

International Journal of Productivity and Quality Management

ISSN online: 1746-6482 - ISSN print: 1746-6474

<https://www.inderscience.com/ijpqm>

Productivity of women self-help groups through quality training and capacity building

Sarmistha Apat, Snigdha Mohapatra

DOI: [10.1504/IJPOM.2023.10055591](https://doi.org/10.1504/IJPOM.2023.10055591)

Article History:

Received:	29 October 2022
Last revised:	02 February 2023
Accepted:	18 February 2023
Published online:	16 January 2025

Productivity of women self-help groups through quality training and capacity building

Sarmistha Apat* and Snigdha Mohapatra

Birla School of Management,
Birla Global University,
Bhubaneswar, India
Email: sapat.scholar17@bgu.ac.in
Email: snigdha.mohapatra@bgu.ac.in
*Corresponding author

Abstract: This research evaluates the impact of training and capacity building towards enhancing the performance of women self-help groups (SHGs) in the context of an emerging economy. Based on the insights from prior studies, this research identifies certain gaps and attempts to fill the vacuum in the literature of rural empowerment, mainly through SHGs. The hypothesised model was empirically tested using structural equation modelling with 418 responses drawn from survey participants. The findings exhibit training positively drive SHGs' performance, while, the link between training and capacity building was also found statistically significant and positive. Moreover, capacity building acted as a potential mediator in the path from training to SHG performance. The findings provide new and interesting insights to facilitate conceptual development and policy formulation. Consequently, this study evidences the vitality of implementing capacity-building and quality training measures to empower and provide economic independence to the underprivileged women in the rural areas.

Keywords: capacity building; quality training; productivity; performance; self-help groups; SHGs.

Reference to this paper should be made as follows: Apat, S. and Mohapatra, S. (2025) 'Productivity of women self-help groups through quality training and capacity building', *Int. J. Productivity and Quality Management*, Vol. 44, No. 1, pp.1–17.

Biographical notes: Sarmistha Apat is a PhD scholar in OB and HR at the Birla Global University, Bhubaneswar, Odisha, India. She has completed her MBA in Human Resource Fakir Mohan University, Balasore, Odisha. She is has an MSc in Mathematics from the Osmania University, A.P. Her area of research is women empowerment, capacity building and team performance of women SHGs in Odisha. She believes in hard-work to get success in life.

Snigdha Mohapatra is an Assistant Professor in HR and OB at the Birla Global University. She has done her PhD in Business Administration from the Utkal University, Bhubaneswar. She is MPhil and MA in Psychology, and MBA in HRM. She is a Merit Certificate awardee in MA (Psychology). Her teaching expertise includes behavioural psychology and her areas of research interest are emotional intelligence, shopper psychology and employee engagement. She has more than a decade of experience in teaching and research. She was a FDP coordinator for conducting a number of AICTE sponsored faculty development programs and national seminars.

1 Introduction

Self-help groups (SHGs), also known as SHGs, have emerged as a key agent of transformation in rural areas, significantly improving the lives of those who were previously marginalised (Nichols, 2021). Recognising that issues can be fixed alone or by a single institution, small voluntary groups get together to pool their resources, abilities, and talent in order to improve their lives (Kumar et al., 2019; Gugerty et al., 2019). This helps people realise that issues can be fixed alone or by a single agency. SHGs encourage people who are economically disadvantaged and socially marginalised to work together to find solutions to the challenges they face, and this strategy has been implemented by both the government and non-governmental organisations with great success to accomplish a variety of objectives (Yadav, 2021). They are intended to mobilise people, make them financially viable to some extent, give them some voice, and build people's organisations that will overcome these obstacles to engagement and involvement in rural communities (Ahmad et al., 2020; de Boef et al., 2021). These goals can be accomplished through a variety of means. To be more specific, the formation of groups, the conception of a 'community', and the growth of equitable relationships among the individuals who make up a village are essential components of the self-help ideal.

Over the course of the past two decades, ever since the pioneering microfinance model was first conceptualised, a great number of pilot research and studies have been carried out to investigate the multifaceted importance of the SHG-approach, which was essential in contributing a major impetus to the nation's regional sustainable growth. But there are still a lot of issues and difficulties that hinders the overall performance of the SHGs (Chakraborty et al., 2019; Pathak and Pant, 2018; Yadav, 2021). Even though having access to financial services is a significant factor in low-income women's increased economic output and improved social well-being, this factor alone does not automatically confer power on women.

Training is required for members of SHGs so that they can become financially independent and use the credit for their own businesses (Kwarteng, 2022; Kaur et al., 2019; Sajeev and Singha, 2016). Further, the members of the SHG are unable to engage in appropriate forms of entrepreneurial activity because there are either no or not enough measures for building capacity and skill development (Imbaya et al., 2019; Franco and Tracey, 2019). When starting their own businesses, members of SHGs frequently discover that they are deficient in marketing skills due to a lack of adequate training. Prior studies have identified that aspects of accessibility of existing networks, skill upgradation training, community support groups, access to microcredit and loans, and other such measures contribute positively towards enhanced participation and performance of the SHGs (Chaskin, 2001; Wang et al., 2020; Franco and Tracey, 2019).

In the context of emerging economies, both the scholarly community and policymakers have shown their consensus on the role of women SHGs to drive economic independence, empowerment, and welfare in the rural areas (Aggarwal et al., 2023). However, there is a dearth of studies that have explore the effect of training and capacity building initiatives on the overall performance of the SHG members, especially in the emerging countries. In response, this study aims to investigate the linkage between training, capacity building, and SHG performance by testing an empirical model in the Indian context. The findings will provide newer insights to extend the domain knowledge as well as assist to formulate effective strategies that can benefit the rural and underprivileged women. The remaining section of this article follows the given sequence.

In the initial section, the authors discuss the prior studies conducted in the context of training, capacity building, and SHG performance. The context of capacity building, Sections 2 and 3 describe the methodology and provides the empirical results. The subsequent section elaborately discusses the findings with reference to the literature and highlights the contribution of this study. The final section presents the research implications, limitations, and future research scope.

