



Research Article

DEVELOPMENT AND STANDARDIZATION OF SOCIAL CHANGE INDEX (SCI)

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Abstract: An index is a composite measure of variables and also an accumulation of scores from a variety of individual items. It's useful for representing a specific concept. This paper clearly explains the construction and standardization of index towards social change. For developing the index towards social change, social change indicators were identified and selected based on the score value of composite social change (CSC). The developed index can be used anywhere to measure the change and needs of rural women. It would be helpful for the policy makers and administrators for strengthening rural women.

Keywords: Social change, Index, Quantification of Indicators, Rural women

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Introduction

Many developing countries are seeing increased feminization of agriculture as a result of increased urbanization, the migration of many young men to the cities, commercial farming growth, conflict and climate change. Unfortunately in many rural settings, women's growing labour force participation does not necessarily translate into an improvement in their employment status relative to men or well-being rather; it often results in an increase in their work burden, time and poverty. As rural men folk have migrated from rural areas to urban for seeking high returns for their occupation and improving the life style of the individual, because of that rural men are migrated to the urban areas and also forget their primary occupation of farming due to that now a day's farming as a feminized occupation its leads to rural women themselves taken independent decision regarding farm and home activities. This paper mainly focuses on developing and standardizing of social change index (SCI). This may be helpful to identify the changes and the needs of rural women. Also it would develop or strengthen the policies / new developmental programmes for the betterment of rural women

Materials and Methods:

In this study, Social change Index has been operationalised as the extent to which the existences of selected indicators are perceived by the respondents at a given point of time. Keeping the objectives in view, an attempt has been made to measure the social change perceived by rural women, considering the selected indicators which were identified by perusing the relevant various literature. The detailed procedure given in below

Identification and Scrutiny of Indicators

Identification of indicators for developing a standardized social change index was carried out through perusing the literature. Further scrutiny was done by discussion with extension and sociologist experts from the Department of Agricultural Extension and Rural Sociology of TNAU, IARI, NDRI and Department of Extension Education of Gandhigram Rural University. Based on the preliminary discussion, twenty-two social change indicators were selected.

Relevancy Rating of the Indicators

The final inventory of indicators was subjected to expert opinions. The experts or judges were from the cadres of teaching faculty in extension discipline of TNAU, IARI, NDRI and Gandhigram Rural University. The experts were requested to specify whether each of the identified indicators were relevant and suitable for inclusion in Social Change Index. Their responses were obtained on a three-point continuum viz., 'Most Relevant', 'Relevant' and 'Less Relevant' assessing scores 3, 2 and 1 respectively

$$\text{Relevancy Weightage (RW)} = \frac{(\text{Most Relevant} * 3) + (\text{Relevant} * 2) + (\text{Less Relevant} * 1)}{\text{Maximum Possible Score}}$$

Considering relevancy weightage, the indicators were screened for their relevancy. Accordingly, indicators having relevancy weightage of more than 0.88 were considered for inclusion in Social Change Index. The responses received from the judges were analysed and the Relevancy Weightage (RW) of i^{th} indicator (RW_i) were worked out by using the following formula.

Based on the table 01, Considering the average of relevancy weightage scores (0.88), the components were screened for their relevancy. Accordingly, components having relevancy weightage of more than 0.88 were considered. Using this process, eleven indicators viz., Women empowerment, Working pattern, Economic improvement, Political involvement, Access to infrastructural facilities, Social trust, Social relationships, Social mobility, Family education, Mass media influence, Gender discrimination in farming and Adoption of scientific technologies which have more than 0.88 relevancy weightage scores were selected for the study. Followed by identification of major indicators of Social Change Index, statements were framed for each of the selected major indicator.

Selection of statements

Under each major indicator, the statements were framed based on the perusal of literature and discussion with experts. The statements were edited based on fourteen criteria as suggested [1]. These statements were then subjected to scrutiny by an expert panel of judges to determine the relevancy.

