

Standardization And Validation Of A Scale To Measure The Role Performance Of Street Eateries In The Livelihood Aspects Of Street Food Sectors

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Abstract: The street food industry plays an important role in cities and towns of many developing countries particularly India and in meeting the food demands of city dwellers. Role performance in terms of the overt behaviour of an individual, it is more or less a characteristic way in which the individual acts as an occupant of a position. Many past researchers have identified role performance psychological variables to determine the level of role performance. Hence, the necessity to develop a scale to measure the role performance of street eateries in the livelihood aspects of street food sectors, in this context, the present study was undertaken for scale construction by using the Likert scaling technique has been utilized standardization and validation of a scale for administration. The scale was found to be reliable and valid.

Index Terms: Scale development, Likert technique, Standardization and validation, Livelihood aspects of Street Food Sectors.

1 INTRODUCTION

Street eateries and street food are an integral part of urban life, particularly for low income population in Tamil Nadu. Lack of relevant literature on the role of street eateries researcher has found difficulty in review of literature on these scale construction efforts to improve the street eateries research, very few researchers have identified livelihood aspects as one of the important dependent variables that contribute in the street food vendor's research. In these situations it is necessary to develop a new scale. In this context, the present study was undertaken for scale construction by using the Likert scaling technique. To measure the role of street eateries researcher has formulated of 35 statements for measuring street food vendors and 35 items measuring street food consumers. Totally 70 items generated in stepwise to measure street eateries roles in informal sector. Respondents were asked to rate the extent to which they fulfill what is expected of them in terms of different aspects of their street eateries role, using a 5-point Likert-type scale from 1 (strongly disagree) to 5 (strongly agree). Output of these items provides strategies to enable nutrition extension researcher to design and develop their street eateries role to measure by following Likert technique.

2 MATERIALS AND METHODS

Scale development is an integral part of any empirical social research. The scales help the researcher in measuring socio- psychological phenomenon in a simple and accurate manner. Traditionally, scale development research employed a classical measurement paradigm for isolating and quantifying socio- psychological phenomenon, recent advances in the measurement paradigm has brought in various tools and techniques, which drastically changed measurement systems [5]. The systematic construction of the scale through Likert techniques and steps were clearly described as given Figure (see Appendix A).

3 RESULTS AND DISCUSSIONS

3.1 Item collection

In the first step, commonly referred as "item generation," the researcher provides theoretical support for the initial item pool [3]. In this context, informally discuss the issues

with the research committee members, teaching faculties, scientists, extension workers, NGOs and also consult secondary sources. Review related literature to the particular topic of interest and also referred journals, books, articles and internet sources. Source of literature helps in the process of item generation for the scale. Hundred statements about street eateries performance in general were collected initially from all possible sources and then edited on the basis of the criteria suggested by Likert (1932) [4], resulting in rejection of thirty statements. The remaining seventy (35 statements street food vendors and 35 statements street food consumers) statements were retained after deleting ambiguous, irrelevant and non confirming statements as per the above said criteria out of which forty eight were positive and twenty two were negative. Those seventy role statements were provided for judges opinion on a five point continuum ranging from strongly agree to strongly disagree with scores 5, 4, 3, 2 & 1 respectively and was administered to 80 judges with appropriate instruction from the field of agricultural extension, home science extension, nutrition extension and sociology specialist in the Agricultural Universities, Home science colleges, Food and Nutrition research institutes and NGO workers in the street eateries research regarding appropriateness of the items with respect to adequate coverage of the universe. Out of the 80 judges, 60 responded with in a period of one month and changes suggested by judges were included.

3.2 Item analysis

The statements were put in the form of summated rating scale (Likert, 1932) with five points response categories namely Strongly Agree, Agree, Undecided, Disagree and Strongly Disagree with scores of five, four, three, two and one for positive items. The scoring was reversed for the negative items. The scale was administered to sixty street food vendors in a non sample study area. After obtaining the summated score for total statements (seventy) the subjects were arranged in descending order based on their total scores. The twenty five percent of the subjects with highest total scores and the twenty five percent of the subjects with the lowest scores would provide criterion groups in terms of which to evaluate the individual

statements. The middle group was excluded from the analysis.