2 Theoretical background

2.1 Linkage between training and performance

Thomas (1997) proposed that proper employee training provides workers with the knowledge and abilities necessary for them to become more effective and productive in their jobs. In addition, employees who receive adequate training frequently report higher levels of motivation and morale. This is because they have the impression that the company has decided to invest in their capacity and growth. A further effect of this is a decrease in employee turnover rates. According to the findings of Devins and Gold (2014), qualified workers often work effectively as team members because all members are aware of the requirements and are able to achieve them together in an easy and coordinated manner.

When it comes to efficiency, an institution is only as good as the people who are employed there. It is a well-known fact that the calibre of an organisation's workforce directly influences the standard of the products and services that it can offer to its customers. Cascio (1993) pointed out effectiveness as a worker's completion of goals that were delegated to them, whereas Cole et al. (1993) described training as any learning program that is aimed towards the acquirement of particular skills and knowledge for the purposes of an individual's job. Cascio further proposed that there should be pre-determined basic standards against which exact performances are assessed, and that if there is not any law of quantification, it will be hard to evaluate performance. To put it another way, before it is possible to assert that individuals are failing to meet performance requirements; there must first be performance standards in place (Soundararajan and Reddy, 2020).

The literature has demonstrated beyond a reasonable doubt that there is a link between employee performance and training. As per Abay and Perkins (2010), a healthy relation was identified to exist among the development of staff and the effectiveness of those workers as a means of completing various activities. It was discovered that workers who had participated in trainings were better able to perform a variety of tasks, and the same was true for the other way around. The employees' performance on the job is directly related to the training they receive. Yamoah (2013), Jagero et al. (2012) and Saeed and Asghar (2012) all came to similar conclusions in their respective studies. On the other hand, Jagero et al. (2012) postulated that while training is a component in performance of work, the collaboration of things such as the workplace environment, worker knowledge and abilities, inspiration and benefits, and interaction is what truly determines performance at the workplace. Team members who have received training tend to have greater self-assurance in their abilities to perform and make decisions. In addition, members who participate in ongoing training are more likely to be adaptable to new circumstances and generate novel concepts. Therefore, such team members are more

likely to demonstrate the capacity to learn, retain, and apply new information through the completion of training courses because they have expanded their skill set. They can also take the onus of training other members in the groups and showcase their leadership skills (Abbas et al., 2021).

Microfinance operations also aid in the inculcation of important financial habits that are necessary for self-sufficiency and economic independence overall. Members of a SHG who develop acceptable credit plans have the power to change themselves into units of social and economic empowerment, as well as to lift themselves out of their socio-economic plight. As a result, the SHG plan provides women with opportunities for educational programs, awareness campaigns, and other activities (Joshi, 2019). Periodicity of, timely actions on training, assistance, service delivery, and group meetings are functional characteristics that influence the SHG's performance. Team features such as liberty of involvement, team development metrics, face-to-face interaction, decision-making, resolving conflict, group uniformity, and empathy have been discovered to play a significant role in determining the efficiency that leads to group cohesion and improved SHG performance (Patil et al., 2021; Sundaram, 2012). Based on the above discussion, we posit the hypothesis that:

H1 Training has a positive and significant role towards enhancing the performance of women SHGs.

2.2 Linkage between training and capacity building

Training is an essential component in the progression of human performance in a specific setting and environment. After completing the training, trainees will have benefited from a methodical increase in their knowledge and skills, which will enable them to perform the responsibility assigned to them in an effective and efficient manner. Training is the process of acquiring new skills, attitudes, and knowledge in the frame of reference of trying to prepare for entry into a profession or trying to improve one's organisational productivity or enterprise. Training can take place in a classroom setting or in the workplace. For a training session to be effective, it is necessary to have a crystal-clear image of how the apprentices will need to use the data after the coaching in place of the local practises that they had previously adopted in their situation. A more systematic and planned attempt to alter or acquire knowledge, skills, and other attributes through the accumulation of learning experiences in order to ensure efficient performance in an action or number of options is what we mean when we talk about training. Before organisations will be prepared to invest in "capacity building" initiatives like literacy classes, for example, they need to be able to prove that they will profit from the training (Kwarteng, 2022).

A significant amount of the academic research defines capacity building in a broad sense as a measurement of a community's ability to adjust to difficulties or possibilities and/or effect changes in accordance with the goals of the community (Clinch, 2008). Building people's capacities means providing them with the tools they need to realise their full collective and individual possibility as valuable contributors to society. According to Smith et al. (2001) and Kaur and Kalra (2018) capacity building is defined as a process in which members of a community recognise the strengths and needs of the community, and then establish ways to maximise the community's strong points in order to meet the specific needs. The purpose of this endeavour is to improve the skills and

abilities of community members so that they are better able to recognise the requirements of their neighbours and contribute to the fulfilment of those requirements.

Building people's capabilities is an essential tactic, as it gives rural communities the ability to react and contribute to the advancement of rural cooperatives. It is an essential step towards building the abilities and community structures required for rural development and empowerment for rural communities to have the ability to both mobilise resources from within the society and negotiate resources from outside the community. The importance of skill-based efforts in promoting community empowerment and economic development has long been acknowledged, with a particular emphasis on ability building and training (Moreno et al., 2017; Niaghi, 2019). Capacity building is described as a process that includes various aspects or levels, as well as a specific purpose or goal (Simmons et al., 2011). Along the same lines, Flaspohler et al. (2008) put forward the view that capacity building involves a complicated system that can occur at the organisational, community, and individual levels.

According to Metcalfe (2011), capacity building entails, deploying, maintaining, and developing the ability to achieve growth targets such as increased self-sufficiency, improved overall standard of living, and poverty reduction. This illustration depicts capacity-building methods that primarily rely and expand on existing community resources and competencies (Imbaya et al., 2019; Vallejo and Wehn, 2016). These programs provide critical information and support to localised communities and groups, potentially leading to the building of networks (informal and formal). Occupational training, networking and participation, social awareness, skill upgrading, and other aspects of capacity building have been mentioned in the literature (Cornelius et al., 2008; McClenachan et al., 2014; Franco and Tracey, 2019). In spite of the fact that other studies have been conducted to investigate capacity development in health promotion activities and in the agricultural sector, it is worthwhile to investigate capacity building in the context of SHGs that are active in rural areas. As a result, we propose the following hypothesis:

H2 Training positively and significantly influences the capacity building of the women SHGs.