For this purpose, the statements were given to a panel of 50 judges and requested to indicate the appropriateness (relevancy) of each statement for inclusion in the scale. The responses were obtained on three-point continuum viz., 'Most relevant', 'Relevant' and 'Less relevant', with scores of 3, 2 and 1 respectively. Based on judges' responses, the relevancy weightage was worked out for each of the statements by using the formula stated above.

Table-1 List of Selected Social Change Indicators with Their Relevancy Weightage

SN	Indicators	Relative Weightage Score
1	Women empowerment	0.98
2	government policies	0.75
3	Leadership behaviour	0.84
4	Decision making pattern	0.86
5	Multidimensional role	0.75
6	Ownership of Agriculture assets	0.81
7	Working pattern	0.90
8	Mechanization in farming	0.75
9	Contact with primary group	0.78
10	Economic improvement	0.95
11	Political involvement	0.89
12	Involvement of Agripreneurial activities	0.76
13	Access to infrastructure facilities	0.88
14	Social trust	0.89
15	Social relationships	0.92
16	Farm reform	0.84
17	Social mobility	0.92
18	Family education	0.95
19	Access of farm services	0.81
20	Mass media influence	0.89
21	Gender discrimination in farming	0.92
22	Adoption of scientific technologies	0.96
	Average	0.88

Procedure for development of Social Change Index (SI)

The finalized schedule with twelve major indicators and their respective statements were administered to the respondents. The respondents were asked to put forth their choice. The scores were given based on the measurement and scoring procedure developed by (3). The respondents were asked to give their responses based on a three-point continuum viz., 'Agree' (A), 'Undecided' (UD) and 'Disagree' (D) with scores of 3, 2 and 1 respectively

Results and Discussion

Quantification of indicators

Each indicator was measured by means of scoring procedure developed for the study. The procedure has been followed by (2) with necessary modification was used for the study. To evolve a Composite Social Change Index (SCI) and to derive meaningful conclusions, separate index was developed for each indicator. The detailed procedure regarding quantification of each indicator is furnished below

Women Empowerment Index (WEI)

This shows the extent to which rural woman in the farm family avails freedom in decision making. The women empowerment index was worked out by using the following formula.

$$WEI = SWEI_{xi} / TWEI_{yi}$$

Wherein,

WEI = Women Empowerment Index

SWEI = Actual score secured by a rural woman on WE

TWEI = Total possible score secured by rural woman on WE

Thus, calculated WEI score was used further analysis

Working Pattern Index (WPI)

It refers to the time and period of involvement of rural women in farm, home and allied activities. Examples of the indicator include: time spend in home activities i.e. (cooking, washing, children caring) and also farm and allied activities - cultivation practices and animal husbandry management. The working pattern index was worked out by using the following formula.

$$WPI = SWPI_{xi} / TWPI_{yi}$$

Wherein

WPI = Working Pattern index

SWPI = Actual score secured by a rural woman on WP

TWPI = Total possible score secured by rural woman on WP

Thus, calculated WPI score was used further analysis

Economic Improvement Index

This shows the changes in expenditure pattern of farm families in farm and home. Examples of the indicator include: spend money into food, education, health and also spend money into basic inputs in farming, machineries used in farming and labours. The economic importance index was worked out by using the following formula.

$$EII = SEII_{xi} / TEII_{yi}$$

Wherein

EII = Economic Improvement Index

SEII = Actual score secured by a rural woman on EI

TEII = Total possible score secured by rural woman on EI

Thus, calculated EII score was used further analysis

Political Involvement Index

It shows that the participation of rural women in political activities at grass root level. Examples of the indicator include: involvement of women in Local body, MP, MLA elections and also their participation in Women group association and farmers group association. The political involvement index was worked out by using following formula

$$PII = SPII_{xi} / TPII_{yi}$$

Wherein

PII = Political Involvement Index

SPII = Actual score secured by a rural woman on PI

TPII = Total possible score secured by rural woman on PI

Thus, calculated PII score was used further analysis

Access to infrastructural facilities Index

This shows the change in the capacity of rural women to rely on a valid infrastructural setting. Examples of the indicator include: access to school, markets, health facilities and other minimum requirements (e.g. toilets, water and electricity). The access to infrastructural index was worked out by using following formula.

