

# Quality Control Aspects of Self Help Group (SHG) Products

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## ABSTRACT

The purpose of this research work is to study the quality control aspects of Self Help Groups (SHGs) in the Union Territory of Puducherry region. The research variables were identified from the literature review relating to quality control of SHG and primary data of 251 random sample of SHGs was collected through survey method using well-structured questionnaire. The statistical package of SPSS was utilized to analyze the data using the statistical techniques of descriptive statistics with frequency analysis and simple mean. Majority of the groups consisting of 32.7% have not adopted any machines for testing quality of output. While a good proportion of the groups consisting of 29.1% have about two machines to test quality features, also a good proportion consisting of 21.5% are using one machine to test quality and it can be concluded that the majority have not adopted machines in sufficient number to test for quality.

## 1. Introduction

Self Help Groups (SHG) are small, homogenous, affinity groups from the poorer sections of society who, have voluntarily come together to save small amounts regularly which is deposited in a common fund to meet the members emergency needs and to obtain collateral free loans as decided by the group (Adams, 2009). The SHG is an informal group of persons numbering between 10 and 20 people from the economically poorer section of the society. SHG can also be described as a formal group of persons, which has been created for the purpose of collective support towards the process of empowerment and financial independence (Basargekar, 2008). The SHG formation and group activity and has been evolved due to the various prevalent social conditions in society which may be dependency of women, large family size, low literacy rate, lack of funds, and lack of technical skills by vast sections of society (Ahluwalia, Carter, & Chenery, 1979). The guiding principle of SHG formation and functioning is mutual trust and mutual support where individuals are equal and made responsible for actions while the group development is the primary motive of functioning and all decisions are made through consensus. Many definitions have been made of the SHG. As per Shanmugam (1991) A women's SHG is a small economically homogenous affinity group of rural poor women, voluntarily coming together to save a small amount of money regularly, to agree to contribute to a common cause, to meet emergent needs on a mutual help basis, to practice collective decision making, to solve conflicts through leadership and to provide collateral free loans with terms and conditions decided by the group (Copestake, 2007).

The microfinance scheme was also introduced as a measure to reduce poverty by providing access of finance to the vast number of poor in India (Bhole & Ogden, 2010). Microfinance consists of two types of schemes; the first is individual lending scheme and the second the more popular group lending scheme (Eapen, 1996). This micro financing has

been introduced to enable poorer sections to commence and operate economically viable activities through the formation of microenterprises as Self Help Groups (SHGs). The SHGs are small groups being formed for savings, developing thrift and obtaining collateral free loans called microcredit (Shanmugam, 1991). These microenterprises have been formed by the Self Help Groups to run operations pertaining to sustainable income generating activities (Awa, Kalu, & Awara, 2010) and this study will help to understand and answer the research questions to quality control aspects of Self Help Group (SHG) Products in Puducherry region (Ganeshkumar & Nambirajan, 2013).

## 2. Review of literature

Gunasekaran, Patel, and McGaughey (2004) explains that value chain and quality management has become an important strategic function in today's organizations. Supplier partnership deals with a more exclusive relationship between manufacturers to reduce uncertainty. The improved value chain would have the benefit of improving the operations (Geertz, 1962). The authors note that many organizations have not been able to improve the supply chains because of their inability to find the performance metrics for it. They also state that the performance measures are incomplete as far as industries are concerned (Heilman & Chen, 2003). The authors have stated the metrics can be in terms of order entry, order lead time, customer order path and evaluation of supplier in terms of speed, quality and cost (Siddhartha, Nambirajan, & Ganeshkumar, 2017). The authors note that the evaluation can be made at the production level through range of products, capacity utilization and effectiveness of scheduling (Ganeshkumar, Pachayappan, & Madanmohan, 2017). Also the measures of delivery performance can be done through on-time delivery, lead-time in delivery, quantity in transit, flexibility in delivery and cost of delivery (Howells, 1999). The findings of the study shows that supplier delivery performance was most important followed by supplier lead time. The results of the production metrics showed that

percentage defect was most important followed cost of operation. In terms of delivery the most important factor was quality if delivered goods followed by on-time delivery. The authors note that 66% of the respondents have indicated a positive impact of SCM on market share (Imai, Arun, & Annim, 2010).

Lee (2004) who states that efficient supply chains become uncompetitive as they do not adapt to change. Some of which may be non-delivery of products, wrong quantity delivered, wrong product delivered, delivery of damaged product, using wrong packing, delivered to wrong person or wrong place of delivery (Jamshi & Ganeshkumar, 2017). Improper supply chain practices can lead to supply chain disruptions which can produce detrimental impacts on the organization through loss of productivity, customer complaints, increased cost, loss of revenue, damage to brand, product release delay, increased product returns and delayed cash flows (Kanitkar, 1994). Many of the supply chain disruptions that are encountered by organizations can also be caused due to external factors which are beyond the control of organizations. Some such external factors leading to supply chain disruptions can be natural calamities, weather, fire, currency fluctuations, technical malfunctions, regulations, logistics disruption, product quality and outsource service failure and also many more such uncontrollable external factors (Midgley, 2008, Thyagarajan et al, 2018a&b).

