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Bipin Kumar Dubey

Research Scholar,

Department of Physical

Education and Sports Science

Vinay Bhavana, Visva Bharati

Santiniketan, West Bengal,

India

Mahesh Swata Khetmalis

Associate Professor,

Department of Physical

Education and Sports Science

Vinay Bhavana, Visva Bharati

Santiniketan, West Bengal,

India

Influence of factors on womens sports participation: A cross sectional study

Bipin Kumar Dubey and Mahesh Swata Khetmalis

Abstract

Objective: To find out the factors which influence the participation of women in sports.

Method: 300 female students from schools of Varanasi, Uttar Pradesh with age range from 15 to 16 years. Factor Analysis was used to find the different factors and items with reveals the different influence in sports participation of women.

Results: Twenty factors were extracted with 63.45% of variance in totality.

Conclusion: Multiple factors were extracted which influence the sports participation.

Keywords: provision, attitude etc.

Introduction

According to the 2011 Census, India's total literacy rate is 74.00 percent, with women's literacy at 65.46 percent. 54.16 percent of women in the country were literate in 2001. According to the 2011 census, the country's literacy rate improved from 18.33 percent in 1951 to 74.00 percent in 2011. Similarly, female literacy has risen from 8.86 percent in 1951 to 65.46 percent in 2011. Between 1991 and 2001, the female literacy rate increased by 14.87 percent, while the male literacy rate increased by 11.72 percent. In comparison to male literacy rates, female literacy rates increased by 3.15 percent (2018, Sahu) [7].

Due to biological and gender-related differences, being a man or a woman has a substantial impact on one's happiness. In many countries, women's and girls' health is especially important because they face bias based on societal factors. Women and girls, for example, have a higher risk of contracting HIV than men (World Health Organization, 2020) [9].

If this is true in a middle-class metropolitan setting, imagine how bad things must be in rural areas. The ICRW conducted a research in Dholpur, Rajasthan, to see if girls enjoy sports. Despite their eagerness to play, the researchers revealed that they were unable to persuade their families to allow them to do so. After finishing their home responsibilities, less than half of the girls aged 12–14 felt they can ask their parents for play time. In 15–16-year-old married adolescent females, this ratio dropped to 39%, while in 12–16-year-old married teenage girls, it was only 33 (Mutatkar, 2018) [6].

Based on multiple reviews and similar studies, the researcher picked the questionnaire "Attitude of girls towards sports participation" to determine the probable responses and various elements of girls' sports participation attitudes.

Methods

A total of 300 female students were chosen for this study. Random sampling was used, with participants ranging in age from 15 to 16 years old and coming from various Varanasi schools. Prior to participation, subjects were given signed, voluntary, and informed consent and Self-made questionnaire was used - "Attitude of girls towards sports participation Questionnaire" Descriptive Statistics (Mean and Standard Deviation), Factor Analysis and Percentages were used to examine the many replies collected in terms of distinct personal and social problems (Provision) that limit Girl's from participating in sports activities. SPSS 20. Software was used to conclude all the research questions.

Corresponding Author:

Bipin Kumar Dubey

Research Scholar,

Department of Physical

Education and Sports Science

Vinay Bhavana, Visva Bharati

Santiniketan, West Bengal,

India

Results and Discussion

Table 1: KMO and Bartlett's test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy		.595
Bartlett's Test of Sphericity	Approx. Chi-Square	3352.832
	Df	1431
	Sig.	.000
Communalities		> .50 in all statements

The KMO value ranges between 0 and 1. The sample size for the factor analysis is more appropriate the closer the KMO value is near 1 (Verma, 2013)^[8]. In this case, KMO value is 0.595, which is <0.5; hence, the sample size is adequate for this study and it shows that the investigator can proceed further with the exploratory factor analysis.

To see if a correlation matrix is an identity matrix, Bartlett's sphericity test is performed. Because the significance value (p value) of Bartlett's test is .000 in Table 1, which equals 0.05, the correlation matrix is not an identity matrix. As a result, it

is possible to conclude that the factor model is adequate (Verma, 2013)^[8].