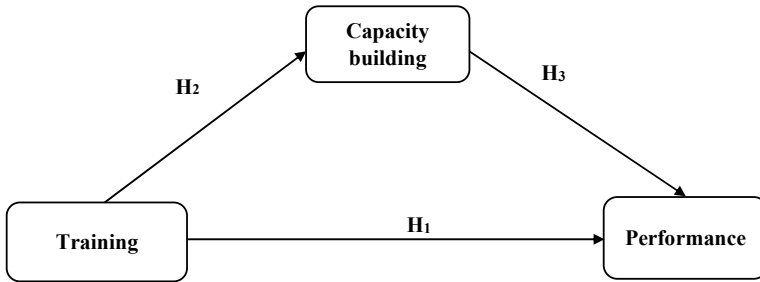
2.3 Mediating role of capacity building in the link between training and SHG performance

According to Flaspohler et al. (2008), capacity building is an intricate mechanism that can occur at the individual, organisational, or community level. This system comprises of the abilities, motivations, knowledge, and behaviours that are necessary for a sustainable livelihood. The social cognition theory (SCT) serves as the theoretical foundation for the fundamental premise of capacity building. Bandura et al. (1999) asserts that SCT allows for a comprehension of the environmental drivers and psychological components of learning and covert empowerment. This theory provides a perspective of capability development that varies depending on the cultural experiences, thought processes, and societal norms that are being compared. In addition to this, it recognises the impact that the local culture has had on the knowledge development and explanations.

The capacity building of SHGs is being carried out by a variety of development organisations, such as non-government and governmental organisations as well as private sector institutions, all of which recognise that SHGs can be a promising technique in the

empowerment of rural poor, particularly rural women. Involvement in SHGs happen because of people's knowledge of their perceived requirements, as well as their belief in their own capacity to dislodge and confront their constraints, as well as their belief in their ability to deal with their problems, either individually or collectively (Muhammad and Ndaej, 2013; Aggarwal et al., 2023). It has been demonstrated in the studies (Ibrahim et al., 2018; Basargekar, 2010) that SHG involvement is strongly associated with increased self-efficacy and self-confidence, as well as increased civic responsibility and political effectiveness. Furthermore, the institutional arrangements that have been developed at the community level provide an effective mechanism for resolving disputes.

Figure 1 Hypothesised research model



Note: Capacity building is the mediating variable.

External intervention is sought for the purposes of facilitation and arbitrage, among other things. As a result, at the level of local communities, SHGs may be the most suitable organisation to assist in the resolution of such conflicts. Women's participation in development projects via SHGs can efficiently raise awareness about the importance of long-term sustainable growth (Khatibi and Indira, 2011; Aggarwal et al., 2023). There is evidence to suggest that the participation of women increases the effectiveness and long-term viability of programs (Khatibi and Indira, 2011). Kisera (2015) investigated the factors that influence women's SHG performance and found that training and capacity buildings are vital factors. According to the findings, SHG members who consistently attended meetings benefited from such activities and develop managerial abilities and self-confidence. Further, the performance of SHGs is impacted by the importance of individual characteristics such as trust among the members (Jones, 2004), motivation to join SHGs (Bharamappanavara and Jose, 2015), and participation in SHG activities and meetings (Bhoj et al., 2014), which can be increased through effective training and capacity building programs. Therefore, we posit the following hypothesis:

H3 Capacity building mediates the positive association between training and performance of the women SHGs.

Figure 1 shows the hypothesised research model involving the study constructs. The model will be empirically validated to affirm the interrelationships between these three constructs and the above mentioned hypotheses.

3 Methodology

3.1 Research context, sampling and data collection

The present research conducted an opinion survey of 435 members of the women SHGs using non-probability method – convenience sampling. In this regard, the survey participants were contacted to seek their approval regarding voluntarily participating in the survey process. Regarding the contextual choice, this study focused on the SHGs operating in Odisha, India. The purpose of these SHGs is to empower rural women and assist them in ensuring a basic income for their families. In Odisha, SHGs have emerged as important agents of social transformation. One of the most innovative things that the state of Odisha has done recently is to make it possible for government agencies to buy goods or services from SHGs in the amount of Rs.5,000 crores over the next five years. In accordance with the decision, the SHGs are going to be given a total of 50,000 crore worth of bank credit over the course of the next five years.

The Government of Odisha will train approximately 40 lakh members of SHGs as part of its livelihood projects and capacity building programs over the course of the next five years, which is another essential part or milestone that is to be accomplished in this time period. The Government of Odisha has made the decision to enhance the Mission Shakti SHG network throughout the state as part of a new initiative that will be launched in partnership with the United Nations Population Fund, India (UNFPA). This will help to speed up improvements and bridge financial, digital, and social gaps in the state. Consequently, this segment of respondents offers an appropriate context to minutely understand the concept of SHGs and its related outcomes.

3.2 Questionnaire design

The research instrument (questionnaire) of the study was framed to minimise the chances of response bias. Based on cues from the extant literature, the questionnaire items were developed and modified to suit the study objectives. Therefore, the chances of respondent confusion and response errors were reduced to considerable extent. The questionnaire comprises specific queries on the model constructs. To gather the required responses, a seven-point Likert scale was used, where 7 denotes ‘strongly agree’ while 1 implies ‘strongly disagree’ (Misra and Panda, 2017a, 2017b). The questionnaire was pre-tested for ensuring appropriateness. In totality, 435 responses were collected from the survey participants. The final analysis incorporated 418 usable responses, and we also ensured minimal sampling bias in the study.

4 Data analysis and results

4.1 Descriptive statistics, normality, and reliability estimation

At the initial level, descriptive statistics and normality assessment were conducted to assess and understand the data pattern and characteristics. The preliminary evaluation provides relevant insights regarding the data properties through mean, standard deviation, skewness, and kurtosis estimates. The primary aim behind descriptive statistics revolves around minimising the data into a considerable number of summarised analytics (Misra

and Panda, 2019a). Accordingly, the measures of central tendency affirm the normality of the dataset. Table 1 exhibits the descriptive of the study items.