### 3. Research methodology

The purpose of the research work is to analyze and describe the quality control aspects of Self Help Groups. It can be hence understood that the research is descriptive in nature. First, Subject experts' options survey was conducted on the identified variable for questionnaire validity checking and required corrections were incorporated (Ganeshkumar & Mohan, 2014; Ganeshkumar & Nambirajan, 2013). The pilot survey of 30 SHGs was collected and initial Cronbach's- alpha value were estimated for checking the reliability of the questionnaire. Primary data for the main study was collected through the survey method of 251 random sample of SHGs were identified from the list of SHG maintained in the various banks, NGOs and Municipal bodies. The data was collected from the members and group leaders of SHGs by means of well-structured questionnaire. The statistical package of SPSS was utilized to analyze the data using the statistical tools descriptive statistics with frequency analysis and simple mean (Hair, Black, Babin, Anderson, & Tatham, 2006).

### 4. Results and discussion

A profile of the sample Self Help Groups (SHG) studied is portrayed in this section. Details such as number of years of functioning of the SHG, savings rate, number of products made, categories of products made and number of machines for quality control.

#### 4.1 Number of years of functioning

The duration of functioning of the SHG signifies its ability to sustain its operations. Based on the number of years functioning the SHG the SHG have been categorized as those

functioning less than one year, from one to two years, two to three years, three to four years and four years and greater.

**Table 1 Number of years functioning**

No of Years	Frequency	Percentage
Less than 1	5	2.0
1-2	59	23.5
2-3	85	33.9
3-4	38	15.1
> 4	64	25.5
Total	251	100.0

From the above table it can be inferred that the majority of SHG consisting of 33.9% are functioning for a period of 2-3 years, while good percentage such as 23.5% are functioning for a period of 1-2 years. Also a good percentage of the SHG, about 25.5% are functioning for a period greater than 4 years. A significant number comprising of 15.1% are functioning for a period between 3-4 years. An insignificant number of SHGs consisting of 2% have been functioning for less than one year. It can be concluded that the majority of the SHG in the study are functioning for a period between 2-3 years' time.

#### 4.2 Savings Rate

The savings rate of the SHG signifies the amount that they are willing to save for the purposes of developing thrift. The savings rate has been categorized as those saving below Rs.50 per month, those savings between Rs.51-100 per month, those savings between Rs.101-150 per month, those saving between Rs.151-200 per month and those groups saving greater than Rs.200 per month.

**Table 2 Savings Rate**

Savings Rate	Frequency	Percentage
Below Rs.50	8	3.2
Rs.51-100	174	69.3
Rs.101-150	32	12.7
Rs.151-200	21	8.4
Greater Than Rs.200	16	6.4
Total	251	100.0

From the above table it can be inferred that the majority of groups which is 69.3% of them have adopted a savings rate of Rs.51-100 wherein the majority have adopted Rs.100 as an ideal rate of savings, a good number of groups consisting of 12.7% of the groups have adopted a savings rate of Rs. 101-150, while a smaller proportion of 8.4% of the groups have adopted a savings rate of Rs.151-200. A much smaller number of groups consisting of 6.4% of the groups have adopted Rs.200 and greater as savings rate.

#### 4.3 Category of Products Made by SHG

The product categories made indicates the different choices of products and skills to make such products. The

different varieties of products produced and services provided which have been selected by the group for making indicates those products which are being most preferred by the groups for the purpose of manufacturing and providing service. The popularity of the product also indicates the general demand for these products presently which can also be inferred through this list. The list of products that have been included in this list are Tailoring activity, Catering service, Ready-to-eat snacks,

Handicrafts, papads, milk production, pickle making, cosmetic products, agriculture activity, fruit and fruit product providing, toys, bakery and others indicating those that are other than these products. The list includes those groups which are producing more than one product therefore the percentage of each category of product as producing and not producing is shown.

