, 2017). However, limited research needs have been done in satisfaction, and as a result, it has been measured in the context of sports (Bartholomew, 2017).

1.2 Research Questions

To study the impact of basic psychological needs on sports satisfaction and the mediating role of coach-athlete relationship. The paper studies the following questions;

Is there a positive association between Sports Satisfaction and Basic Psychological Needs in Athlete-Coach relationships?

There's a strong association between coaches and athletes, characterized by the Sport's Satisfaction (SS) and Basic Psychological Needs (BPN), considering that the competent and autonomous people feel more satisfied while connected to their peers.

The coach-athlete Relatedness will increase the sport's satisfaction, as a positive relationship between coach and athlete can improve individuals' physical and psychological well-being.

Literature Review

Considering the past literature, the researchers argued that a low level of sport satisfaction could not adequately capture the severity of the consequences of the defect (Benita, Benish-Weisman, Matos, & Torres, 2020). For example, people who are less satisfied with their needs may show less interest and enthusiasm in certain activities (Chen et al., 2015). In addition, the controlled form of stimulation may refer to the individuals who feel that their needs are frustrated. For example, they might feel pressured to accept or reject others when asked to work with peers (Eskiler, Yildiz, & Ayhan, 2019). Therefore, individual active engagement with the environment can lead to frustration (R. M. Ryan, Deci, Edward L, 2017). Consequently, there is a difference between sport's satisfaction and basic psychological needs because low levels of sports satisfaction and basic needs do not represent high levels of BPN frustration (Nishimura & Suzuki, 2016).

Previous studies indicate that to control emotions and engage in a truly social environment, athletes have to reach self-motivation with the help of their coaches (Cordeiro, 2016). And as a result, they feel satisfied with their game (Haerens, 2019). Furthermore, according to the Micro-Theory of the Basic Psychological Need, the competent and comfortable social environment favors the sport's satisfaction level of athletes and their basic needs for affecting their motivation and performance and providing them better psychological experiences (Tilga, 2019).

Consequently, athletes' basic psychological needs can be frustrated due to a poorly adaptive environment, resulting in reduced participation in sports (Eskiler et al., 2019). A poorly adaptive environment can sense personal fulfillment and cause physical and emotional fatigue (Delrue et al., 2019). The sport's satisfaction with aspects of peer structure and methodology, such as players' and coaches ' experiences and peer environments, is linked with improving emotional and cognitive performance (Delrue et al., 2019; Schultz, 2015). The sport's satisfaction of Athletes supports the development of group cohesion (Goemaere & Binsted, 2019). The relevance of sport's satisfaction in this perspective highlights the athlete's performance and well-being, and this can explain the variables like motivational environment (Bekiari & Syrmpas, 2015), leadership styles (Kao, 2016; Kim, 2016; Ntomali, 2017), and social support (Cranmer & Sollitto, 2015).

The Coach's behavior has played a significant role in developing sport's satisfaction in athletes (Kao, 2016). When information is transmitted within peers, social support is more important to contribute and support athletes (Syrmpas & Bekiari, 2018). Furthermore, previous research indicates that the motivation environment works as a catalyst for motivating an athlete regarding their sport's engagement. Thus, the satisfaction level of an athlete can be increased with sport's experiences (Kim, 2016). To analyze and understand that how sport's satisfaction and motivation is related to improving the performance and generating positive experiences of athletes are related, the previous studies indicate that behaving healthily and efficiently would be effective (Rodrigues & Neiva, 2020; Diogo S Teixeira, Silva, & Palmeira, 2018). Universally, the micro theory of BPN predicts that elements of motivation, integrity, well-being emergence, and human development satisfy the basic psychological needs of coaches and athletes. These psychological needs are linked with Autonomy, Competence, Personal and Peer relationships (Relatedness) (R. M. Ryan, Deci, Edward L, 2017).

Despite the significant effects of motivation on athlete satisfaction, most studies have focused on athletes' psychological needs (Kim, 2016; R. M. Ryan & Deci, 2000; Syrmpas & Bekiari, 2018). Rather than the perspective of sports coaches, common ideas and isolated perceptions of coaches or athletes are more important as they can provide complete and more efficient information on experiments (Kim, 2016). In sports, the quality relationship between athletes and coaches is considered a central and significant element behind effective performance (Goemaere & Binsted, 2019).

Therefore, the combination of the athlete coaches feelings, behaviors, and thoughts (Ntomali, 2017). In addition, the close dynamic relationships based on affection, commitment, and respect benefit the coach-athlete relationship and contribute to personal development (Kinoshita et al., 2021). Similarly, lack of interest, fatigue, dissatisfaction, and mutual conflict is outside the game context due to distance and commitment (Monteiro et al., 2020).

2.2 Hypothesis

1. There's a positive association between BPN (Basic Psychological Needs) and Sport's Satisfaction (SS).

2. There's an impact of Basic Psychological Needs on Coach-Athletes Relationship.

3. Coach-Athletes Relatedness (CAR) mediates the

association between Basic Psychological Needs (BPN) and Sport's Satisfaction (SS).