Table 1 Descriptive statistics

<i>Items</i>	<i>Mean</i>	<i>Std. deviation</i>	<i>Skewness</i>	<i>Kurtosis</i>
TR1	5.787	1.061	-1.028	1.270
TR2	5.885	0.912	-1.031	1.234
TR3	5.835	0.986	-1.156	1.819
TR4	5.806	1.063	-0.870	0.193
TR5	5.969	1.190	-1.218	1.070
TR6	5.847	1.118	-1.264	1.309
CB1	5.146	1.307	-1.322	0.643
CB2	5.201	1.253	-1.501	1.365
CB3	5.359	1.219	-1.686	2.092
CB4	5.050	1.290	-1.057	0.244
CB5	5.246	1.242	-1.449	1.240
PF1	5.861	0.784	-1.863	3.325
PF2	5.743	0.789	-1.320	3.369
PF3	5.528	1.362	-0.996	-0.381
PF4	5.602	1.356	-1.085	0.018
PF5	5.588	1.451	-1.194	0.454
PF6	5.641	1.455	-1.132	0.126
PF7	5.617	1.507	-1.062	-0.001

Notes: SD: standard deviation; CB: capacity building; TR: training; PF: performance.

According to the descriptive shown in Table 1, the dataset indicates appropriate normality. The present study exhibits the skewness ranges between -0.870 and -1.863 . Further, the kurtosis values lie in the bracket of -0.381 to 3.369 . Based on the recommendations of Hair et al. (2010), the estimates of skewness and kurtosis should fall below 2 and 5 respectively. Additionally, the final instrument included 18 items that loaded on three constructs – CB (five items), PF (seven items), and TR (six items). The Cronbach α value of the overall scale comprising 18 items is 0.891. Nunnally and Bernstein (1978) suggests Cronbach α values exceeding 0.7 are appropriate and ensures adequate reliability of the scale items. Additionally, Kolmogorov-Smirnov (K-S) and Shapiro-Wilk (S-W) tests were duly conducted for testing the normality assumption. Table 2 exhibits the results for both tests, where the p-values of all items were obtained.

Despite the skewness and kurtosis values exhibits evidence of normality for all measurement items, the results of K-S and S-W tests indicate a slight deviation from normality. These contradictions regarding normality can be explained using various arguments. First, the non-graphical normality tests should involve the estimation of skewness and kurtosis, since this allows for the separation of the two types of normality violations (Stevens, 2009). Second, the literature has ample evidence to suggest that factor analysis (exploratory and confirmatory) is a robust and highly reliable technique regarding non-normality data (Field, 2013). However, the factor analysis technique still proves effective for cases where the data does not follow normality. Finally, the presence

of small deviations to normality has no significant effect on the overall results for large samples sizes ($N > 200$) (Hair et al., 2010; Field, 2013). Since the present research has a large sample size ($N = 418$) and implements EFA and CFA techniques, the small deviation from normality would not dilute the final results.

Table 2 Assessment of normality using Kolmogorov-Smirnov and Shapiro-Wilk tests

	<i>Kolmogorov-Smirnova</i>			<i>Shapiro-Wilk</i>		
	<i>Statistic</i>	<i>df</i>	<i>Sig.</i>	<i>Statistic</i>	<i>df</i>	<i>Sig.</i>
TR1	0.300	418	0.000	0.834	418	0.000
TR2	0.325	418	0.000	0.814	418	0.000
TR3	0.320	418	0.000	0.819	418	0.000
TR4	0.300	418	0.000	0.836	418	0.000
TR5	0.271	418	0.000	0.792	418	0.000
TR6	0.258	418	0.000	0.788	418	0.000
PF1	0.262	418	0.000	0.726	418	0.000
PF2	0.244	418	0.000	0.769	418	0.000
PF3	0.280	418	0.000	0.785	418	0.000
PF4	0.297	418	0.000	0.782	418	0.000
PF5	0.286	418	0.000	0.792	418	0.000
PF6	0.281	418	0.000	0.802	418	0.000
PF7	0.287	418	0.000	0.797	418	0.000
CB1	0.286	418	0.000	0.740	418	0.000
CB2	0.295	418	0.000	0.722	418	0.000
CB3	0.330	418	0.000	0.694	418	0.000
CB4	0.298	418	0.000	0.806	418	0.000
CB5	0.295	418	0.000	0.735	418	0.000

Note: Lilliefors significance correction.

4.2 Common method bias evaluation

Podsakoff (2003) suggest the presence of method bias in the dataset leads to issues of measurement error, which leads to confounding empirical results. Previous studies suggest the implementation of Harman's single-factor test to estimate CMB (Podsakoff, 2003; Hair et al., 2010). Therefore, the presents study shows that three unique factors. Were extracted based on the EFA procedure. The identified factors cumulatively account for 72.168% variance in the dataset, where, the first factor explains 26.816% of the total variance; therefore, it lies below the 50% threshold criteria. Overall, this assessment confirms that CMB does not impact the dataset.

4.3 Hypothesis-testing using SEM analysis

The structural equation modelling (SEM) comprises of two main stages (Anderson and Gerbing, 1992). In the first stage, the prime focus lies on determining whether the measurement model deems appropriate; while the second stage comprises assessment of

the structural model. The measurement model assessment involves model-fit values, convergent and discriminant validity. Based on the empirical evaluation, the valid measurement model is carried forward to the next stage that involves examining the hypothesised relationships. In this regard, the structural model shows the nature and degree of the relationship between the independent and outcome variables. Before implementing the SEM technique, the present study carried out exploratory factor analysis (EFA) to achieve the purpose of dimension reduction and identifying latent constructs. Subsequently, the measurement model involving the constructs of interest was examined through the procedure of confirmatory factor analysis. Further, the hypothesised relationships in the study were validated through SEM.

