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Usefulness and expectations on skills development and entrepreneurship among women of low socioeconomic status in Ogun State, Nigeria

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Abstract

The acquisition of vocational training skills and entrepreneurial know-how is acknowledged as an added advantage and a safety net to navigate poverty, especially in dwindling economic recession time and massive unemployment. This study examined the factors influencing the usefulness and perceived realization of skills development/empowerment to encourage more women's involvement in small scale businesses and promote its effect on poverty alleviation in households across Nigeria. Data collection involved a structured questionnaire and in-depth interviews conducted post-the vocational skill/empowerment training. The training was organized among Campus Keepers in a private university in Ogun State, Nigeria. Forty Campus Keepers were selected using the systematic sampling technique from a total population of 224, and 37 of the 40 selected voluntarily participated in this study. The Campus Keepers were women with low socioeconomic status who worked as cleaners on the university campus. Five of the Campus Keepers were purposively selected as key informants for the study. Results showed that respondents who had earlier knowledge and vocational skills training reported that it leads to self-employment. This view was higher for respondents who had more people in their household than those with fewer people (OR = 22.7 [CI= .56, 921.31]). The perception that the training can lead to additional income was lower for respondents who reported that either they or their spouses were sole breadwinners in their household than for those who reported that both/others/none were breadwinners (OR = .05 [CI=0, 1.2]). The odds that the skills development/empowerment training will result in perceived improved business was higher for respondents who gained more knowledge/information from the training than those who did not (OR=29.19 [CI = 1.1, 777.48]). Findings from the qualitative study suggest that key informants who participated in past training were yet to establish a profitable business of their dream fully. Governmental policy and program intervention that incorporates these findings will lead to increased participation of the target population in similar training in the future, leading to poverty alleviation towards achieving the SDGs for Nigeria. *(Afr J Reprod Health 2021; 25[5s]: 171-187).*

Keywords: Skills development, women entrepreneurship, low socioeconomic status, expectations on skills, perceived realization

Résumé

L'acquisition de compétences en formation professionnelle et de savoir-faire entrepreneurial est reconnue comme un avantage supplémentaire et un filet de sécurité pour naviguer dans la pauvreté, en particulier en période de récession économique et de chômage massif. Cette étude a examiné les facteurs influençant l'utilité et la réalisation perçue du développement des compétences/l'autonomisation pour encourager davantage de femmes à participer aux petites entreprises et promouvoir son effet sur la réduction de la pauvreté dans les ménages à travers le Nigeria. La collecte de données a impliqué un questionnaire structuré et des entretiens approfondis menés après la formation professionnelle/d'autonomisation. La formation a été organisée parmi les Campus Keepers dans une université privée de l'État d'Ogun, au Nigeria. Quarante Campus Keepers ont été sélectionnés en utilisant la technique d'échantillonnage systématique sur une population totale de 224 personnes, et 37 des 40 sélectionnés ont volontairement participé à cette étude. Les Campus Keepers étaient des femmes de faible statut socio-économique qui travaillaient comme femmes de ménage sur le campus universitaire. Cinq des Campus Keepers ont été choisis à dessein comme informateurs clés pour l'étude. Les résultats ont montré que les répondants qui avaient déjà acquis des connaissances et une formation professionnelle ont déclaré que cela les conduisait à travailler à leur compte. Ce point de vue était plus élevé pour les répondants qui avaient plus de personnes dans leur ménage que pour ceux qui en avaient moins (OR = 22,7 [IC = 0,56, 921,31]). La perception