3. Methodology

The research methodology is based on a quantitative research method. The research methodology examines the dynamic relationship between coach and athletes, the basic psychological needs, and sports satisfaction by characterizing the structural equation model between BPN and SS (Contreira et al., 2019). The data was collected from 500 Chinese Athletes and 500 Chinese Coaches from different sports centers in China. The data was collected through self-administered and online questionnaires.

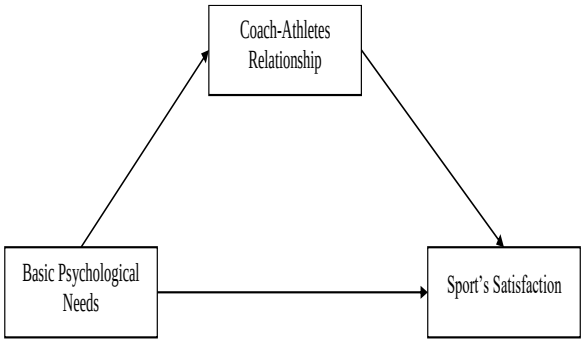
3.1 Instrument Development

The questionnaire scale for Basic Psychological Needs is adopted by (Monteiro et al., 2020; Ng, Lonsdale, & Hodge, 2011), and sport's satisfaction is adopted (Bista, 2015). The questionnaire for measuring BNP was developed by (Ng et al., 2011) and adopted by (Ntomali, 2017). The questionnaire used in this paper has close-ended questions with the 7-Likert Scale. The first instrument comprises 11 items. The second section of the questionnaire computes Sport's Satisfaction including 10 items (Ng et al., 2011). The third section of the questionnaire computes the Coach-Athlete relationship by 11 items. Finally, the relationship of coach and athletes will be compared using structural equation modeling (Contreira et al., 2019).

3.2 Participants

In this paper, the sample of 500 athletes and 500 coaches was collected from various athlete training centers in China (such as Shanghai University of Sports, Wuhan Institute of Physical Education, The Shanghai Yangpu Amateur Athletic School, Shanghai Sports School, National Training Center, Zheijang Provincial Physical Education, and Sports School in Hangzhou. Five dimensions were observed in the coach-athlete relationship: Competence, Choice, Volition, Relatedness, and Internal Perceived Locus of Causality. The respondents were players from 10 different sports, such as Judo, Basket Ball, Volleyball, Handball, Track and Field, Swimming, Olympic Wrestling, Beach Volleyball, and Rhythmic Gymnastics.

3.3 Theoretical Model



3.4 Procedure

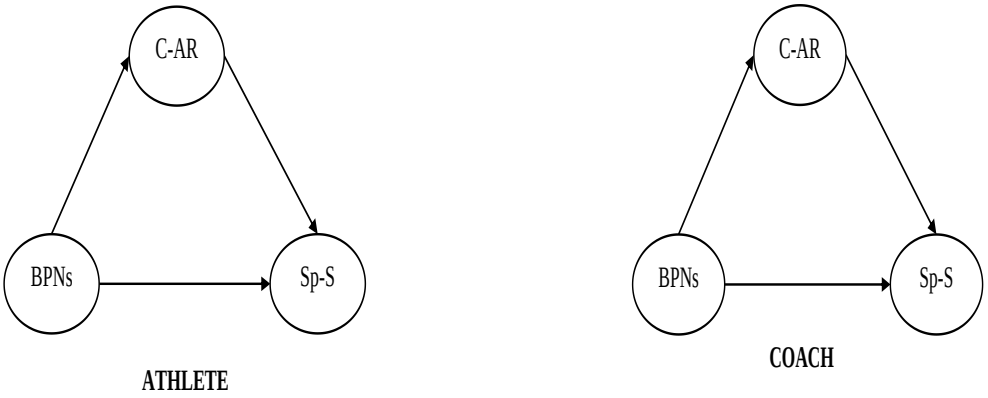
The Dynamic Relationship between Coach-Athlete will be measuring by using 11 items (Vansteenkiste et al., 2020). These constructs were studied separately and compared by athletes and coaches. Figure 1 shows the structural equation modeling between Chinese Athletes and Coaches.

