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Development of A Scale to Measure Sports Loafing

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ABSTRACT

The purpose of present study is to construct and develop a reliable sports loafing scale. For the present questionnaire different sources comprise of critical and allied literature was reviewed thoroughly. In preliminary phase, 77-items were pre-piloted, as an important step in finalizing the preliminary sports loafing scale. After item analysis, 66 statements were framed, based upon the 5-point Likerts' Scale with expertise opinions. In final phase, 523 subjects were chosen from different team games for the final development of the present scale. After factor analysis of final 55-items, loading ≥ 0.3 was included in the Sports Loafing Scale. The self-constructed scale was even tested for its reliability by administering the Cronbach's Alpha test. The obtained value was 0.865, which is within acceptable limits. Results suggested that sports loafing scale is a reliable measure for assessing the loafing in team sports participants. It has been observed that loafing tendency is one of the contributor factors which adversely influence the productive efficiency of an individual and create hurdle for the achievement of collective goal.

Keywords: Sports Loafing, validity, reliability, scale development

INTRODUCTION

The research toolsare pre-requisite for any research study. These are used in various fields of research at different levels. A keen and deep knowledge is must to develop various tools to address various issues related to the subject (Bazerman& Paul, 2004). It is expected that the researcher should develop the tool as per the research subject to make the whole procedure more logical and valid (Kumar, 2011). Hence, tool selection/design is a very critical step of any research as its design contributes to formulating topic procedure and theoretical framework application to the original finding. It depends upon the researcher's need to include and exclude factors as per theme required from the perspectives of the research problem and philosophical views.

Latene et al. (1979) had stated that loafing can be understoodas when members of a team reduce their motivation and create the tendency to reduction in efforts when working collectively. Social loafing occurs when participants of a team put forth less effort while playing in a team, it's an inherent behaviour.

Factors Affecting the Loafing

It is very necessary to have in-depth knowledge about the factors that are responsible for affecting loafing in team sports participants for the development of an efficient and effective scale.

Vaghefi and Lapointe (2012) had evaluated a wide variety of literature on the determinants that might support loafing in the team participants. It can be classified into four categories: personal aspects, group condition, contextual aspects and task-related factors:

Personal Aspects: Most of the researchers concentrated on the role of individual differences (Jassawalla et al., 2009), which point out a broad range of factors that are related to personal and individual characteristics including personality, age, sex and motivation. Hart etal. (2006) had described that participants who suffer from low self-confidence and efficacy, and those who show they are better than others, and those who exhibit low motivation for team goal are more prone to loaf than others. Although, individual differences, perception of the participants could influence loafing in their team. Harkins and Jackson (1985) had found that when participants of a team do not receive any incentive or punishment for their individual efforts, that results in creating the tendency of loafing in them.

Group Condition: Kravitz and Martin (1986) had explained that when Ringelmann conducted his experiment, it was found that as group size enlarged, group performance was significantly lower than the sum of individual efforts. In so-

cial impact theory, it was noticed that bigger group size results in reduced effort and augments loafing (Albanese & VanFleet, 1985; Karau & Williams, 1993). Many researchers also noted that identification with multiple group memberships can create inconsistencies in individuals behaviour. Earley (1989) had explained that self-sufficiency and control leads to membership in multiple groups, which results in a greater tendency toward loafing.

Contextual Aspects: Earley and Gibson (2002) had found that participants of a team will subordinate their personal interests to the goals of their team-membership, which results in less loafing likely to occur. Earley (1989) had described that in cultures, loafing takes place because it helps to gain individuals 'benefits. There are evidences which showed that loafing is limited under the condition of contingent rewards and incentives as well as perception of fairness of procedures (Karau &Williams, 1993).

Task-related Factors: Shea and Guzzo (1987) had noticed that the perception of participants about the degree of task-driven interaction among members of a team or simply, task interdependence partly controls individuals 'performance in that team. Researchers also indicated that where participants cannot show their individual contribution, they strongly prone to reduce their efforts. When individuals work in a team where task visibility is low, they lost in the crowd and their efforts are not distinguishable from others (Latane et al., 1979). This is the reason that they increase or decrease efforts which will not affect their performance (Linen et al., 2004). Harkins and Petty (1982) argued that individual performing a difficult task exert a higher degree of effort, when they identify their efforts as unique and not redundant with others; Kerr and Bruun (1983) had stated that on disjunctive tasks each participant's contribution is visible, members of the team with low capability perceived their efforts as more dispensable, and exerted less effort compared to high capability team-members. These determinants are given below in the table-1:

Table-1: Model of Determinants that affect loafing given by Vaghefi and Lapointe(2012)

CATEGORY	DETERMINANTS
Individual Aspects	Individual Difference Participant's Evaluation
Group Condition	Group identity Group Size Multi-Group-Membership Trust
Contextual Aspects	Culture (Individualism vs. collectivism) justice (Distributive vs. Procedural)
Task Related Aspects	Task Visibility Task Interdependence Dispensability of Efforts Task Difficulty and Uniqueness

Above mentioned factors are related to loafing directly or indirectly in team sports, which hinder the participants to attain the common goal. The present research would provide base to measure the loafing in sports-persons specially in team sports. All factors that affect the team participants psychologically and emotionally have been considered judiciously.