que la formation peut conduire à un revenu supplémentaire était plus faible pour les répondants qui ont déclaré qu'eux-mêmes ou leurs conjoints étaient les seuls soutiens de famille dans leur ménage que pour ceux qui ont déclaré que les deux/autres/aucun étaient soutiens de famille (OR = 0,05 [IC=0, 1.2]). Les chances que la formation sur le développement des compétences/l'autonomisation se traduise par une amélioration perçue des affaires étaient plus élevées pour les répondants qui ont acquis plus de connaissances/d'informations grâce à la formation que pour ceux qui n'en ont pas (OR=29,19 [IC = 1,1, 777,48]). Les résultats de l'étude qualitative suggèrent que les informateurs clés qui ont participé à une formation antérieure n'avaient pas encore pleinement établi l'entreprise rentable de leur rêve. La politique gouvernementale et l'intervention du programme qui intègre ces résultats conduiront à une participation accrue de la population cible à une formation similaire à l'avenir, ce qui conduira à la réduction de la pauvreté en vue de la réalisation des ODD pour le Nigéria. *(Afr J Reprod Health 2021; 25[5s]: 171-187).*

Mots-clés: Développement des compétences, entrepreneuriat féminin, faible statut socioéconomique, attentes en matière de compétences, réalisation perçue

Introduction

Over the years, female entrepreneurship has attracted attention due to its significant impact on household economic conditions and national economic development. Not only has female entrepreneurship contributed to economic growth and national development, but it has created opportunities for self-fulfillment and actualization on a personal level[1]. The significance of women-owned businesses to the economy is well acknowledged in the literature. Oyesomi *et al.*[2] opined that the relevance of women in society could not be undermined. It has brought about innovation, employment, and development[1,3]. Some southwest Nigeria studies examined entrepreneurship among women and later successes involving empowering women into entrepreneurship through microfinance[4]. Others included the contribution of women's business enterprises to the development of Ogun state's economy[5], factors influencing female entrepreneurs' success[6], and factors influencing entrepreneurial development in Ilishan-Remo[7]. These studies majorly emphasized the need to understand women's decisions to become entrepreneurs. It is vital to consider the impact of various factors such as socialization expectation (cultural values), external environment, motivating factors, perceptions, financial ability, and socio-cultural experiences on women. However, Onwumah *et al.*[8] opined that women are increasingly recognized in contemporary Nigeria and enjoy enhanced social, cultural, economic, educational, and political visibility.

An entrepreneur is an active individual, possessing good business acumen, and seeks to employ innovative ways to transform their goods and services[6]. A female entrepreneur can also be defined as a woman who is actively involved in entrepreneurial activities. There is no dissimilarity between the male and female entrepreneurs as they possess similar traits, crafts, and skills to carry out a business. Women entrepreneurs share similar potentials of creativity, innovation, and imagination with their male counterparts[3]. However, despite these similarities, they are faced with some socioeconomic deprivations, which have slowed down their interest in entrepreneurship. These deprivations include childbirth, child-raising, household chores, and caregiving. A woman's business choice is determined by various factors such as age, income, social, economic, and political issues[10].

Women play multiple roles in society as mothers, wives, and breadwinners. They enroll in entrepreneurial programs to provide income for family upkeep. Researchers such as Odoemene[11] and Mansor[12] have emphasized economic factors for getting entrepreneurial development. Entrepreneurship is indeed a powerful engine of economic growth and wealth creation and is crucial for improving the quality, number, and variety of employment opportunities for the poor, especially women[13].

Women's perception of business is rooted in their socio-cultural experiences, cultural values, family responsibilities, and religious ideologies[14]. Cultural values play a vital role in enabling and limiting women's desire to become entrepreneurs; their entrepreneurial activities are reduced in a society where the cultural values restrict them from owning any property[15]. Another critical factor related to cultural values is the family structure, which positively or negatively impacts female entrepreneurs in Nigeria. Positively, family supports women in achieving a work-family balance, influencing their business success and performance. While the negative side dwells on how work-family conflict interferes with business growth and performance[15].