3.5 Sociodemographic profile of Chinese Athletes-Coaches

Variables	Frequency (F)	Percentage (%)
Coaches-Gender		
Male	280	56%
Female	220	44%
Coaches-Experiences		
<5 Years	118	23.6%
>10 Years	187	37.4%
5-10 Years	195	39%
Athletes-Gender		
Male	391	78.2%
Female	109	21.8%
Athlete-Career		
<5 Years	120	24%
>10 Years	200	40%
5-10 Years	180	36%

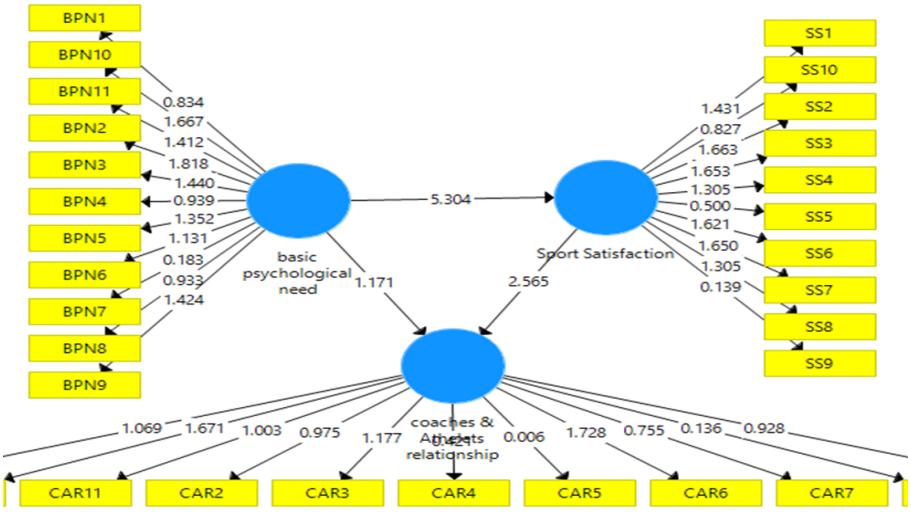
Types of Sports		
Individual	288	57.6%
Team	212	42.4%
Sports Category		
Basket Ball	18	3.6%
Beach Volleyball	34	6.8%
Handball	28	5.6%
Judo	162	32.4%
Olympic Wrestling	55	11%
Rhythmic Gymnastics	73	14.6%
Swimming	62	12.4%
Track and Field	57	11.4%
Volleyball	11	2.2%
Total	500	100%

3.6 Structural Equation Modeling of Coach-Athlete Relationship over the association of Basic Psychological Needs and Sports Satisfaction



4. Results and Discussion:

Smart PLS Algorithm Model



The above model explained that dynamic relationship between basic psychological needs, coaches & athletes, and its impact on sport satisfaction. The BPN present that sub factors of basic psychology need according to the model the basic psychological need present that positive and significant relation with the sport satisfaction. The coaches and athletes relationship are present positive and significant impact on sport satisfaction.

Descriptive Statistics

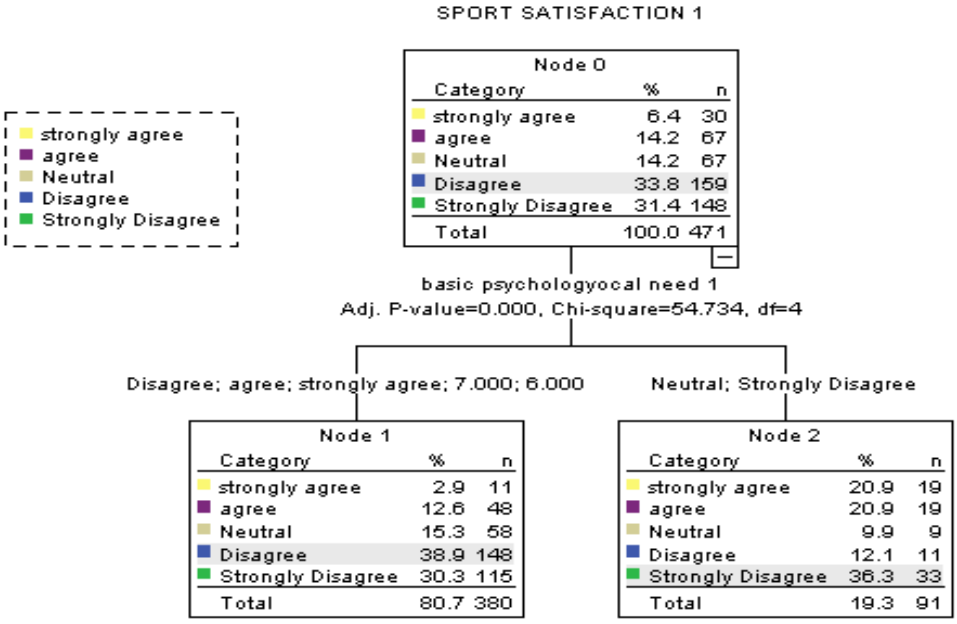
	N	Minimum	Maximum	Mean	Std. Deviation
basic psychologyocal need 1	501	1.00	7.00	3.4471	1.73196
BPN 2	501	1.00	7.00	3.7964	1.18426
BPN 3	501	1.00	7.00	3.7705	1.22687
BPN 4	501	1.00	7.00	3.7106	1.62175
BPN 5	500	1.00	7.00	3.6920	1.25231
BPN 6	500	1.00	7.00	3.9540	1.25660
BPN 7	500	1.00	5.00	3.6360	1.22577
BPN 8	500	1.00	7.00	3.5900	1.60220
BPN 9	500	1.00	6.00	3.4300	1.26977
BPN 10	500	1.00	7.00	3.6680	1.31653
BPN 11	500	1.00	7.00	3.7220	1.24250
SPORT SATISFACTION 1	500	1.00	7.00	3.8760	1.39876
SS2	500	1.00	7.00	3.9660	1.16256
SS3	500	1.00	7.00	3.7740	1.21568
SS4	500	1.00	7.00	3.8400	1.28441
SS5	500	1.00	7.00	3.8280	1.53986
SS6	500	1.00	7.00	3.7740	1.19908
SS7	500	1.00	7.00	3.8460	1.22199
SS8	500	1.00	6.00	3.6540	1.29524
SS9	500	1.00	7.00	3.9400	1.55603
SS10	500	1.00	7.00	3.7760	1.59591
Coach-Athletes Relationship 1	500	1.00	7.00	3.9440	1.45089
CAR2	500	1.00	7.00	3.7620	1.19675
CAR3	500	1.00	6.00	3.6700	1.32839
CAR4	500	1.00	7.00	3.9900	1.61093
CAR5	500	1.00	7.00	3.7560	1.18629
CAR6	500	1.00	7.00	4.0460	1.19278
CAR7	500	1.00	7.00	3.7840	1.59324
CAR8	500	1.00	7.00	3.6780	1.31521
CAR9	500	1.00	7.00	4.0780	1.39851
CAR10	500	1.00	6.00	3.4800	1.25409
CAR11	500	1.00	7.00	3.8680	1.20394
Valid N (listwise)	500				