Table 1: Role performance of street eateries in the livelihood aspects of street food vendors with their "t" values – Item selection

Statement No.	Mean score	Pearson's r	Statement No.	Mean score	Pearson's r
1	3.23	0.87**	19	3.97*	0.60**
2	3.00	0.76**	20	3.63	0.56**
3	4.03*	-0.20NS	21	3.95*	0.42**
4	4.10*	0.57**	22	4.20*	-0.09NS
5	3.33	0.74**	23	3.78*	0.39**
6	3.27	0.19NS	24	3.68*	0.79**
7	3.88*	0.65*	25	3.43	0.85**
8	3.67	0.51*	26	2.58	0.55**
9	3.83*	0.30*	27	2.83	0.37**
10	3.70*	0.28*	28	3.33	0.00NS
11	4.28*	0.53**	29	3.60	0.49**
12	4.50*	0.69**	30	3.62	0.29*
13	3.92*	0.66**	31	4.28*	0.53**
14	3.70*	0.61**	32	3.52	0.64**
15	3.77*	0.37**	33	3.17	0.09NS
16	3.63	0.60**	34	3.80*	0.29*
17	3.92*	0.67**	35	3.32	0.10NS
18	4.25*	0.82**	Grand mean 3.68		

Note: * < 3.68 selected; *p>05, **p<01

The results of the study have been presented in the Table 1 revealed that only 17 out of 35 items were retained. Mean score value for each statement is given in the above table, standardization and administration of the scale. Thus, thirty five statements covering the entire universe of the livelihood aspects of street eateries to street food vendors with highest 'mean' values i.e., more than 3.68 were selected for the scale as they differentiate between high and low groups and based on the mean values rejected 16 out of 35 items. Test the validity of the items was conducted using Pearson Product Moment Correlations using PSPP software. The validity test Product Moment Pearson Correlations done by correlating each items scores with the totally score. The Bivariate correlations of item scores of the scale was computed and found to be significant (0.28 to 0.87) at one percent level of probability. In this context, resulting in rejection of only 18 out of 35 non significant and mean score < 3.68 items, the remaining seventeen items were retained after deleting.

Table 2: Role performance of street eateries in the livelihood aspects of street food consumers with their "t" values – Item selection

Statement No.	Mean score	Pearson's r	Statement No.	Mean score	Pearson's r
1	3.38	0.89**	19	2.75	0.56**
2	3.27	0.58**	20	2.85	0.55*
3	2.37	0.13NS	21	3.60	0.40**
4	2.83	0.65**	22	3.30	0.13NS
5	3.95	0.62**	23	3.87	0.50**
6	3.53	0.25*	24	3.13	0.81**
7	3.45	0.70**	25	3.33	0.71**
8	3.15	0.55**	26	3.87	0.53**
9	3.63	0.32**	27	2.93	0.28*
10	4.18	0.34**	28	4.17	0.18NS

11	3.17	0.50**	29	3.55	0.50**
12	2.78	0.59**	30	4.07	0.29*
13	3.88	0.67**	31	3.28	0.54**
14	3.85	0.59**	32	2.87	0.46**
15	3.52	0.52**	33	2.48	0.04NS
16	3.47	0.67**	34	3.18	0.23
17	2.72	0.65*	35	3.22	-0.17NS
18	3.43	0.73**	Grand mean < 3.34		

Note: * < 3.34 selected; *p>05, **p<01

The results of the study have been presented in the Table 2 revealed that only 15 out of 35 items were retained. Thus, thirty five statements covering the entire universe of the livelihood aspects of street eateries to street food consumers with highest 'mean' values i.e., more than 3.34 were selected for the scale as they differentiate between high and low groups and based on the mean values rejected 20 out of 35 items. Test the validity of the items was conducted using Pearson Product Moment Correlations using PSPP software. The Bivariate correlations of item scores of the scale was computed and found to be significant (0.25 to 0.89) at one percent level of probability. In this context, resulting in rejection of 20 out of 35 non significant and mean score < 3.68 items, the remaining fifteen items were retained after deleting.

3.4 Standardization of the scale

A scale should measure what it intends to measure and it should be consistent in its measurement. A scale thus has to be standardized before it is administered. The present scale developed was also standardized by verifying its reliability and validity.

3.5 Reliability

Reliability is one of the important characteristics of any test. In its simplest sense, reliability refers to the precision, or accuracy, of the measurement of score [6]. Reliability of the scale developed by the researcher was determined by test – retest methods as described below.

3.6 Test-retest reliability

Test-retest reliability refers to the temporal stability of a test from one measurement session to another. The procedure is to administer the test to a group of respondents and then administer the same test to the same respondents at a later date. The correlation between scores on the identical tests given at different times operationally defines its test-retest reliability. In this method, the developed scale was administered to the same 40 respondents after a lapse of fifteen days. The correlation coefficient of scores was obtained (r=0.89) for street food vendors and street food consumers (r=0.74) found to be significant at five percent level of probability. Hence, the scale was highly stable and dependable for measurement of role of street eateries in livelihood aspects of street food vendors and consumers.

3.7 Validation of the scale

Validity is another important attribute of an instrument. Validity means truth or fidelity. In the present study, the validity of the scale was examined with the help of content validity [6].