Women's entrepreneurial activities are widely affected by family responsibilities since they have to take care of their business and family simultaneously[6]. In many cases, while handling family issues, they are at the same time looking for business opportunities, which may limit and affect their chances of running a successful business enterprise in the future[6].
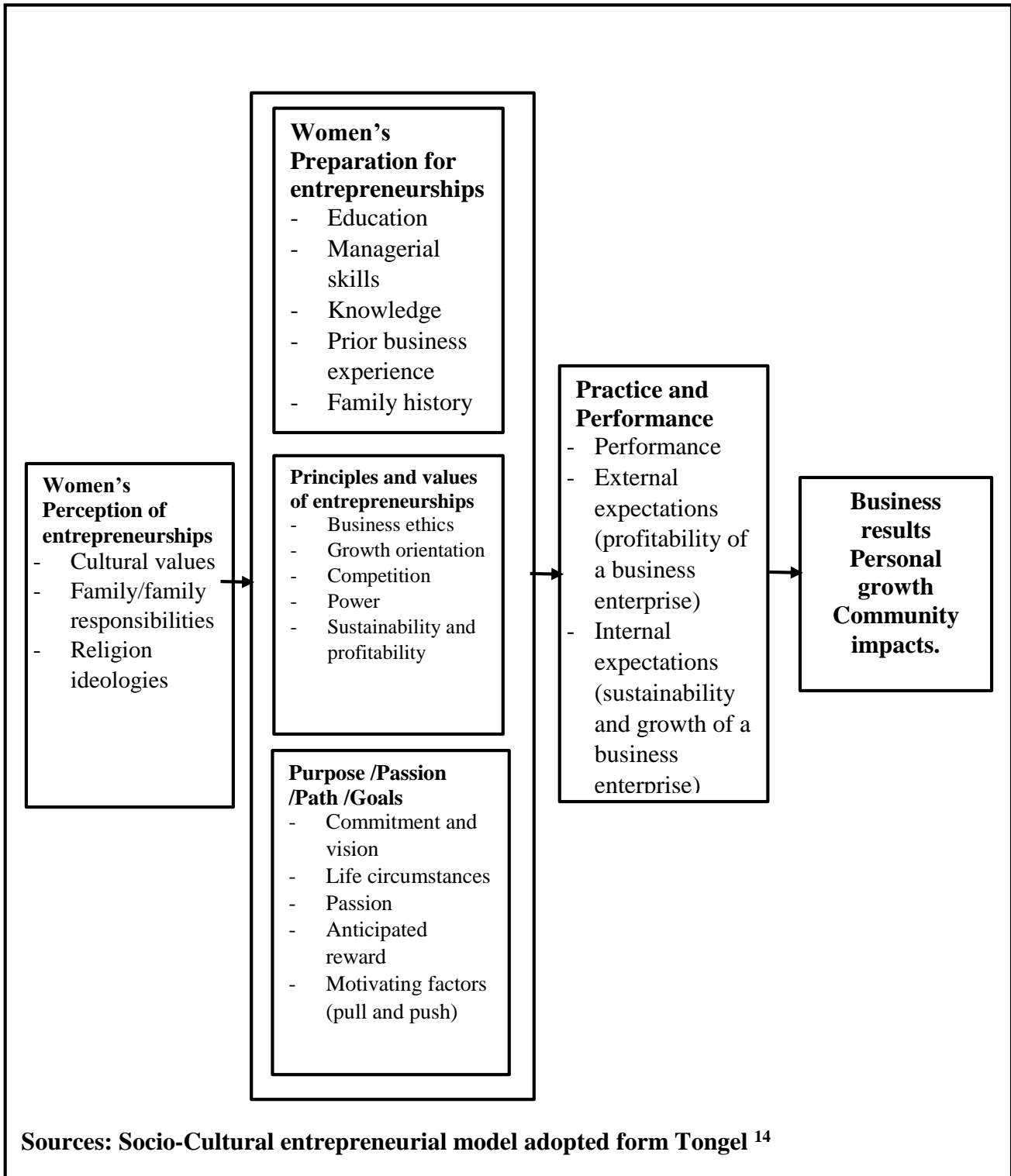
In attaining poverty alleviation, women have a pivotal role to play, mostly in entrepreneurship. Entrepreneurship is the central force for economic change, and it requires more women to be involved in its operations[16]. Across societies, women are the poorest among the poor, especially those at the fringes of society, based on their socio-demographic characteristics. Oladosun *et al.*[34] suggest that for Nigeria to achieve its demographic dividend and eradicate poverty, the citizens' quality of life improvement is required. In turn, quality of life will foster economic growth, health, and well-being of the growing population, and the dynamics of fertility and modern contraceptive use will be well understood. As women prepare for entrepreneurship and try to gain relevant knowledge, one critical challenge is that conventional banks often deny them credit facilities. Kato and Kratze[17] opined lack of credit facility is compounded by low education quality and lack of requisite skills to manage business ventures. Entrepreneurial skills will enable women to improve their families' quality of living and the overall domestic growth of the nation[18]. Women are, however, faced with the challenge of balancing their business and family life. This challenge leaves them with a divided mind and little or no energy and time to devote to managing a business successfully[19].