Table-1

The above table present that descriptive statistical analysis among all variables included sport satisfaction, coach-athletes relationship, and basic psychology needs. The results describe that number of observation, the overall minimum values, overall defined maximum values. The result analysis describes the mean values of each variable and its sub parts that explain the standard deviation. The basic psychology need is main independent variable its minimum value is 1 and maximum values is 7 of each items. The average values of basic psychology need are 3.44, 3.79, 3.77, 3.71, 3.69, 3.95, 3.63, 3.59 and 3.43 respectively, showing positive average mean values. According to the result its standard

deviation values are 1.73, 1.18, 1.22, 1.62, 1.25, 1.22 shows positively deviate from mean. The basic psychology needs present that positive deviation performance of every item. The sport satisfaction is dependent variable its average values are 3.87, 3.96, 3.77, 3.84, 3.82, 3.65 respectively present that 3 to 4 % average value of mean. According to the result its standard deviation values also present that positive deviate from mean. Similarly, the coaches' athletes' relationship plays a mediator role in this research study its also presents that positive value of average mean and standard deviation of mean.

Tree analysis:



The above figure represents the tree analysis of basic psychology need, sport satisfaction, and coaches athlete's relation with the help of specific nodes. The result is divided into different categories: strongly agree, agree, neutral, disagree, and strongly disagree. The node 0 presents the basic need of psychology. Its percentage shows every category the overall agree factor shows 14.2%, the neutral value is also 14%, the strongly agree is 6.4%, and the disagree factor shows 33% respectively. According to the tree analysis the probability value is 0.000 which means that 100% significant level. the chi-square value is 54.74 and its df value is 4. The node 2 shows the 20.9%, 9.9%, 12.1% and 36.3% values of each category. The node 1 shows 2.9%, 12.6%, 15.3%, 38.9%, and 30.3% respectively shows percentage of selected categories.

Test Statistics

	basic psychological need 1	SPORT SATISFACTION 1	Coach-Athletes Relationship 1
Chi-Square	215.836[a]	306.792[b]	323.704[b]
df	6	6	6
Asymp. Sig.	.000	.000	.000

a. 0 cells (0.0%) have expected frequencies less than 5. The minimum expected cell frequency is 71.6.

b. 0 cells (0.0%) have expected frequencies less than 5. The minimum expected cell frequency is 71.4.

