

Modified Kuppuswamy's Socioeconomic Scale: Social Researcher Should Include Updated Income Criteria, 2012

Sir,

Socioeconomic status (SES) is one of the most important social determinants of health and disease, thus, widely studied constructs in the social sciences. Usually composite scales are used to measure SES, which has a combination of social and economic variables. Several ways of measuring SES have been suggested for categorizing different rural and urban populations in last decades.

The most widely used scale for urban populations is Kuppuswamy's socioeconomic scale, which was devised by Kuppuswamy in 1976. Kuppuswamy scale is a composite score of education and occupation of the head of the family along with monthly income of the family, which yields a score of 3-29. This scale classifies the study populations into high, middle, and low SES [Table 1].⁽¹⁾ Usually education and occupation of head of family are not changeable with time. However, the income ranges in the scale lose their relevance following the depreciation in the value of the rupee.⁽²⁾ Steady inflation, lower interest rates, and country's current account deficits are the main factors contributing to fall in the value of currency. Therefore, it is needed to update the scale regularly for socioeconomic classification of study populations. In the past, Kumar⁽³⁾ had tried to update Prasad Scale's income limits using consumer price index (CPI) as a first attempt of its kind. In this letter, we attempted to link income limits of the Kuppuswamy socioeconomic scale with CPI and revised the scale. Such linking of the scale with price index not only makes it relevant and meaningful but also provides a built in opportunity for its constant updating in future.

The family income per month (in rupees) for 1976 was calculated according to base year 1960 = 100 (using the

price index for 1976: 296). These price indexes entail that anything that costs Rs. 100 in 1960 would cost Rs. 296 in 1976. The price indexes were updated for 1982 and again in 2001 assuming them as base year (100).⁽⁴⁾

Table 1: Kuppuswamy socioeconomic scale (Urban, 1976)⁽¹⁾

	Score
Education	
Profession or honours	7
Graduate or post graduate	6
Intermediate or post high school diploma	5
High school certificate	4
Middle school certificate	3
Primary school certificate	2
Illiterate	1
Occupation	
Profession	10
Semi-profession	6
Clerical, shop-owner, farmer	5
Skilled worker	4
Semi-skilled worker	3
Unskilled worker	2
Unemployed	1
Family income per month (in Rs.)	
≥2000	12
1000-1999	10
750-999	6
500-749	4
300-499	3
101-299	2
≤100	1
Socioeconomic class	
Upper	26-29
Upper middle	16-25
Lower middle	11-15
Upper lower	5-10
Lower	0<5

The scale has been revised previously by Mishra *et al.*,⁽²⁾ Kumar *et al.*,⁽⁵⁾ and Patro *et al.*⁽⁶⁾ for 1998 price index,⁽²⁾ Kumar *et al.*,⁽⁵⁾ and Patro *et al.*⁽⁶⁾ Keeping the changing socioeconomic circumstances in mind, income criteria in this paper again revised using the base year of 2001 for All India CPI numbers for industrial workers on base 2001 = 100 (CPI-IW).⁽³⁾ Price index for 2001 according to 1982 base (100) was 458. As per criteria of 1960 (old base), the price index for 1982 was updated at 490. Therefore, we get price index of 1976 converted to new base:

- Price index for 1982 by 1960 base = 490
- Price index for 1982 by 1982 base = 100
- Price index for 1976 by 1960 base = 296
- Price index for 1976 by 1982 base = $296 \div 490/100 = 60.408$.

This means the item which costs Rs. 100 in 1982 was Rs. 60.4 in 1976. Conversion factor for the year 1982 would be 4.90 ($296 \div 60.408$). Conversion factor takes into account the increase in base price index for which it is calculated. Considering the new base (2001), price index for current year (2012) is used to establish new ranges of income. Updated conversion factor can be established using same exercise as follows:

- Price index by old base (1982) for 1998 = 405
- Price index for 2001 by new base (2001) = 100
- Price index by new base (2001) for 1998 = $405 \div 458/100 = 88.428$
- Price index by new base (2001) for 2012 = 208.

Conversion factor for the year 2012 can be achieved by dividing the price index (2012) by 88.428. CPI-IW (base 2001 = 100) shows reference index numbers as 208 on June 2012 as per Labour Bureau, Government of India.⁽⁴⁾ Price index was 88.42 for 1998 and 208 for 2012 so conversion factor with 2001 as new base will be 2.35 ($208 \div 88.42$) [Table 2].^(1,2,4,5)

This revised method for SES has limitations. Educational and occupational factors need to be revised by using suitable survey methods.⁽²⁾ The total family income is being used in this scale, itself is a limiting factor as it does not take into account the family size. In today's time with shrinking family size, best expressed with double income no kid syndrome; a small family with same income will enjoy an upward social mobility. However, this exercise will provide good understanding for deciding the income group in the scale considering the latest available CPI values.

The researchers need to take note of regular update of the CPI values available from Labor Bureau website before

Table 2: Family income (Rs.) per month in the original and modified Kuppuswamy scale[#]

1976	Years		
	1998	2007	2012 (June) (current price index ⁽⁴⁾)
≥2000	≥13,408	≥19,844	≥31,507
1000-1999	6704-13,407	9922-19,843	15,754-31,506
750-999	5028-6703	7441-9921	11,817-15,753
500-749	3352-5027	4961-7440	7878-11,816
300-499	2011-3351	2976-4960	4727-7877
101-299	677-2010	1002-2975	1590-4726
≤100	≤676	≤1001	≤1589

[#]First, second, and third column of the table were adapted from references 1, 2, and 5 respectively

exercising socioeconomic classification of their study population in research.

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References

1. Kuppuswamy B. Manual of Socioeconomic Status (Urban), 1st ed. Delhi: Manasayan; 1981. p. 66-72.
2. Mishra D, Singh HP. Kuppuswamy's socioeconomic status scale – A revision. *Indian J Pediatr* 2003;70:273-4.
3. Kumar P. Social classification – Need for constant updating. *Indian J Community Med* 1993;18:60-1.
4. Labour Bureau, Ministry of Labour, Government of India. Linking factors between new series and old Series. Available from: <http://labourbureau.nic.in/indexes.htm>. [Last accessed on 2012 Aug 7].
5. Kumar N, Shekhar C, Kumar P, Kundu AS. Kuppuswamy's socioeconomic status scale – Updating for 2007. *Indian J Pediatr* 2007;74:1131-2.
6. Patro BK, Jeyashree K, Gupta PK. Kuppuswamy's socioeconomic status scale 2010 the need for periodic revision. *Indian J Pediatr* 2012;79:395-6.

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