4.3.1 *Measurement model assessment*

The application of SEM requires assessment of the latent construct and their respective indicators in the measurement model, thereby, ensuring considerable differences between the constructs. Specifically, the measurement model in this study involves three constructs and eighteen items. The model fit indices of the measurement model show adequate fit (CMIN/df = 2.432, $p < 0.001$, GFI = 0.905, AGFI = 0.872, RMSEA = 0.059, RMR = 0.068, TLI = 0.966, CFI = 0.975). Further, the validity measures were assessed through convergent and discriminant validity that includes composite reliability (CR), average variance extracted (AVE), and bivariate correlations. Convergent validity relates to the shared variance of the variables taken together to explain a single construct.

Table 3 Convergent validity of the study measures

<i>Construct</i>	<i>Measurement item</i>	<i>Standardised factor loadings</i>	<i>CR</i>	<i>AVE</i>
Capacity building	CB1	0.811	0.853	0.545
	CB2	0.805		
	CB3	0.792		
	CB4	0.798		
	CB5	0.786		
Training	TR1	0.832	0.883	0.681
	TR2	0.797		
	TR3	0.771		
	TR4	0.756		
	TR5	0.748		
	TR6	0.741		
Performance	PF1	0.857	0.891	0.616
	PF2	0.829		
	PF3	0.816		
	PF4	0.805		
	PF5	0.778		
	PF6	0.759		
	PF7	0.747		

To examine convergent validity, values of CR and AVE should fall within the threshold limit. Discriminant validity concerns the extent to which a specific construct distinguishes itself from other constructs. The comparison of shared variances between the constructs and diagonal values (square root of AVE for respective construct) establishes the discriminant validity of the measurement model. Hair et al. (2014) recommends std. loadings of the construct items should exceed 0.5. The value of CR should exceed 0.7 for being statistically acceptable. Table 3 shows each indicator loads significantly on the respective construct, where the std. factor loadings meet the recommended levels of 0.5. Also, the AVE and CR values for the constructs of interest are above the threshold value of 0.5 and 0.7 respectively (Fornell and Larcker, 1981).

The discriminant validity concerns the degree to which a construct differentiates itself from other model constructs. It is measured using comparisons of shared variances between construct with the square root AVE of the specific construct. As shown in Table 4, the inter-item correlations confirm the distinctiveness of the constructs and achieves discriminant validity. Thus, the measurement model involving the study constructs show satisfactory convergent and discriminant validity. The subsequent step examines the hypothesised linkages between these constructs through structural model assessment.

Table 4 Discriminant validity of the study constructs

	<i>PF</i>	<i>CB</i>	<i>TR</i>
PF	0.785		
CB	-0.083	0.738	
TR	-0.051	0.011	0.825

Note: Diagonal values in italics represent square root of the AVE.

4.3.2 Structural model evaluation and results

The structural model depicts the nature and degree of the relationship between the independent and dependent variables. SEM predicts the overall model with adequate accuracy instead of evaluating any single relationship. Hence, the rejection or acceptance of the overall model depends predominantly on the goodness-of-fit measures. This research carried out SEM analysis using AMOS 22 package to empirically examine the hypothesised relationships between capacity building, training, and performance in the context of SGHs. In this regard, the structural model results exhibit acceptable model fit (CMIN/df = 2.572, $p < 0.001$, GFI = 0.896, AGFI = 0.872, NFI = 0.932, TLI = 0.939, CFI = 0.958, RMSEA = 0.067, RMR = 0.072). Therefore, the structural model estimates indicate data fits the model well (Hair et al., 2010). Table 5 shows the empirical results of the hypothesised relationships of the research model.

The hypothesis testing results exhibit training measures ($\beta = 0.417$, t -value = 5.024, $p < 0.001$) strongly drives team performance of the SHGs, thus, supporting H1. This finding is in line with prior researches (Suresh and Saravanan, 2013; Gombe et al., 2015). Subsequently, this finding highlights the opinion of the respondents that the elements of skill-based training, group dynamics, microfinance-related training substantially affect the overall performance of the SHGs. These training measures are crucial to impart the required skillset among the members of the SHGs to ensure effective performance. Also, the training positively and significantly influence capacity building ($\beta = 0.207$, t -value

= 4.126, $p < 0.01$), supporting H2, which shows the respondents feel that training measures can enhance the required capabilities and skills of the SHG team members. This finding lends support to the prior studies of Mann (2015) and Varsha et al. (2019) who also report similar findings regarding the positive link between capacity building and training in SHGs context. Therefore, this insight is valuable since it implies improvement or betterment of SHGs members through effective skill enhancement, which ultimately drives team performance in the long-run. Table 6 shows the results for the mediation analysis.

Table 5 Hypothesis testing results

<i>Hypothesised relationships</i>	<i>Standardised path coefficients</i>	<i>t-value</i>	<i>Empirical support</i>
H1 TR → PF	0.417	5.024***	Yes
H2 TR → CB	0.326	4.126**	Yes
H3 TR → PF (CB) [#]	0.574	6.674***	Yes

Notes: *** $p < 0.001$ and ** $p < 0.01$; [#]mediator in parenthesis; TR: training, CB: capacity building, and PF: performance.

Based on the empirical results, it was observed that capacity building emerges as a mediating variable indirect effect = 0.157, bootstrap percentile CI = 0.13 to 0.29; $p = 0.001$), which empirically satisfies H4. The finding implies that capacity building helps the SHG team members to improve their capabilities, which can ultimately enhance performance in the long-run. Therefore, the capacity building factor acts as a catalyst in the relationship between training and performance of the SHG teams.

Table 6 Results for mediation analysis

<i>Structural relationship</i>	<i>Direct effect</i>	<i>Indirect effect</i>	<i>Percentile bootstrap 95% CI</i>		<i>Mediation type</i>
			<i>Lower</i>	<i>Upper</i>	
TR → PF(CB) [#]	0.417**	0.157**	0.131	0.285	Partial

Notes: [#]mediator in parenthesis, ** $p < 0.001$; bootstrap results based on 3,000 samples.