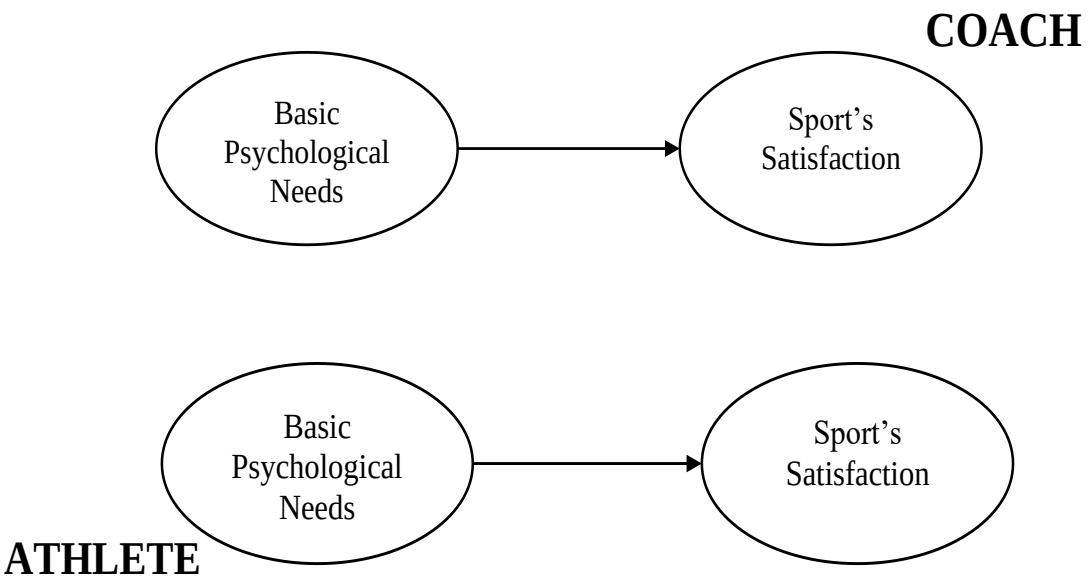
Table-2

The above table present that chi-square analysis with test statistic of each variables one is basic psychology, second is sport satisfaction, and third one is coach-athletes relationship. The chi-square values are

215.836, which is basic psychology need, 306.792 is sport satisfaction, and 323.704 is the coach-athletes relationship. The overall Asymp significant level is 0.000 which means that 100% significant level.

1.1 Correlation Matrix

Figure 1: Structural Equation Model of BPN and SS in Chinese Coach and Athletes



Ratio Statistics for basic psychological need 1 / SPORT SATISFACTION 1

Group	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
strongly agree	1.153	.546	71.9%
agree	1.198	.624	110.4%
Neutral	1.257	.623	104.9%
Disagree	1.297	.780	135.7%
Strongly Disagree	1.312	.663	115.8%
6.00	1.000	.000	.
7.00	1.145	.612	88.0%
Overall	1.263	.620	104.0%

Table-3

The above table shows that Using the price related difference, the coefficient of dispersion, and the coefficient of variation with the median centred, a ratio statistical analysis was performed between fundamental psychology need and sport satisfaction. The group divided into different groups such as strongly agrees, agree, neutral, disagree, and strongly disagree. The values of price related differential are 1.153, 1.198, 1.257, 1.297, 1.312, 1.000, 1.145 and 1.263 respectively present that differential rate of price related. The coefficient of dispersion values are 0.546, 0.624, 0.623, 0.780, 0.663, 0.00, 0.612 and 0.620 shows that positive coefficient of dispersion among every factors. The third column presents that coefficient of variance of each factor's percentage is 71.9%, 110.4%, 104.9%, 135.7%, 115.8%, 88.0% and overall 104.0% respectively present that positive coefficient of variation between them.

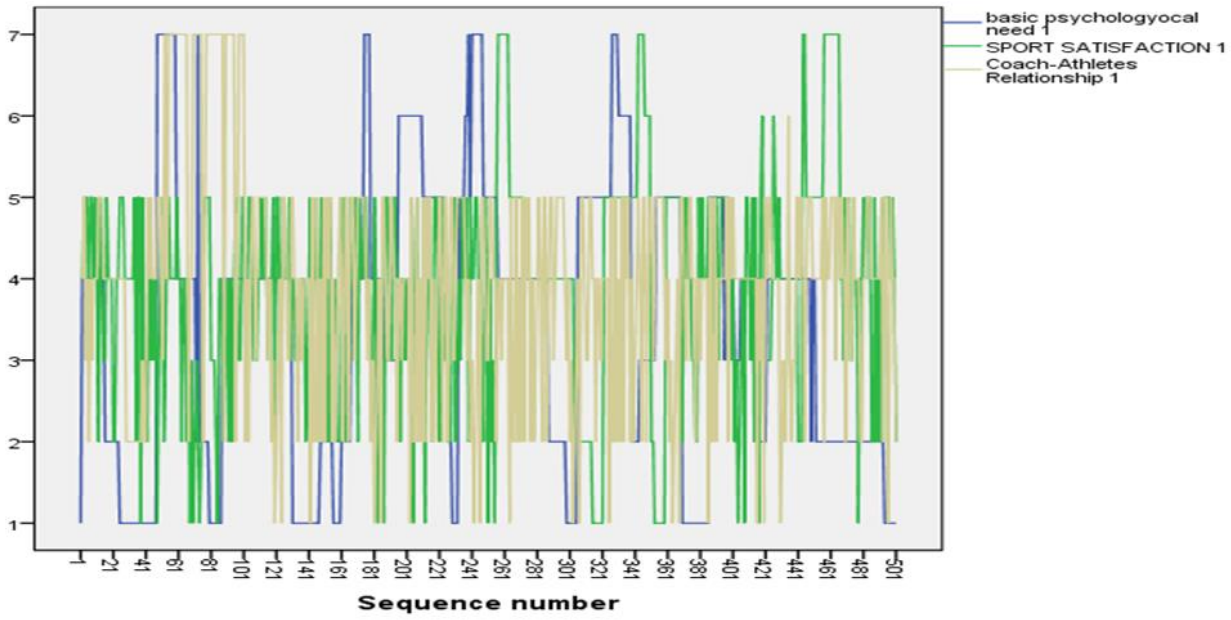


Figure-2The above figure describes dynamic relationship in between the basic psychology need, sport satisfaction and Chinese coaches and athletes with the help of square numbers. The green line shows that sport satisfaction performance, the yellow line present the coach-athletes relationship and blue line shows basic psychology need in china's coaches and athletes. The vertical line show frequency level and horizontal line shows that sequence number start from1 and end is 501.