3.8 Content validity

Content validity is also designated by other terms such as intrinsic validity, relevance, circular validity and representativeness. When a test is constructed so that it's content of term measures what the whole test claims to measure, the test is said to have content or curricular validity. Thus content validity is concerned with the relevance of the contents of the items, individually and as a whole. Each individual item or content of the test should correctly and adequately sample or measure the trait or the variable in question and the test, as a whole, should contain only the representativeness items of the variable to be measured by the test [1]. The contents of role of street eateries in livelihood aspects scale were derived from various literature, expert opinions and feelings, discussions with extension workers, scientists, department officials and progressive street food vendors. The suggestions and remarks of the judges were given due consideration and incorporated in the scale. Care was taken to include all the statements which represented the universe of content of street eateries role in livelihood aspects of street food vendors and thus content validity was ensured.

4 CONCLUSION

The final scale consisting of 15 statements for analyse the role performance of street eateries in the livelihood aspects of street food vendors and 15 statements for analyse the role performance of street eateries in the livelihood aspects of street food consumers, totally 30 statements (see Appendix A and B) for measure the role performance of street eateries in the livelihood aspects of street food sectors in random order were asked to street food vendors and consumers to indicate their strongly agree to strongly disagree for each of the statements provided. The total score for all the statements of each street food vendors and consumers can be worked out and categorized into high, medium and low. The scale developed is not location specific and can be used in any geographical area with slight modifications. The scale was found to be reliable and valid.

5 END SECTIONS

5.1 Appendices

Appendix A

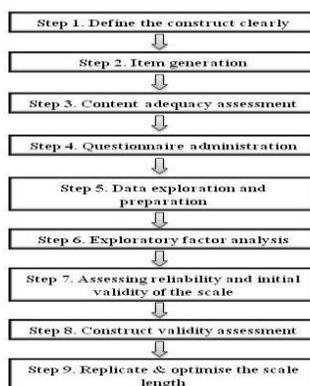


Fig: Modern scale development process adopted DeVellis, 2003 [2] (Source: Sethuraman sivakumar et al, 2017 [5])

Appendix B

Role performance of street eateries in the livelihood aspects of street food vendors

Sl. No	Statements
1	Street food vending is unorganized and diverse as well as informal in nature.
2	Stagnating and falling incomes of households due to poor performance of the economy also leads to increase in entry of street vendors into the market.
3	Street vending is providing practical skills and entrepreneurial talents for a large chunk of people who are cut off from the main stream of life.
4	Street Vended foods in particular is the growing number of urban poor and the mobilization of women into the work force.
5	Street food vending required little capital, family could not miss food and the job was easy among others.
6	Street food vending has been said to be a source of employment elsewhere.
7	Street foods do not only provide income for vending households but are also a direct source of food for household members.
8	Street food vending is an important food supply channel for the urban poor and a source of employment for the unemployed.
9	Street foods trade is also vital for the provision of income to many small farmers who supply these food vendors with local produce, thus stimulating and generating employment in the agricultural sector.
10	Street vended foods play a crucial role in the presentation of traditional and local culture, foods and culinary.
11	SF vending supports local agricultural producers and food processors and contributes to local and natural economic growth.
12	SF vending activity plays a significant role in the informal sector where the opportunity for earning income is rapidly increasing.
13	SF vending as a business, provides a means of livelihood to many unemployed especially, in the Tamil Nadu.
14	Street food trade has emerged as an economic activity and a source of income for the poor in many developing countries.
15	Street food vending was viewed as an emerging enterprise as it provided livelihood for uneducated and school dropouts belonging to low income group family.

Appendix C

Role performance of street eateries in the livelihood aspects of street food consumers

Sl. No	Statements
1	Street vended foods is the crucial role it played in the preservation of traditional and local culture, foods and culinary.
2	Street food as any minimally processed food sold on the street for immediate consumption.
3	Street food played a considerable role in the daily diet of low – income urban workers.
4	Trends in the growth of the economy and the urban population during the previous two decades have contributed to the growth and changing nature of street foods vending.
5	Street food creates opportunities to fight poverty.
6	Street food in particular growing number of urban poor and the mobilization of women in to the work force.
7	Street foods are enjoyed by people from a variety of economic, social, and cultural backgrounds, the particular role they play in providing the urban poor.

8	<i>SF plays an important socioeconomic role in meeting food and nutritional requirements of city consumers at affordable prices to the lower and middle income people.</i>
9	<i>Street food plays a critical role in food security of urban population.</i>
10	<i>Street eateries play a significant role in supplying nutrient needs of urban population.</i>
11	<i>Street food was consuming across all income groups.</i>
12	<i>Street food provides inexpensive and nutritious foods to the less-well-to-do sections of the urban population at convenient places.</i>
13	<i>Street foods play a major role in the nutritional intake of urban and peri-urban dweller.</i>
14	<i>Street foods might provide a good target for improving the diet of the urban poor in terms of amount, variety and nutritional quality.</i>
15	<i>The consumers generally welcome street foods as a source of easily accessible, relatively safe, affordable nutritious and decorous foods.</i>

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5.3 Conflicts of interest: The authors declare that they have no conflicts of interest.

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