There is no appropriate scale available on sports loafing in India. Thus, the present researcher put her step forward to develop an appropriate scale to measure the level of sports loafing in the team participants.

Framework

While keeping in mind above-discussed dimensions, a draft of the scale has been framed in consultation with the experts in this particular area. The scale has items related to the loafing in a group situation. The main focus of the scale is to assess the level of loafing among participants in team sports. Participants' behaviour is considered as one of the most prominent factors for the measurement of loafing among them. The Sports Loafing Scale has touched all the required aspects that could be the reason of loafing among team participants.

Trial Run

Initial draft of the scale comprise of 77-items which was presented to 100 experts (i.e. Sports-Psychologists, Professors, Research-Scholars and Inter-university players) for seeking their opinions. Experts were requested to provide their comments and suggestions on appropriateness and the design of statements.

Item Analysis of the Scale

On the basis of the total scores, high and low groups were formulated according to Kelley (1939) criteria of taking up top 27% and Bottom 27% constituting the high and low groups respectively. Scores of all respondents were calculated, and on the basis of these scores, the responses were arranged in ascending order. The response scores of the first 27 respondents and the last 27 respondents were taken into account for calculating the mean scores of each item. The t-value for each item is calculated for final selection.

After that t- test was computed between high and low scorer groups as shown in Table-2:

Table-2: Item Analysis

Item No	t- ratio	Item No	t- ratio	Item No	t- ratio	Item No	t- ratio
1	0.7849	**21**	**4.7467***	**41**	**5.0899***	**61**	**2.0208****
2	1.84	**22**	**5.0237***	**42**	**4.3529***	**62**	**3.9618***
3	**2.5090****	**23**	**2.5162****	**43**	**4.8813***	**63**	**3.7682***
4	**3.4689****	**24**	**2.5299****	**44**	**2.3419***	**64**	**5.4158***
5	0.2496	**25**	1.1448	**45**	**3.2444***	**65**	**4.1756***
6	**3.0724****	**26**	1.5250	**46**	**6.0068***	**66**	**2.8909***
7	1.0047	**27**	**2.1713****	**47**	**4.1490***	**67**	**4.3564***
8	**2.0283***	**28**	**3.3935***	**48**	**3.9538***	**68**	**3.3357***
9	0.7132	**29**	**2.9682***	**49**	**2.0308***	**69**	**5.6067***
10	**2.1650****	**30**	**3.8435***	**50**	1.4265	**70**	**3.5050***
11	**3.1185***	**31**	**3.1661***	**51**	**4.3967***	**71**	**2.6043***
12	**2.2361***	**32**	**4.7404***	**52**	**3.4840***	**72**	**7.1323***
13	**3.2963***	**33**	**7.2560***	**53**	0.6319	**73**	**5.3000***
14	**4.8617***	**34**	**4.9271***	**54**	**2.2373***	**74**	**3.3786***
15	**2.0265***	**35**	**2.8155***	**55**	**2.2895***	**75**	**4.9169***
16	**3.2808***	**36**	1.8908	**56**	**4.7246***	**76**	**5.0544***
17	**2.7861***	**37**	**2.5640****	**57**	**3.9174***	**77**	**4.4019***
18	**4.5054***	**38**	**5.5902***	**58**	**4.2810***		
19	**2.4227***	**39**	**2.6898***	**59**	**4.1719***		
20	**4.2517***	**40**	**3.5437***	**60**	1.6932		

Table-2 shows the 't-ratio 'for 11 items were not significant even at 0.05 level of significance and rest of the items are significant either at 0.05 or 0.01 level of significance. Hence 11 items were dropped after item analysis and 66-items were retained for the final draft.

Pilot Study

After the item analysis of the 77-items, the final draft with 66-items was administered to the selected sample of the study, who were sportspersons or players from national level tournaments and inter-university championships, which were held in U.T. Chandigarh, Punjab, Haryana and Himachal Pradesh. The selected players for the sample were only the playing members of the team and only one-two first substitution players of the team. For the administration of the scale, sports-persons were given 30 minutes to mark their responses.