5 Discussion and conclusions

The initiatives and programs aimed at capacity building, effective training, and the creation of the enabling environment makes a vital impact towards sustainable livelihood of the rural population. These initiatives impart essential skills and competencies using various training measures among the SHG members (Eger et al., 2018; Ferrero et al., 2019; Wang et al., 2020). Therefore, optimum utilisation of local resources, upgradation of skills, participation and networking, accessibility of microfinance loans, and other training measures may generate formal employment opportunities for the local communities. Accordingly, the effective implementation of such strategies may minimise the skill-gap; thereby, empowering the local communities both economically and socially. Against this backdrop, the present study carried out an opinion survey among the SHGs in the selected locations of Odisha, India.

To effectively meet the research objectives, this study conducted an extensive literature review and empirical testing for evaluate the linkages between the study constructs. The findings of SEM highlight the positive and significant impact of capacity

building towards enhancing the team performance of the SHGs. In the Indian context, the SHGs have helped to transform the lives of the rural people and acted as a means for empowerment. In this regard, the capacity-building mechanisms have immensely contributed to create long-term benefits for the local communities (Boateng, 2021; Rashid and Ratten, 2020). The capacity building elements incorporate the idea of strengthening the individual skills and competencies to find effective solutions for developmental problems, which encompasses both individual-level and societal-level issues. The findings affirm that capacity building can substantially improve the SHG team performance in the long-run, which essentially contributes toward better quality of life of the local communities in the underprivileged regions, thereby adding to the unique contributions of this research. The empirical findings also affirm the positive link between training and performance of the SHGs.

The training measures aimed at developing knowledge regarding microfinance credit, skill development, team building and group dynamics plays a vital role in driving the team performance. Owing to the training measures, the SHGs are able to manage and undertake better decisions for holistic performance of their small ventures. Further, the analysis exhibits that microfinance credit-based programs and skill development measures are vital aspects of training in the SHG settings. In addition, this study also makes a novel contribution by validating the mediating role of capacity building in the link between training and SHG performance. This finding establishes the importance of improving the essential capabilities of the SHG team members to ultimately drive their performance, which can help in achieving the desired social and economic objectives for the underprivileged communities and local groups.

At the theoretical level, the study findings contribute to the limited literature on SHGs, especially in emerging economies. These findings can be treated as a baseline model for exploring the prevailing skill-based issues in the rural and economically-deprived regions. Also, the role of capacity building and training towards enhancing team performance extends the existing understanding about the SHG domain. From the managerial perspective, this study provides newer insights to the policymakers, government agencies, think-tanks, NGOs, and other related stakeholders to formulate customised training strategies to enhance equity, strengthen social inclusion, and promote transparency, thereby, empowering the rural and underprivileged communities. Further, the study offers assistance to the government authorities to benchmark the quality standards and best practices to enable economic and social sustainability using capacity building and training mechanisms in the backward areas. This adds to the implications of the study.

Unlike all research studies, the present study also bears some limitations. First, the use of cross-sectional data might limit the minute understanding of the complexities associated with the model constructs, especially in the context of SHGs. Therefore, the findings require careful interpretation to draw meaningful conclusions. Future research may consider using longitudinal measures to gather more insights into this domain. Second, the research investigated capacity building and training as antecedents of team performance in SHGs, however, further works can explore other antecedents such as collaborative innovation, trust, etc. which can offer better insights for the diverse stakeholders. Finally, the authors suggest implementing qualitative techniques such as focus group discussions, interviews, etc. to better understand the variation among the respondent perceptions.

References

- Abay, A. and Perkins, S.J. (2010) *Employee Capacity Building and Performance in Ethiopian Public Services*, University of Bedfordshire Business School.
- Abbas, A., Saud, M., Ekowati, D., Usman, I. and Suhariadi, F. (2021) 'Servant leadership: a strategic choice for organisational performance. An empirical discussion from Pakistan', *International Journal of Productivity and Quality Management*, Vol. 34, No. 4, pp.468–485.
- Aggarwal, P.J., Khurana, N. and Shefali (2023) 'Impact of HRM practices on employee productivity in times of COVID-19 pandemic', *International Journal of Productivity and Quality Management*, Vol. 38, No. 1, pp.73–97.
- Ahmad, D., Mohanty, I., Irani, L., Mavalankar, D. and Niyonsenga, T. (2020) 'Participation in microfinance based self help groups in India: who becomes a member and for how long?', *PLoS One*, Vol. 15, No. 8, p.e0237519.
- Anderson, J.C. and Gerbing, D.W. (1992) 'Assumptions and comparative strengths of the two-step approach: comment on Fornell and Yi', *Sociological Methods and Research*, Vol. 20, No. 3, pp.321–333.
- Bandura, A., Freeman, W.H. and Lightsey, R. (1999) *Self-Efficacy: The Exercise of Control*, Freeman, New York.
- Basargekar, P. (2010) 'Measuring effectiveness of social capital in microfinance: a case study of urban microfinance programme in India', *International Journal of Social Inquiry*, Vol. 3, No. 2, pp.25–43.
- Bharamappanavara, S.C. and Jose, M. (2015) 'Group dynamics and collective performance of self-help groups under different microcredit delivery models in Karnataka', *Agricultural Economics Research Review*, Vol. 28, No. 1, pp.127–138.
- Bhoj, S., Kumar, A., Bardhan, D. and Dabas, Y.P.S. (2014) 'Women dairy self-help groups in Uttarakhand-India: constraint identification in milk production and participation in microfinance module', *Animal Science*, Vol. 8, No. 2, pp.61–70.
- Boateng, D.A. (2021) 'Pathways for the economic empowerment of female entrepreneurs in emerging economies: implications for social work', *International Social Work*, Vol. 64, No. 2, pp.216–232.
- Cascio, W.F. (1993) 'International human resource management issues for the 1990s', *Asia Pacific Journal of Human Resources*, Vol. 30, No. 4, pp.1–18.
- Chakraborty, A., Sharma, P. and Chaturvedi, D. (2019) 'Increasing impact of self-help groups on women empowerment and poverty alleviation: a study of reliability', *International Journal of Advance & Innovative Research*, Vol. 6, No. 2, pp.35–38.
- Chaskin, R.J. (2001) 'Building community capacity: a definitional framework and case studies from a comprehensive community initiative', *Urban Affairs Review*, Vol. 36, No. 3, pp.291–323.
- Clinch, R.P. (2008) *The Community Capacity Building Impact of the Baltimore Empowerment Zone*, University of Maryland, College Park.
- Cole, H.P., Lineberry, G.T., Wala, A.M., Haley, J.V., Berger, P.K. and Wasielewski, R.D. (1993) 'Simulation exercises for training and educating miners and mining engineers', *Mining Engineering*, Littleton, Colorado, USA, Vol. 45, No. 11, pp.1397–1401.
- Cornelius, N., Todres, M., Janjuha-Jivraj, S., Woods, A. and Wallace, J. (2008) 'Corporate social responsibility and the social enterprise', *Journal of Business Ethics*, Vol. 81, No. 2, pp.355–370.
- de Boef, W.S., Singh, S., Trivedi, P., Yadav, K.S., Mohanan, P.S., Kumar, S. and Isaacs, K. (2021) 'Unleashing the social capital of self-help groups for strengthening seed systems in Uttar Pradesh, India', *Global Food Security*, Vol. 29, p.100522.
- Devins, D. and Gold, J. (2014) 'Re-conceptualising talent management and development within the context of the low paid', *Human Resource Development International*, Vol. 17, No. 5, pp.514–528.