One-Sample Test

	Test Value = 0					
					95% Confidence Interval of the Difference	
	t	df	Sig. (2-tailed)	Mean Difference	Lower	Upper
basic psychological need	44.549	500	.000	3.44711	3.2951	3.5991
SPORT SATISFACTION	61.962	499	.000	3.87600	3.7531	3.9989
Coach-Athletes Relationship	60.784	499	.000	3.94400	3.8165	4.0715

Table-4

The above table describe that one-sample test analysis of each variables included basic psychological need, sport satisfaction and also that coach-athletes relationship. The result presents that t statistic value the significant level, the mean difference value, and also that 95% confidence interval related to the lower value and upper values. The fundamental psychological need is an independent variable. It has a t statistic value of 44.549. 0.000 is the important level. Its mean difference is 3.447. The lower and higher confidence intervals are 3.2 and 3.5, respectively. The result shows that significant value and positive mean difference of basic psychological need. The sport satisfaction is dependent variable. Its t statistic value is 61.962. The lower confidence interval is 3.75 and upper confidence interval is 3.998. The mean difference value present that 3.87600 respectively shows positive average value. The coach-athletes relationship is another variable according to the result its t statistic value is 60.784, the lower interval is 3.8 and upper interval is 4.07 present the positive interval of mediator variable.

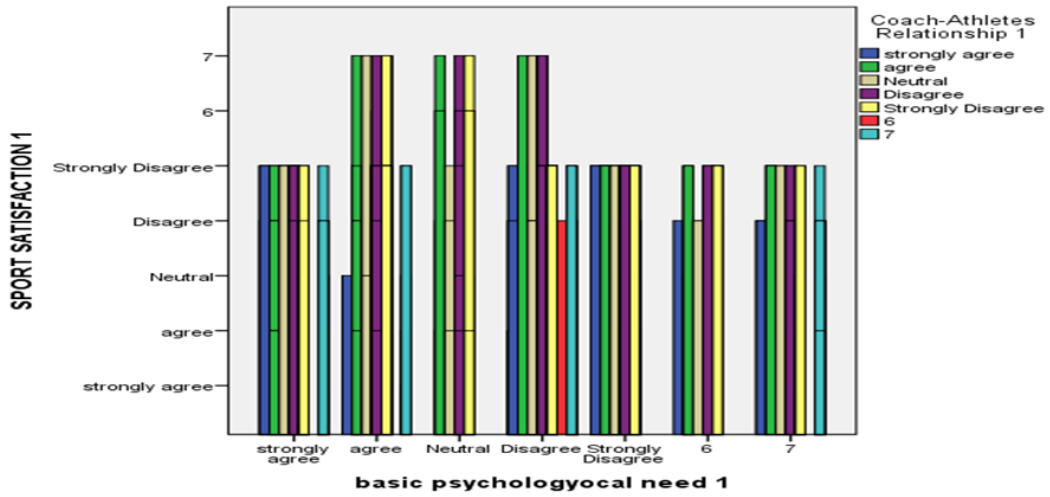


Figure-3

The above bar graph presents that relation between sport satisfaction and basic psychological need. The horizontal side presents that basic psychological need with the factor strongly agree, agree, Neutral, strongly disagree and vertical side present sport satisfaction.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.87[a]	.800	.400	1.39623

a. Predictors: (Constant), Coach-Athletes Relationship , basic psychological need

Table-5

The following result summarises the model using R value, R-square value, and modified R-square value, as well as the standard error of the estimate. The value of R is 0.87, indicating that the model is 87 percent fit for analysis. The value of R squared is 0.800. The corrected R square value is 0.400, whereas the standard error of the estimate value is 1.39623.

ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	7.436	2	3.718	1.907	.150[b]
	Residual	968.876	497	1.949		
	Total	976.312	499			

a. Dependent Variable: SPORT SATISFACTION

b. Predictors: (Constant), Coach-Athletes Relationship , basic psychological need

Table-6

As shown in the table above, the ANOVA test demonstrates regression analysis, residual value, and total values. The outcome displays the sum of squares value, the mean square value, as well as the f statistic value and significant level. The sum of squares values are 7.436, 968.876, and 976.312. The corresponding mean square values are 3.718 and 1.949. The f-statistic value is 1.907, indicating a positive value, and the significant level is 0.150, indicating a 15% significant level.

