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A Structural Equation Model of Sports Commitment as Estimated by Perfectionism, Passion, and Burnout Among College Athletes

Deljun R. Rodriguez[1], Felix C. Chavez Jr.[2]

[1]Graduate Student, School of Graduate Studies, University of Immaculate Conception
[2]Professor, Graduate School, University of Immaculate Conception

Abstract
College athletes' sports commitment has been a perennial issue as these athletes simultaneously face two worlds: academics and sports. This see-saw scenario of athletes creates an imminent need to reexamine the controversies of sports commitment. This study was conducted to determine the best-fit model of sports commitment. Specifically, it intends to build the interrelationship among perfectionism, passion, burnout, and sports commitment. Data were gathered through a systematic random sampling among regional athletes from State Universities and Colleges (SUCs). Further, a survey questionnaire was utilized to collect from the respondents. Structural Equation Modeling was used to generate the best-fitting model of sports commitment. The generated model illustrated that burnout directly influences perfectionism while it predicts sports commitment negatively, suggesting these findings have important implications for the sports commitment of college athletes.

Keywords: College Athletes, Perfectionism, Burnout, Passion, Sports Commitment, Structural Equation Model

Introduction

One key element that mobilizes athletes to establish direction continuously is commitment, which allows athletes to translate goals, possess greater confidence, and improve performance relevant to identifying and nurturing sports talent. [1,2] Theoretically, commitment in sports is a psychological idea and or belief that points to athletes' prolonged engagement despite obstacles such as poor results, life demands, and alike being encountered. [3,4] Despite the positive effects of our extended engagement in sports. [5,6] Still, components that cause discontinuation, leading to incompetence, personal constraints, and less feeling of enjoyment, have also been noted in sports. [7] Supporting this fact was that the athletes manifested a decrease in commitment, exhibiting unstable and inconsistent training, affecting their execution and success rate in sports. [8] In Spain, amateur runners were classified as "slightly committed" athletes who were found to have not been interested, may it be an enthusiastic or constrained form of commitment in sports. [9] Another research indicates that clusters of athletes manifested less commitment due to negative experiences in sports by being obligated to commit. [10] Parallel to these findings, athletes who are obligated to participate have shown a decreased commitment, resulting in amotivation. [11] . In a national setting, problems of sports commitment arise as the athletes from the University of the Philippines Diliman participated in their sports, not by personal choice but rather by being obligated to

join. [12] Similarly, in the State Universities and Colleges (SUCs) in the National Capital Region (NCR), students' participation in sports and physical activity heavily depends on teachers' support, whereas uncooperative engagement is common for both PE and sports. [13] Locally, Batucan concluded that athletes' commitment in Regions IX and X varies subject to their emotions. [14]

Given the interest in sports commitment, works of literature have shown that perfectionism is associated with athletes' commitment in both positive and negative forms. [15] True to this are female golfers whose performance and commitment were affected because of pressure brought by their perfectionistic tendencies. [16] In addition, perfectionism disrupts various facets of individuals' emotional and behavioral aspects in performing sports. [17] A recent study found that sports commitment has been associated with a significant effect on passion. [18] In particular, levels of passion for sports and the athletes' participation have been found to have a direct relationship, and both variables were low for athletes with only 1 to 3 years of sports experience. [19] Moreover, Harris et al. (2023) saw that sports commitment in children was through the contribution of passion, making it high since children's passion for sports was observed to be enjoyable, which corresponds to a strong commitment. [20] Former Pakistani athletes expressed that passion in the involvement of sports strengthens commitment and eventually develops as a life skill. [21]. Also, it was asserted that passion is vital in influencing the athletes' sports commitment. [22] A well-known knowledge of sports commitment led to the findings that commitment can contribute to athletic burnout, dropout in sports, and poor performance due to the belief that they "have to" instead of "want to". [23] A review of the concept of burnout expounds that sports commitment contributes to burnout experiences, specifically its dimensions, such as a sense of accomplishment and levels of exhaustion, as it plays a significant role in burnout regulation. [24] Along with this idea, the commitment among junior athletes is dependent on their environment as influenced by coaches, parents, etc., which affects burnout [25], indicating that a more positive environment plus a high commitment equates to less burnout. In the same scenario, women athletes playing in co-creational intramural reported having more commitment and less burnout compared to those who compete in basketball leagues. [26]

