



Construction and Validation of Perceived Performance Questionnaire in Sports

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Article Info

Abstract

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Objective: The development of two item self-assessment perceived performance Questionnaire in sport. **Method:** Two items were generated one for each; level of efforts exerted, and skill level executed in the competition. Responses from 64 state and national level female volleyball players were treated as data. **Confirmatory factor analysis, item to total correlation and individual's self-assessment to individual's assessment by teammate's correlation analysed statistically. Result:** Confirmatory Factor analysis evident that both variables lie in one factor only. Computed correlation value between self-assessed individual score and self-assessed effort was .91 and with self-assessed skill was .88 which are strongly correlated. Whereas, with individual assessment by teammates was .415 which is moderately correlated. And correlation between both the variables self-assessed individual skill and individual effort is .60, which is highly correlated. **Conclusion:** The questionnaire could be revised by taking responses from more subjects. It was also concluded that effort and skill both represents the perceived performance as its variables.

Introduction

Athletes train in order to perform better. Their performance has been an indicator of how well they have trained or their possibility to win a match. In relation to sport it can be understood as a pivot around which everything else revolve. Athletic performance is considered a connotation of representing the pursuit of excellence, where an athlete measures and judges his or her performance as a progression toward excellence or achievement. In other words, it is an approach to perform goal oriented- task reflecting pre conceived notions and beliefs about the

achievement of that particular activity (Dennett, 1978; Nicholls, 1980, 1984, 1989; McArthur and Baron, 1983). An effective way to measure performance is when athlete is being judged by an expert on various technical and tactical skills in different match situations. On the other side many researchers came up with the concept of perceived performance alongside. Performance was also measured in relation with the satisfaction level of athlete, as for many researchers' satisfaction and performance are intuitively linked. Athlete satisfaction is considered as a prerequisite to athletes performing at the highest level (Chlladurai

1987). Frode and his co-researchers used Athletes Satisfaction Questionnaire to measure their subject's satisfaction with the progress in their performance. Whereas Robert et.al. (1997). development the perception of success questionnaire as a measure of achievement goals specifically for the sport context. Perceived performance can also be understood as the ability and the ways in which an athlete or person interpret their performance. These perceptions and beliefs form a personal theory for achievement in the activity. (Nicholls, 1989). L. Gershgoren (2012) developed Perceived Performance in Team Sports Questionnaire (PPQTS). The purpose of the PPQTS is to capture the team member's perception of their team performance throughout the last season. The study is carried out with the purpose of developing a reliable tool to measure individual's perceived performance in sport. After having an extensive literature review along with discussion with experts, two variables were finalised; efforts and skills.

As cited by Weidong Li, Amelia M. Lee and Melinda A. Solmon (2006) in their study "beliefs about causes of success are rooted in attribution theories such as achievement goal theory" (Nicholls, 1984, 1989), self-efficacy (Bandura, 1997) and "conceptions of ability" (Dweck, 1999). In achievement context, "ability, efforts, task difficulty, luck, mood and help or hindrance from others" are typically identified as the cause of success and failure (Graham & Weiner, 1996; Weiner, 1985, 1986, 1992). Among these inferred causal ascriptions, the most dominant variables are ability and effort. These two causal ascriptions exert a substantial effect on cognition, motivational behaviour and achievement strivings in physical activity and academic contexts (Graham, 1991). So physical and mental energy exerted by athlete in their performance is one of the major components considered in this study.

Practice makes a man perfect. Practicing your mastered sport skill is vital and helped you to stay intact with your acquired sport skill. A well-conditioned athlete with poor skill level is akin to a high-performance racing car with flat tyres. Athletic skills being motor skills, requires voluntary body movement to be performed properly to perform the task or achieve the goal. An athlete who is par excellence at one sport but is not in all the other sport, the athlete can play other sport as per the theory of transition of skill, is because of the lack of efficiency and practice

in skills required in particular sport. A fine motor skill requires a lot of things like body position, neuro muscular -coordination, timing, hand eye -coordination, rhythm and body stabilization which eventually help an athlete to master the skill and outperform. (Yuri Hanin and Muza Hanina, 2009). This is why athletes indulged in vigorous practice of 5-6 days a week, performing repetitive movements or a particular by part drill to master those particular sports compositely an individual who is willing to master the skill or a sport in particular has to grill him/herself with thorough practice and hard work to improve and consequently, fetch better results.