Women's actual preparation for entrepreneurship involves various factors such as skills, level of education, training, and prior business experience. Langowitz and Minitiz[20] assert that women's business skills and abilities provide them with the propensity to start their business venture. Training is an essential component for producing an able set of entrepreneurs who can survive in immediate and global environments. A key background factor is the level of education and training necessary to enable a woman to understand her business ecosystem and develop skills to further assist her in launching a business enterprise[14].

Without the right skills, a woman cannot run a successful business enterprise since managerial skills, and educational training are vital to success. According to Uwannah *et al*[6,] the more educated a woman is, the better she would be as an entrepreneur as she is less likely to face financial constraints. Tongel[14] argued that many women failed to grow their business enterprise due to the lack of managerial skills. He adds that women operate business similar to how they run their family affairs and generate income to sustain their immediate families. This assertion supports the purpose of the Campus Keepers' training in this study, enhancing their vocational skills and entrepreneurial ability to succeed in business.

Another critical aspect of preparing for entrepreneurship is the purpose or passion that propels women into business. The purpose is combining passion, goals, commitment, anticipated reward, and choice of a business enterprise[14]. According to Patil and Deshpande[21,] most women's reasons for being an entrepreneur is usually a result of life circumstances. These life circumstances may include job losses, unemployment, family needs, or the desire to be more creative and flexible. Women also engaged in entrepreneurial activities based on two motivating factors: pull and push factors[21]. The pull factors include passion, freedom, availability of capital, and personal growth. On the other hand, the push factor consists of redundancy, economic necessity, job losses, unemployment, and death of their spouse or breadwinner[21]. Tongel[14] opined that a woman's socio-cultural experiences might lead them to develop specific skills in their roles as caregivers and nurturers, which would be vital in incorporating these into their entrepreneurial activities.

Perceptions may also be derived from the transfer of principles such as honesty, fairness, respect, and work ethics to business, which occurs as part of women's socio-cultural experience. Women can transfer the values of what they have learned and experiences from friends, families, and mentors into running a business enterprise[14]. Women's entry into the world of entrepreneurship may not be solely based on making money but also on their self-fulfillment, community impact, satisfying customer, and offering quality products[1,14,22].

Women's Preparation for entrepreneurships
- Education
- Managerial skills
- Knowledge
- Prior business experience
- Family history

Women's Perception of entrepreneurships
- Cultural values
- Family/family responsibilities
- Religion ideologies

Principles and values of entrepreneurships
- Business ethics
- Growth orientation
- Competition
- Power
- Sustainability and profitability

Practice and Performance
- Performance
- External expectations (profitability of a business enterprise)
- Internal expectations (sustainability and growth of a business enterprise)

Business results Personal growth Community impacts.