While there are numerous pieces of literature on sports, commitment is linked to perfectionism, passion, and burnout. To date, various forms of scholarly articles have prevailed, such as Sports Commitment as a mediator in an empirical study of Chinese athletes [27], sports commitment focusing on swimmers [28], passion for sports as a predictor of burnout [29]. Finally, the football players' adaptive motivation and sports commitment using structural equation modeling [30]. However, scholars have yet to explore how perfectionism, passion, and burnout affected commitment in sports using structural equation modeling approach. To the author's knowledge, there has been a dearth in attempting to understand these constructs by scrutinizing indicators of these variables, particularly in the context of tertiary athletes in Region X, where it is recorded that there is a need among student-athletes to achieve balance for dual careers such as in sports and academics. [31] In view of understanding how sports perfectionism, passion for sports, and athletic burnout intersect with sports commitment. The result of this study provides empirical evidence of the interconnectedness among variables in the locality. It will have a noteworthy implication through integrating the findings in their respective sports programs upon training to sustain athletes' commitment to a competitive state. As an effect, sports managers and coaches will be more aware of how to strategize their athletes efficiently, specifically in-game making.

Objective

This study aimed to determine to fill this gap to determine the best-fit model by using a structural equation

modeling approach in the sports commitment of collegiate athletes in Region X. Specifically, intending to test the causal link of perfectionism, passion, and burnout of the athletes' sports commitment.

Methods

Respondents

The data was taken from each SUC through a complete enumeration. The study's respondents were college athletes who represented their institution in the Regional Meet since these athletes went through rigorous training and tune-up game exposures, causing them to possess advanced skill sets and experience intense sports competition. With reference to the sample size, the total respondents of the study were 491 college athletes from different SUCs. The 491 college athletes were distributed based on the budget allotment of the SUC. This implies that the more athletes who represent their institution, the more budget is needed.

Data Gathering Procedure

Prior to the data gathering, ethical clearance was complied with by the UIC Research Ethics Committee (REC), observing the proper research protocol and guidelines. Documents are then compiled and sought permission from the different institutions. The institution issued a clearance approving the data gathering. An informed consent form (ICF) was given to the respondents, enclosing the ICF are the study's nature, purpose, and objective. Before answering the survey questionnaire, respondents are encouraged to ask questions to avoid confusion. Also, the respondents were given enough time to answer the questionnaire to ensure the correctness of the responses.

Measures

Perfectionism was measured through an adapted questionnaire. [32] The scale comprises 42 items, a 5-point Likert scale from 1 (strongly disagree) to 5 (strongly agree) with six indicators: personal standards, concern over mistakes, perceived parental pressure, perceived coach pressure, doubts about actions, and organization. The Cronbach alpha for this sample are .82, .89, .89, .84, .83, .90, and .94 indicating high reliability.

Passion for sports scale was an adapted scale that intends to quantify two types of passion, which comprises 12 items for each factor with a response format of 1 (strongly disagree) to 5 (strongly agree). [33] For this sample, the Cronbach alphas are .96, .87, and .89, respectively, suggesting adequate reliability and validity.

Athletic burnout scale was used to diagnose the levels of burnout among athletes. [34] 15 items involving 3 factors, physical and emotional exhaustion, devaluation of sports practice, and reduced sense of achievement, were answered using a 5-point response format from 1 (strongly disagree) to 5 (strongly agree). For this scale, a Cronbach alpha earned is .89, .92, .95, and .94.

Sports Commitment Scale is composed of eleven items designed to analyze two factors, which are enthusiastic commitment and constrained commitment. [35] This response format of the scale ranges from 1 (strongly disagree) to 5 (strongly agree). For this sample, a Cronbach alpha of .92 for enthusiastic, .79 for constrained, and an overall Cronbach alpha of .82.

Data Analysis

To ensure the validity and reliability of the data, the modified survey questionnaire went through content validation. Afterward, the validated questionnaires were subjected to pilot testing involving respondents

