

A New Socio-economic Status Scale: urgent Need of Hour

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Abstract— Almost all community- based studies focus on socio-economic stratification, which is the key parameter for proper understanding the affordability of the community of health services. But nowadays in the era of changing social prestige parameters with debt from financing agencies should be considered in scaling socio-economic condition. So there is an urgent need to have socio-economic scaling reinvent considering new areas of socio-economic status. Present study was aimed to compare the different socio-economic status scales prevalent with Gaur's socio-economic scale. Variables of 240 Antenatal cases were recorded along with the variables as per B.G. Prasad's, Kuppuswami's and Gaur's SES classification. Proportion of cases falling in various category of SES status as per all these SES Scaling was assessed and compared. It was found that as per B.G. Prasad SES classification there was 79.58% in class I, which is unbelievable. Whereas as per Gaur's SES scaling there were 0.83% in Class I which is quite reasonable. Likewise, as per Kuppuswami SES Scale there were 46.67% in Class I, which is also not appropriate for ANCs attending at Government setting. Proportion of ANCs in various Classes as per B.G. Prasad SES and Kuppuswami SES Scale with Gaur's SES scale was with significant ($P < 0.001$) difference. Socio-economic scaling need to consider other variable like Housing Condition, Living Status, Percentage of Income Expenditure and Debt to asset Ratio (as in Gaur's SES Scaling) along with Income, Education and Occupation.

Keywords— Socio-economic status scales, B.G.Prasad SES classification, Kuppuswami SES Scale, Gaur's socio-economic scale.

1. Introduction

Socioeconomic status (SES) is a measure of an individual's or family's economic and social position in relation to others, based on various variables responsible for that like income, education, occupation, family effluence, physical assets, social position, social participation, caste, muscle power, political influence, etc.¹ Majority of researchers agree that income, education and occupation together best represent SES, while some others feel that changes in family structure, family effluence etc should also be considered.²

Wealth is also considered a determinant of SES, which is a set of economic reserves or assets, presents a source of security providing a measure of a household's ability to meet emergencies, absorb economic shocks, or provide the means to live comfortably. Wealth reflects intergenerational transitions as well as accumulation of income and savings.^{3,4}

The socioeconomic status (SES) is an important determinant of health and nutritional status as well as of mortality and morbidity. Socioeconomic status also influences actual utilization of various available health facilities. There have been several attempts time to time to develop different scales to measure the socioeconomic status.

SES scales were developed mainly by psychologists especially in the western world.^{5,6,7} In Indian studies, Prasad's classification of 1961⁸ based on per capita monthly income and later modified in 1970 has been extensively used.⁹ Another SES classification namely Kuppuswami scale¹⁰ is widely used to measure the socio-economic status of an individual in urban communities, which is based on three variables namely education, occupation and income. Letter on modification of Kuppuswami

scale¹¹ were done, where the education and occupation of head of the family and income per capita per month was used. Mishra et al¹² have suggested an economic revision of Kuppuswami's scale.

But many authors¹⁰⁻¹⁷ feels that income is not appropriate as a *single* indicator of social class because it varies considerably within occupations also. However, high education does not necessarily lead to high income and high occupational standing. In addition, there are regional differences in educational attainment. Likewise in present scenario other SES indicators like physical assets, savings, debts etc must also be taken into consideration while assessing SES.

2. Methodology

This study hospital bases study was carried out on 240 local (Jaipurites) Antenatal cases attending in month of September 2014 at ANC outdoor of Mahila Hospital, Sanganer Jaipur. Personal Identification variables of these cases were recorded along with the variables like family size and occupation of head of family. Income of every individual cumulating total income of family per month with expenditure per month was also recorded. Housing and living status of family of every identified ANC was observed and inquired as per Gaur's SES¹⁸ scaling at their houses. Total value in rupees was calculated of total assets they have and total debts taken by family. (Anuxeres)

Socio-economic status of these identified ANCs was calculated as per B.G. Prasad's, Kuppuswami's and Gaur's SES classification. (Anuxres) Proportion of cases falling in various categories of SES status as per B.G. Prasad SES classification and Kuppuswami SES Scaling were assessed. These proportions were compared with SES classification as per Gaur's SES classification. Results were inferred by Chi-square test.