Regression Analysis:

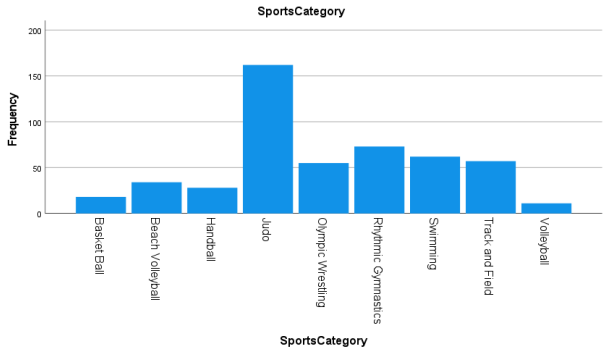
Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	4.257	.218		19.546	.000
	basic psychological need	-.018	.036	-.022	.497	.0620
	Coach-Athletes Relationship	-.081	.043	-.084	1.878	.061

a. Dependent Variable: SPORT SATISFACTION

Table-7

The above table present that regression analysis when dependent variable is sport satisfaction the result describe that unstandardized coefficients, standardized coefficient with the help of beta value and standard error. The result describes that t statistic value and also shows significant level. the basic psychological need is an independent variable its beta value is 4.257, standard error value is 0.218 the t statistic value is 0.497 shows positive relation in between basic psychological need and sport satisfaction. The result shows that significant level is 0.06 which means that 6% significant level. The coach-athletes relationship is play a mediator role in research study its beta value is -0.081 its t statistic value is 1.878 which also shows positive relation its significant level is 0.061 which means that 6% significant level. The findings support the alternative hypothesis and reject the null hypothesis, indicating a positive and substantial link between coaches and players and sport satisfaction.

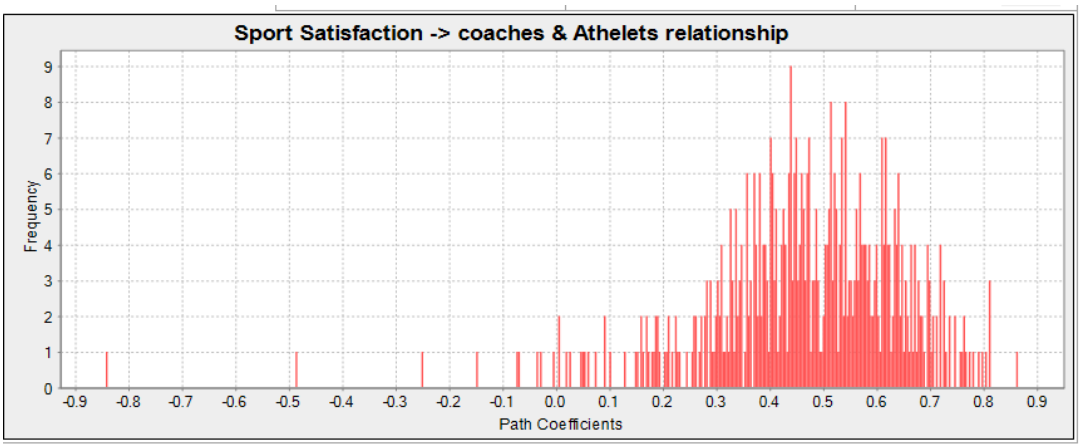


Paired Samples Correlations

		N	Value of Correlation	Signification level.
Pair 1	basic psychological need & SPORT SATISFACTION	500	.024	.592
Pair 2	Coach-Athletes Relationship & SPORT SATISFACTION	500	.084	.059

Table-8

The above table represents that paired samples correlation in between basic psychological need and sport satisfaction and coach athlete's relationship & sport satisfaction. The result presents that correlation and significant level. the correlation value of pair 1 is 0.024 and its significant level is 0.592 shows positive and insignificant relation. On the other hand, the correlation value of second pair is 0.084 and its significant level is 0.059 which shows positive and significant relation between them.