Without optimum efforts one cannot achieve the appropriate skill and fitness levels. Therefore, the amount of efforts individual put in accomplishment of a task and with the level of skill he possesses is a potent factor determining one's performance

Construction of items

Item construction for this study was based on the work of Andrew and Maria (2011). In their study golfers were asked to rate their performance during the rounds. 2 items were used; Overall (i.e., compared to your typical performance) and Overall (i.e., compared to others in the tournament). Both the items were highly correlated ($r = .83$) and had Cronbach's alpha of .91. Players responded on a 10-point Likert scale anchors of 1 (worst I could play) and 10 (best I could play). Similarly, two items were generated for current study. But in this questionnaire subjects were asked to rate their level of skills and efforts executed in last match they played from 1 (completely unsatisfied) to 10 (completely satisfied) instead of asking them to rate their overall performance. Item to measure effort was, how do you rate your efforts in the last match you currently played? And to measure skill was How do you rate your skill level exhibited during the last match you currently played?

Butt, Weinberg & Horn (2003); Randle & Weinberg (1997) have recommended that "when psychological state of interest is related to performance outcome, then it is advisable to use two independent assessment of performance outcome, reflecting both athlete's and coach's assessment". Butt, et. al. (2003) assessed performance by taking players' self-assessment performance measure and a coaches' player assessment of performance. On the contrary to coaches' player assessment performance, teammate's player assessment has been

employed along with individual self-assessment performance.

After considering these recommendations, the author settled with the idea of collecting data on perceived performance by the individuals themselves and their teammate's assessment on individual's performance. Later, the author attempted to find the relation between both the self-assessed and team assessed individual performance data with the objective to find whether individual's self-assessment on perceived performance could also be considered reliable if taken solely. The items asked from teammates were how do you rate your teammates' efforts in the last match you currently played? And how do you rate your teammates skill level exhibited during the last match you currently played?

Selection of subjects

The subjects were selected from 6 colleges using purposive sampling: Laxmi Bai College, Gargi College, Mata Sundri College for Women, IGIPSS, Indraprastha College for women and Shaheed Guru College of Applied Sciences for Women, University of Delhi. To check the reliability of the questionnaire the questionnaire was administered on total of 64 (N= 64), female volleyball players, have represented at state and national level competitions.

Analysis

Table 1.

Descriptive analysis of self-assessed individual scores & individual scores assessed by team

Variables	Mean	SD	N
Perceived performance score by individual	6.96	1.82	64
Perceived performance score by team	6.98	1.54	64

The table no. 1 reveals the descriptive analysis of Perceived performance score by individual and perceived performance score by team. It represents the mean score of perceived performance score by individual is 6.96 (SD= 1.82) whereas, average score of perceived performance by team is 6.98 (SD= 1.54). Although nothing can be concluded here, thus, the data is further processed for factor analysis for the factor loading.

Factor analysis

Table 2:

Correlation matrix of self-assessed individual efforts, self-assessed individual skill

Variables	Perceived Efforts Score by Individual	Perceived Skill Score by Individual
Perceived Efforts Score by Individual	1	0.601
Perceived Skill Score by Individual		1

Determinant= .639

Table No. 2, reveals the correlation matrix among two variables those are Perceived Efforts Score by Individual and Perceived Skill Score by Individual which is highly correlated with $r = .60$. The determinant value has been listed at the bottom of the table i.e., 0.639. According to the result Perceived Efforts Score by Individual is highly positively correlated to Perceived Skill Score by Individual. For sampling adequacy Kaiser Meyer- Olkin was computed.

Table 3.