- Eger, C., Miller, G. and Scarles, C. (2018) 'Gender and capacity building: a multi-layered study of empowerment', *World Development*, Vol. 106, p.207–219.
- Ferrero, G., Setty, K., Rickert, B., George, S., Rinehold, A., DeFrance, J. and Bartram, J. (2019) 'Capacity building and training approaches for water safety plans: a comprehensive literature review', *International Journal of Hygiene and Environmental Health*, Vol. 222, No. 4, pp.615–627.
- Field, A. (2013) *Discovering Statistics using IBM SPSS Statistics*, Sage Publications, London.
- Flaspohler, P., Duffy, J., Wandersman, A., Stillman, L. and Maras, M.A. (2008) 'Unpacking prevention capacity: an intersection of research-to-practice models and community-centered models', *American Journal of Community Psychology*, Vol. 41, No. 3, pp.182–196.
- Fornell, C.G. and Larcker, D.F. (1981) 'Evaluating structural equation models with unobservable variables and measurement error', *Journal of Marketing Research*, Vol. 18, No. 1, pp.39–50.
- Franco, I.B. and Tracey, J. (2019) 'Community capacity-building for sustainable development: effectively striving towards achieving local community sustainability targets', *International Journal of Sustainability in Higher Education*, Vol. 20, No. 4, pp.691–725.
- Gombe, S., Suandi, T., Ismail, I.A. and Omar, Z. (2015) 'Extension worker competencies needed for effective management of self-help groups (SHG) in Gombe State', *International Journal of Education and Training*, Vol. 1, No. 1, pp.1–7.
- Gugerty, M.K., Biscaye, P. and Leigh Anderson, C. (2019) 'Delivering development? Evidence on self-help groups as development intermediaries in South Asia and Africa', *Development Policy Review*, Vol. 37, No. 1, pp.129–151.
- Hair, J.F., Anderson, R.E., Babin, B.J. and Black, W.C. (2010) *Multivariate Data Analysis: A Global Perspective*, Vol. 7, Pearson, Upper Saddle River, NJ.
- Hair, J.F., Black, W.C., Babin, B.J. and Anderson, R.E. (2014) *Multivariate Data Analysis*, Pearson Education Limited, Essex.
- Ibrahim, A.A., Samah, A.A. and Saidu, M.B. (2018) 'Participation and empowerment among self-help groups in Kano City', *Pertanika Journal of Social Sciences & Humanities*, Vol. 26, No. T, pp.95–108.
- Imbaya, B.O., Nthiga, R.W., Sitati, N.W. and Lenaiyasa, P. (2019) 'Capacity building for inclusive growth in community-based tourism initiatives in Kenya', *Tourism Management Perspectives*, Vol. 30, pp.11–18.
- Jagero, N., Komba, H.V. and Mlingi, M.N. (2012) 'Relationship between on the job training and employee's performance in courier companies in Dar es Salaam, Tanzania', *International Journal of Humanities and Social Science*, Vol. 2, No. 22, pp.114–120.
- Jones, E.C. (2004) 'Wealth-based trust and the development of collective action', *World Development*, Vol. 32, No. 4, pp.691–711.
- Joshi, G. (2019) 'An analysis of women's self-help groups' involvement in microfinance program in India', *Rajagiri Management Journal*, Vol. 13, No. 2, pp.2–11.
- Kaur, L. and Kalra, R.K. (2018) 'Capacity building: a pathway for changing behaviour of self help groups', *Journal of Community Mobilization and Sustainable Development*, Vol. 13, No. 1, pp.36–42.
- Kaur, R., Rathore, B.S., Gadhwal, P.C., Sharma, A.K. and Rai, P.K. (2019) 'Training of self help group women on food safety through value addition of lemon waste: peel', *Bhartiya Krishi Anusandhan Patrika*, Vol. 34, Nos. 3–4, pp.199–204.
- Khatibi, F.S. and Indira, M. (2011) 'Empowerment of women through self-help groups and environmental management: experiences of NGOs in Karnataka State, India', *Journal of Human Ecology*, Vol. 34, No. 1, pp.29–40.
- Kisera, N.J. (2015) 'Factors affecting performance of women investment groups: a survey of Gucha Sub County, Kisii County', *The International Journal of Business & Management*, Vol. 3, No. 4, p.412.