Purpose /Passion /Path /Goals
- Commitment and vision
- Life circumstances
- Passion
- Anticipated reward
- Motivating factors (pull and push)

Sources: Socio-Cultural entrepreneurial model adopted form Tongel [14]

Figure 1: Framework on the perception of women towards entrepreneurship

As espoused by Adetayo[23], women empowerment and entrepreneurship can help achieve economic development if their skills and talents are well nurtured and utilized. The ultimate goal is to help reduce poverty among women. Many female entrepreneurs fail in their business endeavors due to a shortage of capital. There is also the challenge of low education and are usually not aware of business technology and market knowledge[24-26]. Women empowerment involves strengthening their existing skills and capacities to participate and perform better to improve themselves and their families.

Women's economic empowerment is a cornerstone of the 2030 Agenda for Sustainable Development. Compared to men, women-owned businesses are smaller and disadvantaged in their access to credit, resources, and assets. Indeed, the potentials of female entrepreneurs are not fully realized in many economies. Education compounds the gender gap[27].

Figure 1 shows the conceptual framework on the perception of women towards entrepreneurship based on socio-cultural factors. It explains the skills, training, and related educations; women acquire as preparation for entrepreneurship. Historically, women are acknowledged as active participants in their respective societies' social, economic, and political development (George *et al.*[35]. As major players in the informal sector, women contribute maximally to total Gross Domestic Product (GDP)[36]. Principles such as business ethics, purpose, passion, and path are crucial to the usefulness and perceived realization of skill development expectations. Tongel[14] states that these preparations, principles, and passion are grounded on entrepreneurship's socio-cultural perception, thus leading to anticipated outcomes such as business results, personal growth, and community impacts.

The Expectancy theory was engaged to offer a practical explanation in the study. It assumes that individuals would take action if they perceive that the exerted efforts will lead to a desirable outcome[28]. Gatewood *et al.*[29] found that entrepreneurs who believe in their skills or crafts would be motivated to employ them into new venture formation. Also, Douglas and Shephered[30] opined that pursuing entrepreneurship is based on

several factors, which include anticipated outcome, skills or crafts, the risk involved, and individual's perception. Women's business enterprises' success is not based on financial success alone but on factors such as; innovation, self-realization, and recognition[28]. Buttner[22] further enumerated factors that would influence women's entrepreneurial success, and these include business experience, quality of products, determination, financial management, risk, and commitment. In line with the Expectancy Theory propounded by Victor Vroom in 1964, as cited in Okunnu and Akinjole[31], a person's behavior will lead to specific outcomes and value based on the outcome on it. The level at which women engage in entrepreneurial activities is dependent on their growth, perception, values, principle, and the anticipated business growth[31].

However, this study seeks to examine the usefulness and perceived realization of skills development and entrepreneurship expectations among women of low socioeconomic status in Ogun State. It is premised on the training on skill development and entrepreneurial drive organized by Covenant University Research Cluster on Women Development and Human Security Initiatives (CU-WDHSI) in collaboration with her Centre for Entrepreneurial Development Studies (CEDS) for 40 Campus Keepers within six weeks. The study targets mainly women with little or no formal education in low-income employment of cleaning services in the University. However, it is essential to state that a few men in the institution's cleaning services also benefited from the training. The synonym for the staff of the Cleaning department of the University is "Campus Keeper." A focus on empowerment for the Campus Keepers makes this study unique and novel because, from the available literature, previous studies in similar research areas tend to focus on other groups, including widows, students, youths, and rural communities[6,9,31]. The paper authors did not come across any literature that documented specialized groups of women with low socioeconomic statuses like the Campus Keepers and their skills development and entrepreneurship. This study buttresses findings in the literature that women dominate the low skill and low paying jobs in most parts of the country and Africa[9].