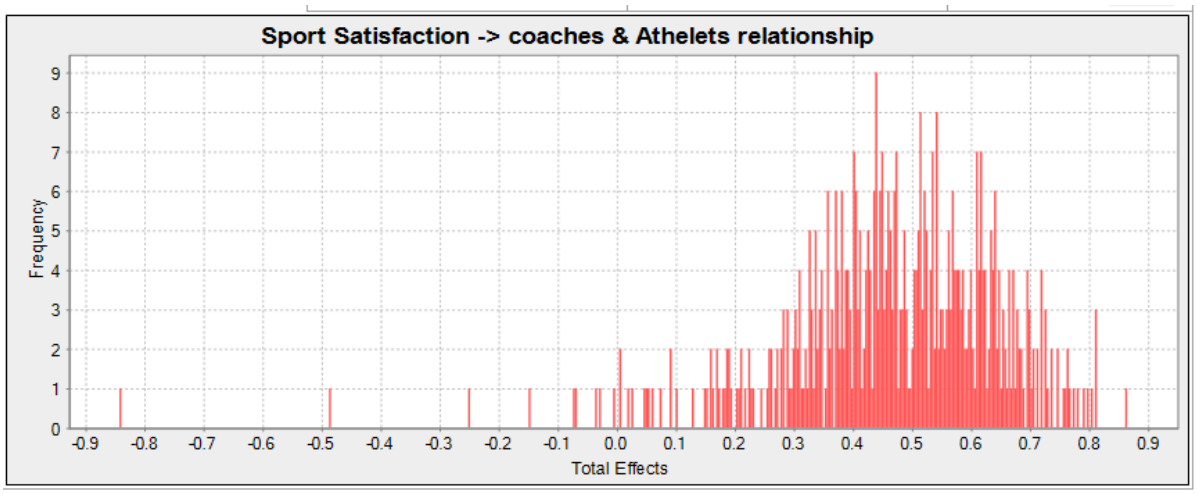
The above figure present that sport satisfaction and coefficient athletes relationship with the help of bar lines. In the vertical side present the frequency level and horizontal side shows path coefficient level at rate is -0.9 to 0.9 respectively.

Paired Samples Test

Paired Differences									
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference		t	df	Sig. (2-tailed)
					Lower	Upper			
Pair 1	basic psychological need - SPORT SATISFACTION	-.42400	2.25086	.10066	-.62177	-.22623	4.212	499	.000
Pair 2	Coach-Athletes Relationship - SPORT SATISFACTION	.06800	2.09861	.09385	-.11640	.25240	.725	499	.469

Table-10

The above table describe that paired sample test with the help of mean value, the standard deviation value, the standard error of average value, the 95% the overall confidence interval of difference value also that result describe that t-statistic value and significant of both paired. The mean value of first pair is -0.4240 its standard deviation value is 2.25 the t statistic value is 4.212 and its significant level is 0.000 shows that positive and significant level between basic psychological need and sport satisfaction. On the other word the average value of pair 2 is 0.0680 its standard deviation value is 2.09 its t statistic value is 0.725 and also that its significant level is 0.469 which shows that positive but insignificant relation in between coach-athletes relationship and sport satisfaction.



This figure represents the dynamic relationship in between sport satisfaction and coaches & athletes. This figure presents the total effect similarly, the vertical side present frequency and horizontal side present total effect ratio which start from -0.9 and end on 0.9.

5. Discussions and conclusion:

This research study describes that measuring the impact between sport psychological need on sport satisfaction also measures the dynamic relation between coach-athletes in china. This research study relied on primary data analysis, and smart PLS software was utilised to measure the data. For data analysis, several findings were utilised, including descriptive statistics, paired sample test analysis, regression analysis, tree analysis, and other graphical analyses. According to the findings, there is a positive and substantial link between fundamental psychological demand and sport satisfaction. The result shows that positive but insignificant relationship in between coach-athletes relationship and sport satisfaction. The regression analysis describes that 0.65 significant relation between them. Our findings help coaches, sport psychologists, and other youth sports professionals understand the importance of social connections in motivating and gratifying young athletes; it's also essential to build closeness and commitment in addition to training and instruction. To overcome largely technical and tactical components, coaches must incorporate psychological and social connections into their training and competitive situations. In this view, it is critical for players to feel inspired to continue playing their sport if they also have an intimate connection with their teachers, defined by mutual respect and understanding.

Furthermore, the findings of this study provide a more in-depth understanding of the coach-athlete relationship. According to the findings of this study, the influence of the coach–athlete connection is not confined to the athletic setting. A positive relationship may lead to beneficial consequences for the athlete. A strong C–A connection, on the other hand, might be detrimental to the athlete. However, the difference in the current study's results might be attributed to the perceived amount of complementarity. When the connection is cooperative, it is conceivable that pressure and distraction are reduced, and players feel respected and appreciated—by the coach—and that their contributions are recognised. The study's goal in analyzing these characteristics was to gather data to raise awareness of attachment relationships outside of the family of origin and to give a more in-depth knowledge of the significance of the coach-athlete connection. Overall, the data indicate that the coach plays an essential part in the athlete's life and can positively influence it. Most significantly, the data suggest that this link may be vital for athletes from more significant communities, since they are at a higher risk of bad outcomes. Finally, the study's findings advance the field of psychology by revealing another crucial element that might aid in the reduction of bad outcomes for young Black men: the coach–athlete connection. The findings of this study contribute to the area of psychology by providing another factor to consider while treating student–athletes. As observed in this and prior research, the athlete-coach connection is another crucial aspect in the athlete's life that may have a good or bad influence on the athlete's growth. It is suggested that future study incorporate this information and assess the impact of various degrees of exposure. Future study may benefit from a comparison analysis of various performance levels. Athletes in this research may have been more prepared to control emotions

and demonstrate academic confidence than those younger (e.g., middle school) or play at a lesser competitive level (e.g., intramural sports).

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