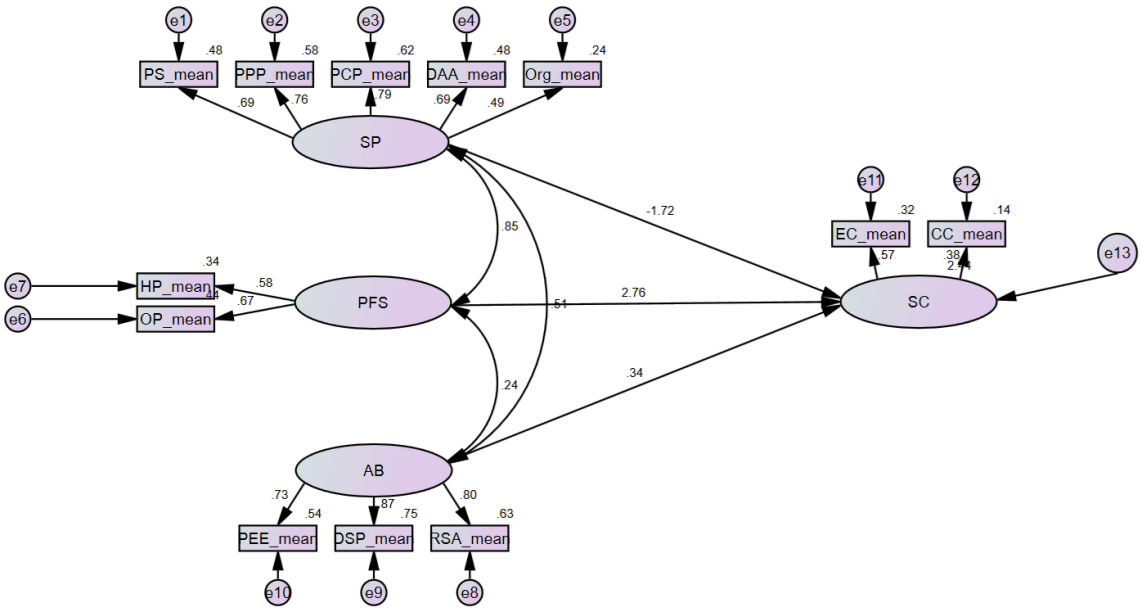
who represented the study's inclusion criteria. Thereafter, the actual data gathering went through a series of analyses. Data cleaning to avoid discrepancies and errors in the data. The cleaning involved the identification of the variable's characteristics, coding or labeling, checking the minimum and maximum values, and computation of missing values. Importing the data to the statistical software, using the AMOS (Analysis of Moment Structure) in determining the best-fitting model of the college athletes' sports commitment.

Results and Discussion

Table 1. The Goodness of Fit Measures of the Hypothesized Model

Index	Criterion	Model Fit Value
GFI	>.90	.767
TLI	>.90	.654
CFI	>.90	.748
NFI	>.90	.737

Figure 1. Estimates of the Hypothesized Model



Legend:

SP = Sports Perfectionism	PCP = Perceived Coach Pressure
PS = Personal Standards	DAA = Doubts About Actions
PPP = Perceived Parental Pressure	Org = Organization
PFS = Passion for Sports	HP = Harmonious Passion
OP = Obsessive Passion	AB = Athletic Burnout
PEE = Physical and Emotional Exhaustion	SC = Sports Commitment
DSP = Devaluation of Sports Practice	EC = Enthusiastic Commitment
RSA = Reduced Sense of Achievement	CC = Constrained Commitment

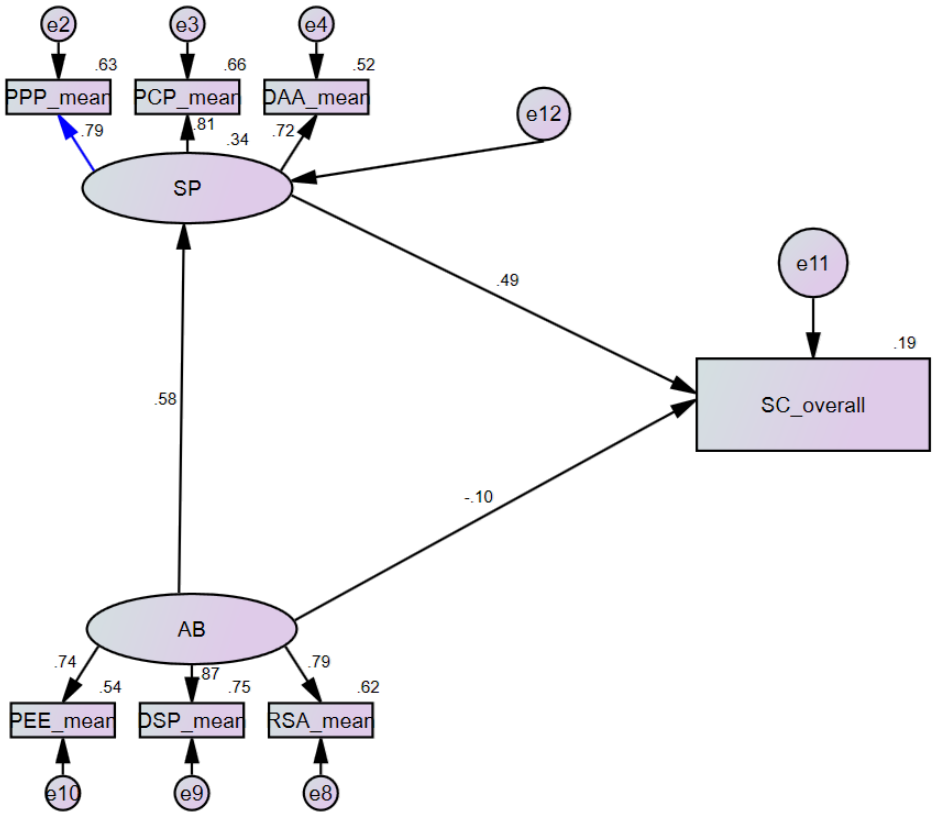
The estimates of the hypothesized model are displayed in Figure 1. Based on the presentation investigates the direct causal relationship between sports perfectionism, passion for sports, and athletic burnout. Statistically, it can be observed that the combined influence of sports perfectionism, passion for sports,