Scoring of the Items

Five responses were given for each item of the scale. The scale was based upon the Likert Scale which is widely used for opinions in all the areas of research. For each itemresponse rating was as follow:

A. Strongly Disagree-1
B. Disagree-2
C. Neutral-3,
D. Agree-4
E. Strongly Agree-5

Factor Analysis and Extraction of Final Items

Factor analysis was applied on the data collected from the final sample to check the correlation among all the items. For this, Kaiser-Meyer-Olkin measure of sampling adequacy and Bartlett's test of Sphericity test was taken to check the correlation among all the items and value was 0.824, which fall in very good category criteria given by Kaiser (1974). So that, factor analysis was employed to obtain the theoretical construct of Sports Loafing Scale, which is given in table-3:

Table-3: KMO and Bartlett's Test for Sports Loafing Scale

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.824
Bartlett's Test of Sphericity	Approx. Chi-Square	10639.742
	df	2145
	Sig.	.000

After approval of KMO and Bartlett's Test of Factorial Simplicity, Researcher has been laid out the component matrix for the loading of the items. The loading of the items <±0.3 was not considered in the final scale, after reviewing the suggestion given by Hair et al. (1998), for factor loading and Sample size. Therefore, finally 55-items were extracted in the loading of matrix, which are given below in Table-4:

Table-4: Factor Extraction

Factor1 Items	Loading	Factor1 Items	Loading
S43	0.591	S21	0.494
S30	0.582	S48	0.473
S56	0.556	S1	0.469
S15	0.554	S49	0.457
S51	0.548	S14	0.452
S59	0.541	S28	0.448
S40	0.536	S53	0.433
S18	0.532	S7	0.432
S61	0.525	S63	0.430
S47	0.523	S46	0.425
S65	0.521	S6	0.423
S42	0.510	S35	0.422
S39	0.508	S22	0.421
S44	0.507	S31	0.413

S26	0.502	S54	0.407
Factor2 items	Loading	Factor2 items	Loading
S9	0.618	S8	0.501
S38	0.617	S2	0.484
S52	0.608	S4	0.436
S58	0.571	S25	0.423
S13	0.570	S34	0.418
S29	0.569	S17	0.410
S41	0.563	S27	0.391
S16	0.552	S55	0.388
S66	0.524	S32	0.356
S36	0.519		

Reliability

Reliability of the constructed tool was established with Cronbach's Alpha Method through SPSS. Cronbach's Alpha was 0.865. Reliability co-efficient of all the 55-items has been given in the Table-5 below:

Table-5: Reliability Co-efficient

Item No	Cronbach's Alpha	Item No	Cronbach's Alpha	Item No	Cronbach's Alpha	Item No	Cronbach's Alpha
1	0.852	**16**	0.852	**31**	0.850	46	0.853
2	0.859	**17**	0.853	**32**	0.851	**47**	0.850
3	0.857	**18**	0.853	**33**	0.857	**48**	0.854
4	0.853	**19**	0.851	**34**	0.851	**49**	0.851
5	0.854	**20**	0.849	**35**	0.851	**50**	0.851
6	0.856	**21**	0.852	**36**	0.852	**51**	0.851
7	0.853	**22**	0.856	**37**	0.852	**52**	0.852
8	0.852	**23**	0.850	**38**	0.849	**53**	0.852
9	0.856	**24**	0.853	**39**	0.852	**54**	0.851
10	0.853	**25**	0.852	**40**	0.851	**55**	0.854
11	0.852	**26**	0.853	**41**	0.851		
12	0.854	**27**	0.852	**42**	0.852		
13	0.853	**28**	0.853	**43**	0.853		
14	0.853	**29**	0.852	**44**	0.851		
15	0.852	**30**	0.851	**45**	0.851		

Hence, the constructed tool was found to have acceptable measures of reliability.

CONCLUSION

It is concluded that purpose of the present study was to construct and develop scale which can be used to determine the level of loafing in team sport participants. The construction and validation of any questionnaire or scale is the most challenging task for the researcher. In Sports Loafing Scale, two main dimensions were created through factor analysis method. Initially, the sports loafing scale has included 66 statements related to the phenomena. The responses of 523 team participants of national level tournaments were quantified. Based on these scores, all items were analyzed with factor analysis. Finally, 55-items were retained in extraction of items which have the loading ≥0.3 as suggested by (Hair et al., 1998). Now, the present of Sports Loafing Scale has 55 statements to assess level of loafing in team participants. The reliability was calculated by using Cronbach Alpha test, which is found to be within acceptable limits.

It is further concluded that the development of a valid and reliable research scale is foremost requirement in the field of research. Every factor which is responsible to affect the participants work efficiency driven by loafing has been included in the study. It is safely surmised that the knowledge of the researcher about his/her area of research in every aspect should be finalized without any biased approach.

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