KMO & Bartlett's Test of Performance Variables

Kaiser- Meyer- Olkin Measure of Sampling Adequacy		0.500
Bartlett's Test of Sphericity	Approx. Chi-Square	27.57
	Df	1
	Sig.	.00

Table No. 3, It is evident that the data is adequate for factor analysis, as KMO measures at 0.50 that lies between the range of 0.50- 0.70 that is mediocre range of KMO. Bartlett's test is significant at 0.01, therefore factor analysis is appropriate to apply on data.

Table 4.
Factor Loading, Communalities Eigen Values, Percentage of Explained Variance of Variables

Variables	Component Matrix	Communalities Extraction
Self-assessed individual efforts	0.895	0.801
Self-assessed individual skills	0.895	0.801
Eigen Values	1.6	
% Of Variance	80.05	

Extraction Method: Principal Component Analysis

The communalities after extraction are 0.80 for both the factors. One factor solution with Eigen Value 1.6 is emerged which account for 80.05% of the variance. Both the variables highly loaded on the one factor and loading has the value of 0.89 for both the variables lie under one component. Hence, the component could not be rotated further.

Table 5:
Correlation among Perceived Performance Score by Individual, Perceived Performance Score by Team, Perceived Skill Score by Individual and Perceived Effort Score by Individual

Variable	Perceived Performance Score by Individual	Perceived Performance Score by Team	Perceived Effort Score by Individual	Perceived Skill Score by Individual
Perceived Performance Score by Individual	1	0.415	0.906	0.882
	Pearson Correlation			
	Sig. (2-tailed)	.001	.00	0.00
	N	64	64	64

It could be revealed from the table no.5 the coefficient of correlation Perceived Performance Score by Individual and Perceived Performance Score by Team is 0.415 i.e., is moderately correlated, that is significant at 0.01 level of significance ($p < 0.01 = 0.001$).

The value of coefficient of correlation between Perceived Performance Score by Individual and Perceived Effort Score by Individual is 0.91, i.e., strongly correlated, which is significant at 0.01 level of significance ($p < 0.01 = .00$).

The coefficient of correlation between scores Perceived Performance Score by Individual and Perceived Skill Score by Individual is 0.88, which is strongly correlated, that is found significant at 0.01 level of significance ($p < 0.01 = .00$).

Discussion

The scholar was set out to develop a self-report two items questionnaire to assess perceived performance of athletes. Performance is majorly viewed as an act which requires skills to execute that act and take efforts in completion. Athlete’s efficiency in performance is dependent on his proficiency in skill in that game. To meet the purpose of the study two separate questionnaires were designed, each contained two items. This idea is based on the suggestion of Butt, Weinberg & Horn (2003); Randle & Weinberg (1997). According to them two separate assessments should be considered while assessing performance.

It was advised to take coach’s and athlete’s independent assessments. However, in present study, two separate assessments from athletes and their team members have taken. Efforts and skills were selected as variables which contribute to performance. One questionnaire was designed for the individual for their self-assessment another was for the teammates to assess the performance of the individual. Later the correlation was computed to find the reliability of two. Graham & Weiner, 1996; Weiner, 1985, 1986, 1992 mentioned that the number of efforts one puts along with his ability are essential in his performance. In order to improve the proficiency of the particular sport an athlete must submerge him/herself into thorough and vigorous practice on everyday basis, one day’ off on the field impacts the overall skill learning and overall performance. (Yuri Hanin and Muza Hanina, 2009). To test the reliability of the Perceived Performance Questionnaire it was then correlated with the scores that were allotted to individuals by their teammates.

This correlation was moderately positive with $r = .41$. As per author’s observation during the period of data collection, some of the athletes who were given higher marks by their teammates

ratted themselves low on scale. Either their expectations were higher, or they were not satisfied with their last performance. Rivalry among teammates also was observed. As some athletes who perform better did not rate well to another better performing member of the team, whereas other members had ratted her good. So according to scholar these could be few reasons due to correlation between both the questionnaires appeared moderate.

Conclusion

Following conclusions are withdrawn:

1. It was concluded that effort and skill both represents the perceived performance as its variables.
2. Performance of a player is the product of many factors, ability and efforts are internal factors which can be controlled internally by an individual.

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