When a variable has a high communality, it suggests that the bulk of its variability is explained by all of the components revealed in the study. If the value of the variable communality is 0.4, it is considered unnecessary and should be eliminated from the model. Table 12 demonstrates that all of the variables have communalities greater than 0.4, indicating that they are all meaningful in the model and that the investigator can use them all for factor analysis (Verma, 2013)^[8].

Table 2: Total variance explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	4.417	8.180	8.180	4.417	8.180	8.180	2.215	4.103	4.103
2	3.334	6.175	14.355	3.334	6.175	14.355	1.980	3.666	7.769
3	2.221	4.113	18.468	2.221	4.113	18.468	1.930	3.575	11.344
4	2.088	3.867	22.335	2.088	3.867	22.335	1.917	3.550	14.894
5	1.895	3.510	25.845	1.895	3.510	25.845	1.897	3.514	18.408
6	1.841	3.409	29.254	1.841	3.409	29.254	1.810	3.351	21.759
7	1.776	3.288	32.542	1.776	3.288	32.542	1.765	3.268	25.027
8	1.576	2.919	35.461	1.576	2.919	35.461	1.762	3.263	28.290
9	1.558	2.886	38.347	1.558	2.886	38.347	1.757	3.254	31.544
10	1.504	2.785	41.132	1.504	2.785	41.132	1.729	3.201	34.745
11	1.430	2.649	43.781	1.430	2.649	43.781	1.633	3.024	37.769
12	1.347	2.495	46.276	1.347	2.495	46.276	1.616	2.993	40.763
13	1.313	2.431	48.707	1.313	2.431	48.707	1.609	2.979	43.742
14	1.294	2.396	51.103	1.294	2.396	51.103	1.605	2.972	46.714
15	1.220	2.260	53.363	1.220	2.260	53.363	1.598	2.959	49.674
16	1.150	2.130	55.494	1.150	2.130	55.494	1.517	2.809	52.482
17	1.131	2.095	57.588	1.131	2.095	57.588	1.497	2.772	55.254
18	1.112	2.059	59.647	1.112	2.059	59.647	1.493	2.765	58.019
19	1.044	1.934	61.581	1.044	1.934	61.581	1.492	2.763	60.782
20	1.011	1.872	63.453	1.011	1.872	63.453	1.443	2.672	63.453

The all three section of the table no. 7 (Initial Eigenvalues, Extraction Sums of Squared Loadings and Rotation Sums of Squared Loadings) is clearly showing that the variance

explained in the table is only 20 (twenty) Factors. Together, they reach to 63.453% of the variability of the original variables. (IBM, 2020)^[5].