3. Results

Present study observed that as per B.G. Prasad SES classification out of total 240 ANCs majority were falling in class I i.e. 191 (79.58%) followed by in Class II and III, where it was 32 (13.33%) and 17 (7.08%) respectively. As per B.G. Prasad's SES there were no ANC of Class IV and Class V. (Table 1)

Table 1

Comparison of SES of ANCs as per B.G. Prasad's SES and Gaur's SES Scaling

S. No.	SES Class	B.G. Prasad's SES Scale		Gaur's SES Scale	
		No.	%	No.	%
1	Class I	191	79.58	2	0.83
2	Class II	32	13.33	18	7.5
3	Class III	17	7.08	99	41.25
4	Class IV	0	0	93	38.75
5	Class V	0	0	28	11.67
6	Total ANCs	240	100	240	100

Chi-square = 367.968 with 4 degrees of freedom; P <0.001 HS

When SES of these ANC's was calculated as per Kuppaswami SES majority were falling in class I i.e. 112 (46.67%) followed by in Class II, III and IV, where it was 83 (34.58%), 36 (15%) and 9 (3.75%) respectively. As per Kuppaswami SES there were no ANC of Class V. (Table 2)

This study observed that if socio-economic status of these sampled ANC's were calculated as per Gaur's SES scale it was found that majority were falling in class III i.e. 99 (41.25%) followed by in Class IV, V, IV, and lowest number fall in Class I i.e. 93 (38.75%), 28 (11.67%), 18 (7.5%) and 2 (0.83%) respectively (Table 1 & 2). This distribution was observed near to normal distribution.

Present study revealed that if B.G. Prasad SES classification these ANC's was compares with Gaur's SES scaling it was found that proportion of ANC's in various Classes as per B.G. Prasad SES and Gaur's SES scale was having was significant ($P < 0.001$) difference. (Table 1)

Present study also revealed that if Kuppaswami SES Scale these ANC's was compares with Gaur's SES scaling it was found that proportion of ANC's in various Classes as per Kuppaswami SES Scale and Gaur's SES scale was having was significant ($P < 0.001$) difference. (Table 2)