**Table 3 Category of Products**

S.No	Product category	Yes		No		Total
		Count	%	Count	%	
1	Tailoring	147	58.57	104	41.43	251
2	Catering	86	34.26	165	65.74	251
3	Ready to Eat Snacks	68	27.09	183	72.91	251
4	Handicrafts	65	25.90	186	74.10	251
5	Papad	57	22.71	194	77.29	251
6	Milk	54	21.51	197	78.49	251
7	Pickles	52	20.72	199	79.28	251
8	Others	51	20.32	200	79.68	251
9	Cosmetics	47	18.73	204	81.27	251
10	Agriculture	40	15.94	211	84.06	251
11	Fruit and fruit products	35	13.94	216	86.06	251
12	Toys	20	7.97	231	92.03	251
13	Bakery	13	5.18	238	94.82	251

From the above table 4.3, it can be interpreted that the product categories that are most preferred to be made by the SHG's are in the order as given shows that Tailoring where 58.6% of the groups are involved in this activity. This is followed by catering of food through small catering outlets where 34.3% of the groups are involved. This is followed by snack foods consisting of snacks and savories wherein 27.5% of the groups are involved. This is followed by handicrafts making being done by 25.9% of the groups, followed by Papad production being done by 22.71% of the groups, followed by dairying being done by 21.51% of the groups. This is followed by pickle making which is being done by 20.72% of the groups. This product is followed by other products mainly consisting of fish sales, flower and garland (and flower bouquet) making. This is followed by cosmetics products making being done by 18.73% of the groups, which is followed by agricultural activity being done by 15.94% of the groups. This is followed by Fruit and fruit juice sales being done by 13.94% of the groups. This is followed by toy making being performed by 7.97% of the groups and Bakery products making by 5.18% of the groups.

#### 4.4 Number of Products Made

The number of products made indicates the versatility of the group members in production. The greater the number of products a group is producing indicates that the capabilities of the group is quite divergent and is indicative of the many skills obtained by the group members. The number of products made have been categorized as no products produced, single product produced per group, two products produced per group, three products produced per group, four products produced per

group and greater than four products produced and has been portrayed in Table 3

**Table 4 Number of Products Made**

Number of Products Made	Frequency	Percentage
No Products	8	3.2
One Product	46	18.3
Two Products	82	32.7
Three Products	45	17.9
Four Products	35	13.9
> than Four Products	35	13.9
Total	251	100.0

From Table 4 it can be inferred that the largest number which constitutes 32.7% of the groups are capable of producing two products, while a good proportion consisting of 17.9% are producing up to three products. A substantial 13.9% of groups are producing four products and a similar percentage is also producing greater than four products which indicates the increasing skill levels of the groups.

#### 4.5 Number of Quality Control Machines

The output quality of production is maintained through the quality control and quality testing machines. The more number of machines used during the various stages of production indicates the improved quality of output by the groups. The number of machines being used in quality control are shown in the table below.

**Table 5** Number of Quality Control Machines

Number of Quality Control Machines	Frequency	Percent
None	82	32.7
One Machine	54	21.5
Two Machines	73	29.1
Three Machines	22	8.8
Four and Greater	20	8.0
Total	251	100.0

From the above table 5 it can be inferred that the majority of the groups consisting of 32.7% have not adopted any machines for testing quality of output. While a good proportion of the groups consisting of 29.1% have about two machines to test quality features, also a good proportion consisting of 21.5% are using one machine to test quality. While a small proportion consisting of 8.8% are using three machines and similar proportion of 8% of groups are using four and greater machines to test quality. Therefore it can be concluded that the majority have not adopted machines in sufficient number to test for quality.

## 5. Conclusions and Implication

The research results depicts that Majority of SHG consisting of 33.9% are functioning for a period of 2-3 years, while good percentage such as 23.5% are functioning for a period of 1-2 years. Also a good percentage of the SHG,

about 25.5% are functioning for a period greater than 4 years. Majority of groups which is 69.3% of them have adopted a savings rate of Rs.51-100. Product categories that are most preferred to be made by the SHG's are in the order as given shows that Tailoring where 58.6% of the groups are involved in this activity. This is followed by catering of food through small catering outlets where 34.3% of the groups are evolved. This is followed by snack foods consisting of snacks and savories wherein 27.5% of the groups are involved. This is followed by handicrafts making being done by 25.9% of the groups, followed by Papad production being done by 22.71% of the groups, followed by dairying being done by 21.51% of the groups. largest number which constitutes 32.7% of the groups are capable of producing two products, while a good proportion consisting of 17.9% are producing up to three products. A substantial 13.9% of groups are producing four products and a similar percentage is also producing greater than four products which indicates the increasing skill levels of the groups. Majority of the groups consisting of 32.7% have not adopted any machines for testing quality of output and can be concluded that the majority have not adopted machines in sufficient number to test for quality. The research study endeavors to study the various distribution activities performed by the SHG in the Union Territory of Puducherry Region. The study will be a useful guide for making strategic decisions for the development of SHGs. Thus this research will be of immense utility to the Government, Banks, Microfinance Organizations and other policy makers.

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