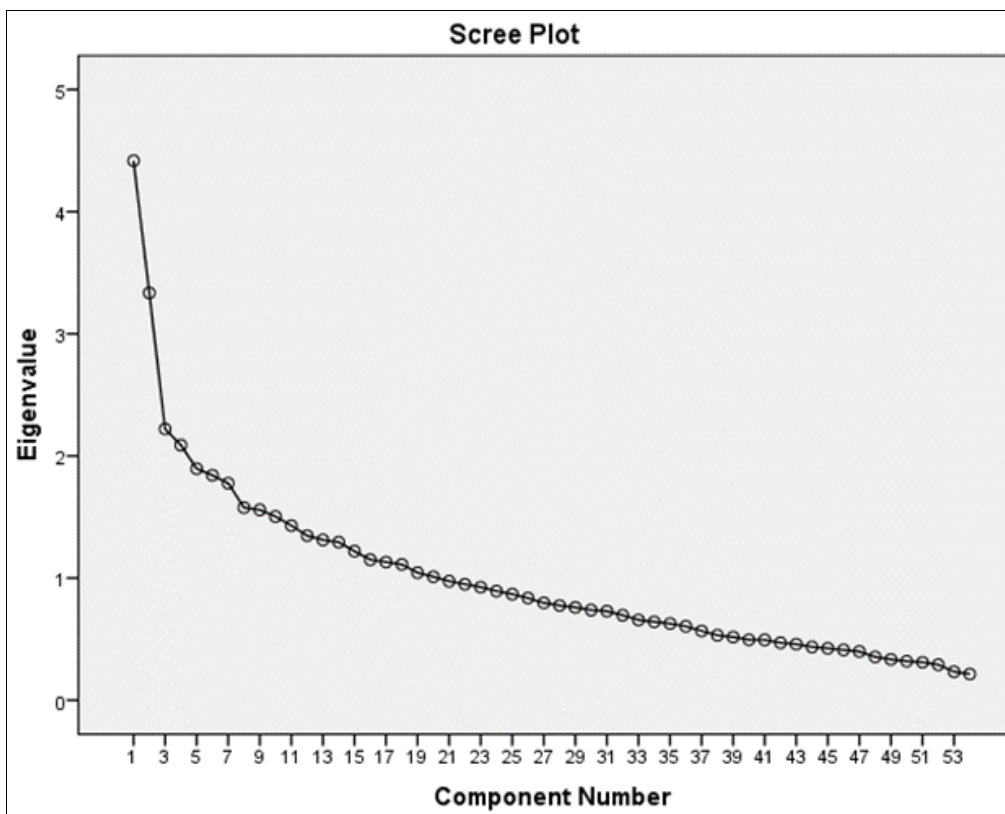


Fig 1: Graphical representation of provision questions

The screen plot (shown in figure: 1) is created by graphing the factor (along the X axis) against their eigenvalues (along Y axis). Only 20 (twenty) components have eigenvalues greater

than one, whereas the rest factors have eigenvalues less than one, as shown in this graph. This Screen plot can be used to determine how many factors should be kept.

Table 3: Extracted factors after varimax rotation of provision

Questions	Extraction
Q.39 I do not get time to play sports	.711
Q.105 Toilets are available at my sports ground are in good condition	.780
Q.99 Job security in sports is very less	.746
Q.36 My sister wish to participate in sports	.755
Q.21 I read Sports News	.723
Q.20 I like to read Sports News	.759
Q.76 I am afraid of sports injuries	.707
Q.2 I make my own decisions	.776
Q.70I think there is exposition of alcohol in sports	.693
Q.62 When I participate in sports my neighbors criticize	.768
Q.30 I like to give my share of milk to my brother	.734
Q.114 Girls are harassed on the playground and face bad comments	.835
Q.100 Very few jobs for small scale players	.790
Q.109 I think I am not fit for sports participation	.648
Q.31 In my family every one participates in sports	.795
Q.108 I think I don't get enough time to participate in sports	.697
Q.98 I think government is doing more work in the favour of Women sports	.759
Q.84 I this women coaches are much better then Male coaches for Women	.691
Q.26 I am allowed to watch local sports	.770
Q.112 I think there is lack of transportation to the nearby playground	.694

After the applying Varimax Rotation, the formula has divided all the questions into 20 factors in which the highest loading factor is extracted from the given table for finalizing the concluded questions of provision. The extracted variables were selected equals to or more than 0.50 values. So, for above table Question no. 39, 105, 99, 36, 21, 20, 76, 2, 70, 62, 30, 114, 100, 109, 31, 108, 98, 84, 26 and 112 were extracted.

Discussion

Women have an important role in every part of society.

However, because of the numerous roles they play in society, they are at a higher risk of mental illness than other members of the community. Women carry the brunt of the responsibilities that come with being wives, mothers, and managers of other people's careers. Women are increasingly becoming an important component of the workforce, and they constitute the primary source of income in one-quarter to one-third of households (WHO, 1995).“Sport as an embodied practice may liberate girls and women from hegemonic feminine ideals, empower them within their communities,

provide positive health and welfare outcomes, and ultimately transform gendered notions, leading to a more egalitarian world and unleashing women's productive, intellectual, and social power," writes Martha Saaverda. This would then contribute to economic, social, and political development as a whole."

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