Method

The paper examines the usefulness of the trainees' entrepreneurial skills, perception, and expectations to improve their socioeconomic status and sustainability through wealth creation. With financial assistance from the University, forty female and a few male Campus Keepers were exposed to different training skills ranging from financial management, customer relations, and practical skills on different vocations, namely: soap making, perfumery, catering, fish farming, fabric design and making as a source of wealth creation and financial enhancement within four weeks. The training was packaged in such a manner that it comprised both hands-on and theoretical sessions. This study is focused on the data collected after the training sessions were concluded. The training included business experience, family support, and requisite skills to manage a successful business.

The mixed-method research design was employed in this study which included a quantitative survey, and an in-depth qualitative interview was utilized for the data collection exercise. The quantitative data was collected through a self-administered questionnaire that elicited information from the respondents on background factors, knowledge, experience, attitudes, and perceptions about vocational skills and entrepreneurship. The study population constituted mainly women and a few men who were aged between 18 and 52 years. As they are commonly called, the Campus Keepers are the junior staff of the Department of Physical Planning Development Unit (PPD) of Covenant University. They are saddled with the responsibility of cleaning and beautifying the entire University Campus.

A sample of 40 Campus Keepers was selected using the systematic sampling technique from a total population of 224 employed at the Covenant University in 2016 when the empowerment training was conducted. With a sampling fraction of six (k =N/n), the training participants were selected from the list of the Campus Keepers employed in the University. The sample size, which was based on the availability of funds for phase one of the empowerment project, represented 17.85% of the total study population. Of the 40 Campus Keepers selected, 37 completed the survey questionnaire, and all respondents answered all questions. Campus keepers that were less than a year in employment with the institution were not included in the empowerment project and thus were not part of the study sample. The post-test data collection took place soon after the training/empowerment exercise ended. The survey research team obtained information from respondents through a well-structured questionnaire containing both open and closed-ended questions.

In addition to the quantitative survey data collection, qualitative data was also collected from a purposively selected key informant from the campus keepers who served as case studies. The study research team designed the survey questionnaire to capture critical questions for achieving the study objectives. The two separate structured questionnaires were divided into sections "A" for respondents' background information and "B" for respondents' knowledge, experience, and attitudes about vocational skills and empowerment. Each of the questionnaires contained a total of twenty-five open and closed-ended questions spread across the two sections.

Five key informants representing 12.5 percent of the study sample participated in the in-depth interview sessions. They were selected from campus keepers who had participated in a similar training/empowerment program conducted in 2014. The composition involves four females and one male. The key informants were purposely selected to capture Campus Keeper trained in different vocational skills: catering services, fish farming, perfumery, tie and dye textiles, and soap making. They were asked questions about the aftermath of vocational skills acquisition and the benefits of entrepreneurship.

Data analysis

Data analysis was done separately for quantitative and qualitative data collected, and the survey questionnaire's findings were corroborated with personal testimonies of the selected case studies. Quantitative data analysis consisted of using univariate analysis involving frequency distribution. Bivariate analysis using chi-square tests and multivariate analysis involving collinearity diagnostics and logistics regression. The Statistical Package for Social Science Software (SPSS 24.0)

was used for the quantitative data analysis. The qualitative data analysis involved content analysis. Secondary data obtained from existing literature and archival sources, including seminar papers, newspapers periodicals, professional journals, and several online resources, complimented the primary sources' data.

Operationalization of variables

In this study, the usefulness of skills development/empowerment and perceived realization of training expectation are conceptualized to be influenced by selected background factors, reasons for enrolling in empowerment program, and knowledge/information about entrepreneurship. Data on these two dependent variables were elicited only at the post-test survey. Thus, this paper focuses on only the post-test data collected after the empowerment exercise was concluded. The dependent variables in this study were operationalized as; usefulness of skills development/empowerment in the future, which was transformed from qualitative to quantitative by subjecting the data to content analysis and recoding general concepts into; self-employed =1, independence = 2, and others = 3. Similarly, the second dependent variable perceived realization of training expectations was transformed from open-ended to quantitative by converting common concepts/words into codes. It was then recoded as increased additional income =1, more knowledge/skills =2, improved business =3, and others = 4. For the purpose of the binary logistics regression, this variable was dichotomised into three separate variables; increased additional income = 1, else = 0; more knowledge/skills = 1, else =0; improved business = 1, else =0; and other responses = 1, else = 0.