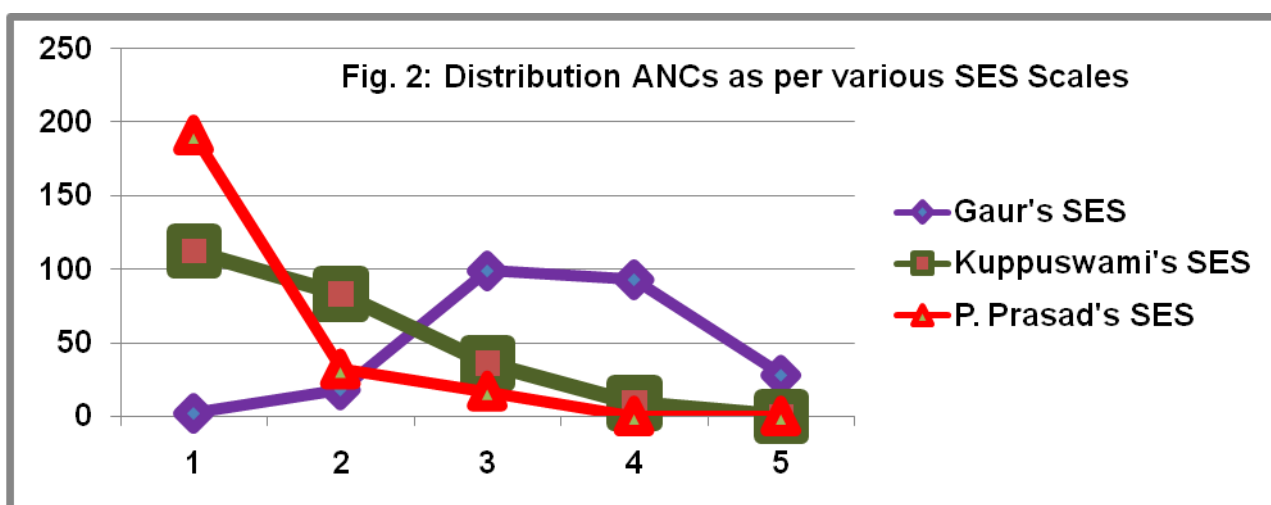
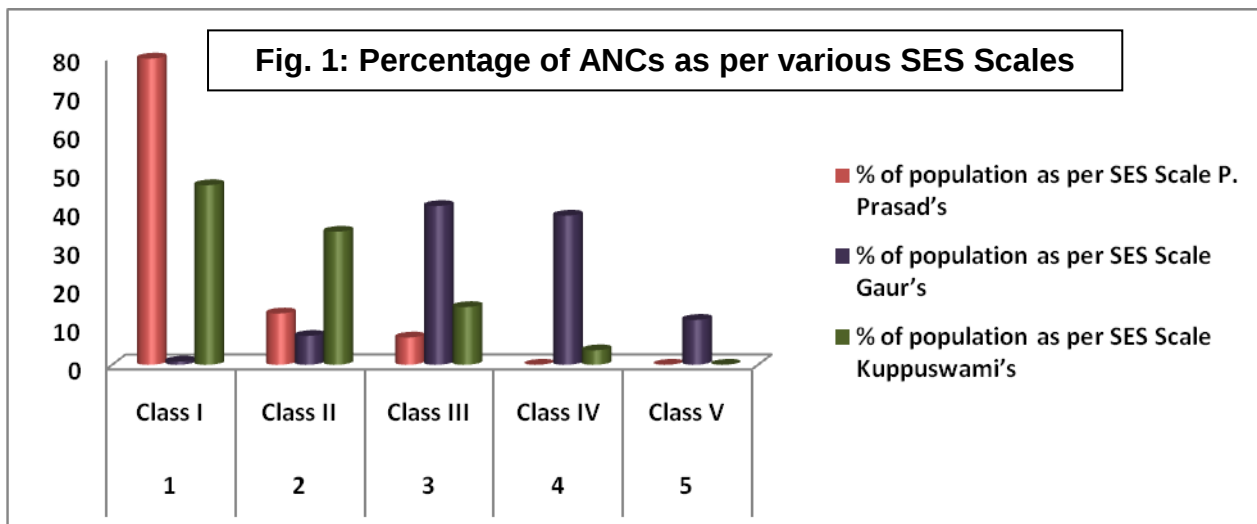
Table 2

Comparison of SES of ANC's as per Kuppaswami's SES and Gaur's SES Scaling

S. No.	SES Class	Kuppaswami's SES Scale		Gaur's SES Scale	
		No.	%	No.	%
1	Class I	112	46.67	2	0.83
2	Class II	83	34.58	18	7.5
3	Class III	36	15	99	41.25
4	Class IV	9	3.75	93	38.75
5	Class V	0	0	28	11.67
6	Total ANC's	240	100	240	100

Chi-square = 274.549 with 4 degrees of freedom; $P < 0.001$ HS

When all the three SES were compared as per distribution of ANC's in various SES classes, it was found that Gaur's SES scaling was near to normal distribution whereas others i.e. B.G. Prasad's and Kuppaswami's SES Scale were far away from normal distribution (Fig 1 & Fig 2)



4. Discussion:

Present study observed that out of total 240 Antenatal cases attending at ANC outdoor of Mahila Hospital, Sanganer Jaipur, majority of ANC's were falling in Class I as per B.G. Prasad SES and Kuppuswami SES classification i.e. 191 (79.58%) and 112 (46.67%) respectively. Whereas as per Gaur's SES scale it was found that majority were falling in Class III i.e. 99 (41.25%).

Like wise there were no ANC in Class IV and V as per B.G. Prasad SES classification and no ANC in Class V as per Kuppuswami SES classification. Whereas, these studied ANC's were distributed in all five SES classes according to Gaur's SES classification.