$$AIFI = SAIFI_{xi} / TAIFI_{yi}$$

Wherein

AIFI = Access to infrastructural facilities Index

SAIFI = Actual score secured by a rural woman on AIFI

TAIFI = Total possible score secured by rural woman on AIFI

Thus, calculated AIFI score was used further analysis

Social Trust Index

Social trust denotes the belief in the honesty, integrity and reliability of others in the rural society. Examples of the indicator include: group cohesiveness, mutual cooperation and relationship with one another. The social trust index was worked out by using following formula.

$$STI = SSTI_{xi} / TSTI_{yi}$$

Wherein

STI = Social Trust Index

SSTI = Actual score secured by a rural woman on ST

TSTI = Total possible score secured by rural woman on ST

Thus, calculated STI score was used further analysis

Social Relationship Index

It shows the relationship with other members other than primary group members in rural society. The social relationship index was worked out by using following formula.

$$SRI = SSRI / TSRI$$

Wherein

SRI = Social Relationships Index

SSRI = Actual score secured by a rural woman on SR

TSRI = Total possible score secured by rural woman on SR

Thus, calculated SRI score was used further analysis

Social Mobility Index

Social mobility is the one of the important aspects of social change. It means mobility of household between different positions in social structure. More specifically – mobility out from farming and mobility inside the farming sector. The social mobility index was worked out by using following formula.

$SMI = SSMI / TSMI$

Wherein

SMI = Social Mobility Index

SSMI = Actual score secured by a rural woman on SM

TSMI = Total possible score secured by rural woman on SM

Thus, calculated SMI score was used further analysis

Family Education Index

Family educational it is the freedom for education by the female family members. Examples of the indicator include: family education for entrepreneurial activities and for improves the economic status. The family education index was worked out by using following formula.

$FEI = SFEI / TFEI$

Wherein

FEI = Family Education Index

SFEI= Actual score secured by a rural woman on FE

TFEI= Total possible score secured by rural woman on FE

Thus, calculated FEI score was used further analysis

Mass Media Influence Index

It shows that extent to which the information related to agriculture and allied activities obtained through radio, television and modern gadgets have influenced their farming. The mass media influence index was worked out by using following formula.

$MMII = SMMII / TMMII$

Wherein

MMII = Mass Media Influence Index

SMMII = Actual score secured by a rural woman on MMI

TMMII = Total possible score secured by rural woman on MMI

Thus, calculated MMII score was used further analysis

Gender Discrimination in Farming Index

It refers to the preferential treatment given to one sex over the other in farming situation. Examples of the indicator include: wage disparity and exploiting the workforce. The Gender Discrimination in Farming index was worked out by using following formula.

$GDFI = SGDFI / TGDFI$

Wherein

GDFI = Gender Discrimination in Farming Index

SGDFI = Actual score secured by a rural woman on GDF

TGDFI = Total possible score secured by rural woman on GDF

Thus calculated GDFI score was used further analysis

Adoption of Scientific Technologies Index

It denotes that decision of an individual rural woman or a group of rural women to make full use of an innovation as the best course of action available. The adoption of scientific technologies index was worked out by using following formula.

$ASTI = SASTI / TASTI$

Wherein

ASTI = Adoption of Scientific Technologies Index

SASTI = Actual score secured by a rural woman on AST

TASTI = Total possible score secured by rural woman on AST

Thus calculated ASTI score was used further analysis

Conclusion

This study aims at constructing and standardizing the social change index towards rural women. Based on the literature review 22 social change indicators were identified. Among them twelve indicators were selected based on the expert opinion and also the composite value of the social change index.

Application of research: The developed index can be used anywhere to measure the change and needs of rural women. It would be helpful for the policy makers and administrators to develop suitable coping strategies for towards social change.

Research Category: Extension Education

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