INTRODUCTION:

Measuring socio-economic status is really about measuring differences between people. Many of the research papers use socio-economic status (SES) as an explanatory variable for outcomes such as fertility, health (measured both objectively and as self-reported), injury and propensity for injury, mortality, obesity (waist:hip ratio and BMI (Body Mass Index defined as weight in kilograms divided by height in metres squared)), psychological well-being, disability, chronic and degenerative diseases, and nutrition. From a sociological perspective, social class and socioeconomic status determine life chances. SES has long been a prime predictive variable in epidemiological studies and as a variable driving health and dietary policies. There is a need for redefinition of some relevant items for indicating the SES accurately. However the currently available SES scales are either outdated or there is a need for redefinition of some relevant items for indicating the SES accurately.

SUBJECTS AND METHODS:

Study design:
Cross sectional study was conducted as part of Family and Household survey as per the National Health Mission guidelines.

Study Population:
TP Chatram, Zone 8 of Corporation of Chennai, the field practice area of the medical college.
Sampling:
All Families catered by two ICDS centers (KVN Puram 1 &2) of TP Chatram were selected for the survey. With the proportion of Middle class households being 51%, 440 families would provide results with an absolute accuracy of 5% at a Confidence level of 95% and a 10% allowance for non-response.

Study Instrument:
Socio Economic Status Scoring developed by the Marketing Research Society of India classifies households in India. It's based on two variables:
- Number of “consumer durables” (from a predefined list) owned by the family. The list has 11 items, ranging from ‘electricity connection’ and ‘agricultural land’-to cars and air conditioners (Table 1)
- Education of chief earner (Table 2)
Based on the intersection of both variables, the household is categorised into one of the five groups Class I – Upper; Class II – Upper Middle; Class III – Lower Middle; Class IV – Upper Lower; Class V – Lower Lower;
The same households were also scored for SES using Modified Kuppuswamy’s scale. Details of Occupation and Education of the head of the household and monthly per capita income adjusted for inflation were collected and scored for classifying the household into the five groups as above.

Data Collection:
Data relating to socio economic status was collected along with the other details for family and household survey, by the investigator, from the adult member available at the house during the survey, after getting informed consent.

Data Analysis:
Households’ SES classification into the five classes as per the

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**TABLE 1. Consumer Durables possession measured by the MRSI Scale**
MRCSI Scale and the Modified Kuppuswamy's Scale are expressed as percentages. The agreement between the two set of class for each household is measured by the kappa statistics. Further the degree of correlation between the SES class by both the methods is measured by Spearman's correlation coefficient.

RESULTS:

The study population could be classified into 5 levels of socio economic status. As shown in Table 3 the majority belonged to the upper middle class (62.5% by MRCSI scale and 67% by modified Kuppuswamy’s scale). The two extreme classes were in minimal numbers. (6.6/5.9% in Upper Class and 4.1/4.1%in Lower lower class). An initial analysis of correlation between the two methods showed an impressive Spearman's correlation coefficient ‘r’ of 0.926. The agreement between the two scales of classification shows a kappa of 0.869 which reflects the closeness of the similarity in classification of socio economic status by the two methods.

<table>
<thead>
<tr>
<th>S-E STATUS</th>
<th>MRCSI SCALE</th>
<th>MODIFIED KUPPUSWAMI SCALE</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Number</td>
<td>%</td>
</tr>
<tr>
<td>Upper Class</td>
<td>29</td>
<td>6.59</td>
</tr>
<tr>
<td>Upper Middle Class</td>
<td>275</td>
<td>62.5</td>
</tr>
<tr>
<td>Lower Middle Class</td>
<td>86</td>
<td>19.55</td>
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<tr>
<td>Upper Lower Class</td>
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<td>7.27</td>
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<tr>
<td>Lower Lower Class</td>
<td>18</td>
<td>4.09</td>
</tr>
<tr>
<td>Total</td>
<td>440</td>
<td>100</td>
</tr>
</tbody>
</table>

TABLE 3: Socio Economic Status of study group classified by two scales
DISCUSSION:

SES Measurement in India:

Though UK and USA have been using scales based only on occupation, India had been using different scales giving a continuum of scoring. Prasad’s (1961) classification based on per capita monthly income and later modified in 1968 and 1970 has been extensively used. Kuppuswami scale (1981) is widely used to measure the socio-economic status of an individual in urban community based on three variables namely education, occupation and income. The modification of Kuppuswami scale (Mahajan, 1995) meant to determine the socioeconomic status of family based on education and occupation of head of the family and per capita income. Adjusting income for inflation using All India Consumer Price Index (AICPI) has also become impractical today and has lower validity due to great variations in the Consumer Price Index. The inflation rate was governed by the All India Whole Price Index series, creating an urgent need to link classification with the All India Whole Price Index.

In the rural areas, Pareekh (1981) classification based on nine characteristics namely caste, occupation of family head, education of family head, and level of social participation of family head, landholding, housing, farm power, material possessions and type of family. Other socio economic status scale are Bharadwaj (2001) scale on students, Srivastava (1978) Scale, Kulshrestha (1972) scale and Jalota, et.al. (1970) scale on urban families, Shirpurkar (1967) scale and Rahudkar (1960) scale on farm families. But NSSO uses very peculiar profile termed as MPCE (Monthly Per Capita Expenditure) of a household to assess the socioeconomic status. The MRSI scale used in this study overcomes several limitations of the above SES scales.

a) The household’s assessment of SES is based on the occupation and education of the ‘Head of the household’ in the Kuppuswamy’s scale. However in the current social setting we know the youngsters get better education and technological knowhow and can earn more than the ‘Head of the household’. The MRSI scale instead uses Education of the ‘Chief Earner’ which helps better in classifying the SES.

b) Getting information on ‘Income’ has been controversial with the truth of the amount always being doubtful. Further determinant of inflation (which varies across different goods) is changing from Consumer Price Index to All India Wholesale Price Index. The MRSI scale instead of using ‘Income’ uses possession of ‘Consumer durables’ for measuring economic inequality. The choice of 11 variables (Table 1) has been made based on those which produced the largest Gini coefficient (the measure of inequality).

c) ‘Occupation’ can be measured in different contexts like skilled or unskilled labour, the amount of responsibility assigned like the top manager, middle manager, the ownership status such as self employed, entrepreneur or employed. This can lead to different interpretation across population. The MRSI scale avoids this subjective nature to assessment by not using “occupation” as a variable.

d) This scale is common for both urban and rural population.

The only limitation of this scale is the variability of inequality measure (gini coefficient) with variability of penetration of the consumer durable. (e.g. The penetration of cell phones is so widespread that its possession has a low inequality measure and therefore is not included in the consumer durables list) This may be overcome by periodic assessment of penetration of the consumer durable and the inequality level (Gini coefficient) wherein the list of consumer durables can be changed.

Answering the search for a new alternative to the measurement of Socio Economic Status, the results of the study, show the Socio Economic Status of the study population to be classified almost into similar proportions by both the Kuppuswamy’s scale and MRSI scale. The Spearman’s Correlation Coefficient of 0.926 between the scoring by both Kuppuswamy’s scale and the MRSI Scale shows a strong correlation between the two methods. Further statistical analysis for agreement shows k (kappa) value to be 0.869 which is very good agreement compared against the maximum of 1.

As there has been no ‘Gold Standard’ method available for evaluating the quality of new methods, there are very few comparative studies available in the literature to compare this study results with similar studies.

CONCLUSION:

With very simple method of classification using just two ‘objective’ variables of Education of chief earner and Consumer Durables, the MRSI scale offers a quick and easy method for socio economic classification equivalent to the
Kuppuswamy's scale. However to prove this method to be a replacement for Kuppuswamy's scale, it requires a study which can provide stronger proof of predictive capacity for health or health care outcomes. Therefore the current study results encourage use of MRSI scale at least where quicker assessments are required as in the primary care outpatient setting, till stronger proof of the MRSI scale's superiority is obtained by its prediction of health outcomes.

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