- Kumar, N., Raghunathan, K., Arrieta, A., Jilani, A., Chakrabarti, S., Menon, P. and Quisumbing, A.R. (2019) 'Social networks, mobility, and political participation: the potential for women's self-help groups to improve access and use of public entitlement schemes in India', *World Development*, Vol. 114, pp.28–41.
- Kwarteng, A.J. (2022) 'Ensuring quality in higher education institutions: going beyond quality assurance system', *International Journal of Productivity and Quality Management*, Vol. 36, No. 4, pp.569–588.
- Mann, S.K. (2015) 'Training and capacity building of women self-help groups in Punjab', *Agriculture Update*, Vol. 10, No. 2, pp.130–133.
- McClenachan, L., Neal, B.P., Al-Abdulrazzak, D., Witkin, T., Fisher, K. and Kittinger, J.N. (2014) 'Do community supported fisheries (CSFs) improve sustainability?', *Fisheries Research*, Vol. 157, pp.62–69.
- Metcalf, B.D. (2011) 'Women, empowerment and development in Arab Gulf States: a critical appraisal of governance, culture and national human resource development (HRD) frameworks', *Human Resource Development International*, Vol. 14, No. 2, pp.131–148.
- Misra, S. and Panda, R.K. (2017a) 'Environmental consciousness and brand equity: an impact assessment using analytical hierarchy process (AHP)', *Marketing Intelligence & Planning*, Vol. 35, No. 1, pp.40–61.
- Misra, S. and Panda, R.K. (2017b) 'Scale transformation of analytical hierarchy process to Likert weighted measurement method: an analysis on environmental consciousness and brand equity', *International Journal of Society Systems Science*, Vol. 9, No. 3, pp.242–255.
- Moreno, J.M., Noguchi, L.M. and Harder, M.K. (2017) 'Understanding the process of community capacity-building: a case study of two programs in Yunnan Province, China', *World Development*, Vol. 97, pp.122–137.
- Muhammad, A.A. and Ndaaji, N. (2013) 'Rural women empowerment through self-help groups in Nigeria: the role of participation and volunteerism', *Life Science Journal*, Vol. 10, No. 4, pp.747–753.
- Niaghi, O. (2019) 'The role of women and their empowerment in environmentally sustainable development', *Journal of Environmental Science Studies*, Vol. 4, No. 2, pp.1328–1339.
- Nichols, C. (2021) 'Self-help groups as platforms for development: the role of social capital', *World Development*, Vol. 146, p.105575.
- Nunnally, J.C. and Bernstein, I.H. (1994) *Psychometric Theory*, 3rd ed., McGraw Hill Publishing, New York, NY.
- Pathak, P. and Pant, V. (2018) 'An assessment of bank credit literacy, accessibility and service quality among women self help groups', *Academy of Entrepreneurship Journal*, Vol. 24, No. 1, pp.1–13.
- Patil, C.N., Patel, J.K., Bellagi, R.D., Manunayaka, G. and Gattupalli, N.K. (2021) 'A study on group dynamics effectiveness of women's self-help groups members in Ahmedabad District of Gujarat', *Indian Journal of Extension Education*, Vol. 57, No. 1, pp.76–80.
- Podsakoff, N.P. (2003) 'Common method biases in behavioral research: a critical review of the literature and recommended remedies', *Journal of Applied Psychology*, Vol. 88, No. 5, pp.879–903.
- Rashid, S. and Ratten, V. (2020) 'A systematic literature review on women entrepreneurship in emerging economies while reflecting specifically on SAARC countries', in Ratten, V. (Ed.): *Entrepreneurship and Organizational Change*, pp.37–88, Contributions to Management Science, Springer, Cham, https://doi.org/10.1007/978-3-030-35415-2_4.
- Saeed, M.M. and Asghar, M.A. (2012) 'Examining the relationship between training, motivation and employees job performance – the moderating role of person job fit', *Journal of Basic and Applied Scientific Research*, Vol. 2, No. 12, pp.12177–12183.
- Sajeev, M.V. and Singha, A.K. (2016) 'Capacity building through KVKs: training needs analysis of farmers of Arunachal Pradesh', *Indian Research Journal of Extension Education*, Vol. 10, No. 1, pp.83–90.

- Simmons, A., Reynolds, R.C. and Swinburn, B. (2011) 'Defining community capacity building: is it possible?', *Preventive Medicine*, Vol. 52, Nos. 3–4, pp.193–199.
- Smith, N., Baugh Littlejohns, L. and Thompson, D. (2001) 'Shaking out the cobwebs: insights into community capacity and its relation to health outcomes', *Community Development Journal*, Vol. 36, No. 1, pp.30–41.
- Soundararajan, K. and Reddy, K.J. (2020) 'Productivity and quality improvement through DMAIC in SME', *International Journal of Productivity and Quality Management*, Vol. 31, No. 2, pp.271–294.
- Stevens, J.P. (2009) *Applied Multivariate Statistics for the Social Sciences*, Taylor & Francis Group, LLC, USA.
- Sundaram, A. (2012) 'Impact of self-help group in socio-economic development of India', *IOSR Journal of Humanities and Social Science*, Vol. 5, No. 1, pp.20–27.
- Suresh, S.S. and Saravanan, S. (2013) 'Women empowerment through self-help groups: a case study', *Economic Affairs*, Vol. 58, No. 2, p.147.
- Thomas N.G. (1997) 'Interpersonal skills training for quality service interactions', *Industrial and Commercial Training*, Vol. 29, No. 3, pp.70–77.
- Vallejo, B. and Wehn, U. (2016) 'Capacity development evaluation: the challenge of the results agenda and measuring return on investment in the global south', *World Development*, Vol. 79, pp.1–13.
- Varsha, P.S., Reddy, G., LN, S.R. and Kumar, A. (2019) 'Impact of self-help groups, capacity building measures and perceived tension on women empowerment-an empirical study', *Asian Journal of Empirical Research*, Vol. 9, No. 3, pp.65–87.
- Wang, Y., Cao, H., Yuan, Y. and Zhang, R. (2020) 'Empowerment through emotional connection and capacity building: public participation through environmental non-governmental organizations', *Environmental Impact Assessment Review*, Vol. 80, p.106319.
- Yadav, J. (2021) 'Self-help groups and women entrepreneurship in India: opportunities and challenges', *AMC Indian Journal of Entrepreneurship*, Vol. 4, No. 1, pp.13–21.
- Yamoah, E.E. (2013) 'Employee training and empowerment: a conceptual model for achieving high job performance', *Journal of Education and Practice*, Vol. 4, No. 13, pp.27–30.