The independent variables were mainly socio-demographic factors, reasons for enrolling in the empowerment program, and knowledge/information about the training content. Socio-demographic factors included state of residence coded as Ogun state =1, and Lagos state = 2; place of residence urban = 1, and semi-urban = 2; and age of respondent regrouped as 34 or younger = 1, 35 to 44 = 2, and 45 or older = 3. Other background variables employed in this study were religion, no response = 1, and Christian = 2; marital status single/divorced/widowed =1, and married =2; level of education primary/no response =1, and secondary/tertiary =2; and years worked as campus keeper, two or less = 1, three to six = 2, and more than six =3; number of people living in household categorized as, four or less = 1, or more = 2; and the person referred to as the breadwinner in the family regrouped as, others/no response = 1, spouse/both = 2, and self = 3. Knowledge-based independent factors considered in this paper included 16 indicators of knowledge/information about the content of the empowerment training grouped t form cumulative index categorized as 8 to 11 = 1 and 12 to 16 = 2; and perceived knowledge about women development topics grouped as little = 1, average knowledge = 2, and much knowledge = 3.

Results

Sample description

Table 1 presents the post-test sample description, which is the focus of this paper. The majority of respondents (97.2%) lived in Ogun state, resided in semi-urban areas (97.2%), were aged 35 or older (75%), and Christians (100%). Also, most of the empowerment participants were married (62.2%), had secondary education (78.4%), and had at least three years of work experience as a campus keeper (67.5%). More respondents (56.3%) had at least five or more people living with them. Breadwinner in respondent's family was either their spouse/both (37.8%) or respondent alone (37.8%). Moreover, slightly above half of the respondents (51.4%) attended the skills development/empowerment training because they desired to make progress in life; others attended to gain more knowledge/skills (37.8%) and to improve business/additional income (10.8%). The different aspects of the intervention were combined into a cumulative index, and results showed that more respondents (55.6%) reported eight to eleven indicators of knowledge/information about empowerment/skills development.

Table 2 presents campus keepers' responses on the future use of the skills and empowerment acquired at the training and their perceptions of the training expectations' realizations. Results showed that the majority (63.9%) reported that the training would enable them to be self-employed.

Table 1: Background characteristics of respondents

Variables	Post-Test Frequency	Percent (%)
	Total N = 36	
State of residence		
Ogun state	35	97.2
Lagos state	1	2.9
Place of residence		
Urban	1	2.8
Semi-urban	35	97.2
Age at last birthday		
34 or younger	9	25.0
35 to 39	9	25.0
40 to 44	10	27.8
45 or older	8	22.2
Religion		
No response	-	-
Christian	36	100
Marital status		
single/divorced/widowed	14	37.8
Married	23	62.2
Level of education		
primary/no response	8	21.6
secondary/tertiary	29	78.4
Years worked as campus keeper		
2 or less	12	32.4
3 to 6	8	21.6
over 6	17	45.9
Number of people living with the respondent		
4 or less	14	43.8
5 or more	18	56.3
The breadwinner in the family		
others/non response	9	24.3
spouse/both	14	37.8
Self	14	37.8
Why enroll for the empowerment program		
improved business/additional income	4	10.8
more knowledge/skill	14	37.8
make progress in life	19	51.4
Cumulative index on knowledge/information about intervention indicators		
8 to 11	15	55.6
12 to 16	12	44.4

The majority of the respondents perceived that the training/empowerment increased their knowledge/skills (76.5%), followed by those who reported improved business (52.9%), and increased additional income 926.5%), and other perceived expectations (11.8%).