and athletic burnout can explain 244 (β=2.44) percent of the variance of sports commitment. Thus, the model depicts an inverse influence of sports perfectionism on sports commitment (β=-1.72, p<.05). In parallel, both passion (β=2.76, p<.05) and burnout (β=.34, p<.05) directly affect sports commitment accordingly. That, the model's GFI is equal to .767, NFI is .737, TLI is .654, and CFI is .748 respectively. This part can be viewed through the escalation of commitment theory, as postulated by Staw, individuals set goals for a positive outcome, yet later, the outcome turns out different, causing the commitment to escalate rather than to deplete due to "self-justification" as concluded by various studies. [36, 37] Further, this model did not satisfy the criterion values for the goodness of fit model.

Table 2. The Goodness of Fit Measures of the Best-Fitting Model

Index	Criterion	Model Fit Value
GFI	>.90	.965
TLI	>.90	.938
CFI	>.90	.965
NFI	>.90	.957

Figure 2. Best Fit Model



Legend:

SP = Sports Perfectionism
PPP = Perceived Parental Pressure
PCP = Perceived Coach Pressure
DAA = Doubts About Actions
AB = Athletic Burnout
PEE = Physical and Emotional Exhaustion
RSA = Reduced Sense of Achievement
SC = Sports Commitment

As presented in Table 2, many of the criteria were achieved, such as values of GFI, TLI, CFI, and NFI where figures are more than .90. A good fitting model to elucidate sports commitment college athletes in Region X as these indexes were carried up by Arbuckle (i.e., CFI, TLI, GFI, and NFI) close to .90. Concerning the multicollinearity of the variables involved, a model-generating technique by Kline was performed that involved respecifying the model, such as "adding and trimming" the parameters to refine the model in explaining the commitment to sports, where this technique was done and proved to be adequate and efficient in numerous studies. [38, 39] Figure 2 reveals the standardized value of the best-fit model. Analyzing the figure, 19 (β=.19) percent of the variance of sports commitment can be accredited to the combined influence of perfectionism and burnout. To boot, a total of 34 percent of the variance of perfectionism can be accounted to burnout of college athletes. The factor loadings of the figure are above .70, which is acceptable, denoting that these indicators represent the latent variables well.

The best-fitting model states that athletic burnout directly influences sports perfectionism (β=.58, $p<.05$) and has an inverse influence (β=-.10, $p<.05$) on sports commitment. In this regard, both SP and SC are influenced by athletic burnout through physical and emotional exhaustion, devaluation of sports practice, and a reduced sense of achievement. This occurrence can be clearly articulated in the concept known as Leisure Constrained Theory, where commitment is affected due to hindrances or barriers, depleting the commitment straightly, [40] which is mirrored in the results through the direct influence of burnout to perfectionism was noted in an article from the perspective of 235 employees, where the excessive effort to be perfect predicts a higher degree of burnout. [41] In the same result using meta-analysis, the negative influence of perfectionism was also brought by athletic burnout and reported to be moderated by gender. [42] Contextually, in Isabela, Philippines intervention program was implemented to lessen the degree of both SP and AB, since perfectionistic athletes were also experiencing burnout at the same time. [43]

To continue, the unit decrease in burnout means a certain value increase in the degree of commitment. This reinforced the results that a great level of enthusiastic commitment influenced less form of burnout. [44] Significantly, results have shown that inverse influence by means of high levels of burnout decreases the engagement and dedication of athletes to sports. [45] This scene was also present in the regression analysis, where the commitment of coaches through great leadership weakens the tendency of athletes to encounter burnout. [46] Noticing the model, an influence of SP on SC is present directly (β=.485, $p<.05$), which confirms certain research that the maladaptive form of perfectionism influenced the negative commitment of athletes due to overtraining. [47] In such a way, a clear distinction between football athletes with an established personal standard (PS) was equated to a high volume of independent training boosting their commitment compared to those with less PS. [48]

Conclusion

In light of the results of the model, the following findings can be stated. Athletic burnout has a direct effect on sports perfectionism. The study expresses the idea that a greater experience of burnout in the form of physical and emotional exhaustion, devaluation of sports practice, and a reduced sense of achievement can influence a maladaptive form of sports perfectionism. Conversely, lesser burnout experience exhibits a greater level of sports commitment. This suggests that Leisure Constraint Theory (LCT) can be a basis for determining hindrances and lessening the barriers among college athletes in improving their sports commitment.

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