As these ANC's were from the ANC's attending at Mahila Chikitsalay which is attached to SMS Medical College is a government set up Mahila Hospital. ANC's attended at this government set up were not seems to belongs to Class I in such a majority i.e. 79.58% and 46.67% as it was observed by B.G. Prasad and Kuppuswami's SES classification respectively. This study also observed that there was no ANC in Class V as per B.G. Prasad and Kuppuswami's SES classification. (Fig 1)

Jaipur is capital of Rajasthan catering a large number of private good hospitals and nursing homes including Fortis, Santokaba, Cocoon etc. So there is less chances of Class I class ANC's to attend this Facility. This explanation is further supported by report of Ministry of Health and welfare¹⁹. In this

report also there are 27.5% below poverty line in India¹⁹. Even Agrawal et al¹⁵ also reported 14% in Class V in their studies. In a study conducted on 1155 families of Rajasthan Gaur¹⁹ also reported that 152 (13.16%) families belong to Class V.

Whereas as per Gaur's SES classification Class I ANCs were only 2(0.83%) and Class V ANCs were 11.67% with the fact that majority belongs to Class III i.e. 99 (41.25%). Distribution as per this scale is near to normal distribution (Fig 2) and is quite in resonance with other authors.^{15,16,19}

The other fact may be that B.G. Prasad SES Classification depend on per capita income only whereas other indications like education, occupation, wealth, affluence level, housing condition etc were not considered. Most of the authors¹⁰⁻¹⁷ feels that income is not appropriate as a *single* indicator of social class because it varies considerably within occupations and is often inconsistent with educational requirements. For example, a sanitation worker will often earn more than a teacher, although the teacher has more education and would be considered to have higher status. Similarly, the perceived status of income is not monotonically related to income amount. The fact that income is relatively unstable over time can pose another difficulty.

Likewise Kuppuswami SES classification is based on income, occupation and education so its better than B.G. Prasad SES Classification for assessing SES in urban population but then also other SES indicators remain untouched. In the era of economic inflation and finance facility availability the other indicator like Expenditure and Debt to Asset ratio are also have their weightage. When the health of individual is concerned then living status and housing condition also become important especially for urban population.

Another fact is that B.G. Prasad SES and Kuppuswami SES Classification was developed in early 60's, although they are revised time to time but in present era it does not seems to be in resonance with present situation.

If income per capita of highest score class is compared as per B.G. Prasad SES⁸, Kuppuswami SES¹⁰ and Gaur's SES¹⁸ Classification, it is Rs 4680 and above (as per AICPI April 2012), Rs 30,375 and 30,000 and above respectively which again revealed that P Prasad's SES is far away to even average value of national per capita income as per Ministry of health report¹⁹ which is Rs 33283 (2007-8). Kuppuswami's SES and Gaur's SES classification are almost similar in income assessment but here in Kuppuswami's SES only three SES indicators i.e. income, education and occupation and that to of head of the family's is taken in consideration. It may be difficult for researchers in field settings to arrive at accurate identification of the HOF. If the eldest member of the family is identified as HOF which is quite common for Indian families, the chances of low score in education, occupation and in income may obtained as there has been a remarkable opening up of the Indian economy in the past years.

The SES of the family may also be affected in a large part by how successful a person is in his/her job, which may be whatever. An example may be an unskilled worker doing a simple occupation may have lot of social standing. Another thing is that only regular monthly or annual income may not be a true reflection of the family's economic standing. There are may be one-time monetary gain or loss which may affect SES of family. On the above the past economic conditions of the family can impact their present and future well-being too. So the physical assets possessed by the family are not assessed as by these two prevalent SES scales.

Likewise there is no accountability regarding their savings and expenditure which also affect the social status. In the present scenario where the finance facilities are available for even any household items along with to buy property, vehicle etc, and amount of debts taken should also be taken into consideration for assessing SES.

CONCLUSIONS

Most prevalent SES scales i.e. B.G. Prasad SES and Kuppuswami SES scales have question mark on its relevance in present scenario of changing economy. Their relevance is questionable not only for urban population but for rural population also because the gap between urban and rural is being narrower with the time as far as the economy is concerned.

So there is a urgent need to find some other alternative better SES scale relevant to present scenario rather than using 3-4 decades older SES scales. Gaur's SES status is one which quite in resonance with present situation and is having good applicability and reliability.¹⁶

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