Bivariate associations

This section presents the association between the two dependent variables; future usefulness of skills development/empowerment, and perceived realization of training expectations, and background factors. Only significant results at 0.1, 0.05, 0.01, and 0.001 levels are explained in this paper. Table 3 shows that the dependent variable, future usefulness of skills development/empowerment, was significantly associated with education level (p-value = .086). The reason for enrolling in the empowerment program (p-value = .054) and a cumulative index of the various aspects of knowledge/information covered in training (p-value = .067).

Results in Table 4 show that perceived realization of increase additional income was significantly associated with the cumulative index on knowledge/information about topics covered at the training (p-value = .027). Also, Table 4 shows that perceived realization of more knowledge/skills was significantly associated with the reasons for participating in the training program (p-value = .004). Simultaneously, the perceived realization of improved business from the training was significantly associated with age at last birthday (p-value = .061) and perceived knowledge about intervention topics (p-value = .000).

Multivariate relationships

A critical step in multivariate analysis is collinearity diagnostics that enable the detection of independent variables that may present an abnormal relationship with other independent variables or with the dependent variable. Appendixes I to V show the results of five diagnostic tools, including variance proportions, variance inflation factor, condition index, eigenvalue, and tolerance levels. The only abnormality observed in the results presented in the Appendixes was for variance proportions between (1) age at last birthday by the cumulative index of knowledge/information about the intervention, and between (2) years worked as campus keepers by the number of people living with the respondent in their household. Variance proportion values were over .6 in these two relationships in all the matrixes identified, whereas the threshold expected was .5 or lower. These observed abnormalities may have

Table 2: Percentage frequency distributions on usefulness and perceived realization of training expectations

Variables	Frequency (N)	Valid Percent (%)
Total N = 36		
The usefulness of skills development & empowerment in the future		
self-employed	23	63.9
Independence	7	19.4
Others	6	16.7
the usefulness of skills development & empowerment in the future (self-employed)		
Else	14	37.8
self-employed	23	62.2
the usefulness of skills development & empowerment in the future (independence/others)		
Else	24	64.9
independence/others	13	35.1
perceived realization of training expectations (increased additional income)		
No	25	73.5
Yes	9	26.5
perceived realization of training expectations (more knowledge/skills)		
No	8	23.5
Yes	26	76.5
perceived realization of training expectations (improved business)		
No	16	47.1
Yes	18	52.9
perceived realization of training expectations (others)		
No	30	88.2
Yes	4	11.8

accounted for the exclusion of some factors in Models I to Model IV.

Model I in Table 5 shows the relationships between skills development/empowerment acquired by campus keepers and selected background factors, reasons for enrolment in the empowerment program, and knowledge/information about the training content. The statistics in the lowest panel of the table suggest that the predictors in Model I explained at least 50% of the relationships' variation despite that only one of the relationships were statistically significant. The odds that respondents will report that the training/empowerment was useful for self-employment was higher for those who had five or more people in their household than their counterparts with four or lower numbers (OR = 22.7 [CI = 0.56, 921.31]). In Model II of Table 5, the variance was 52.1%, although none of the predictors had a statistically significant relationship with the dependent variable.

Table 5 presents the relationships between perceived realizations of skills development/empowerment expectations by selected factors. Model 3 shows the relationships between perceived realizations that training leads to additional income by selected factors, which accounted for at least 62% of explained model variations. The odds of perceived realization that training leads to additional income was lower when only respondent or spouse was the family breadwinner (OR = .05 [CI = 0, 1.2]) than when both respondent and their spouse/others were the breadwinners in the family. It is essential to state that the relationship between perceived realizations and additional income levels was not statistically significant. Furthermore, reports below of a middle-aged female campus keeper indirectly seem supported during key informant interviews. Her views are paraphrased thus:

She learnt tie and dye vocation during the training programme (conducted some years back). Five years down the line she has not been able to practice how to make tye and dye fabric, and since then, due to lack of finance to buy relevant materials to start producing the fabric. This made her to lose interest. She is planning to embark on soap making in the nearest future.

An account of a male participant aged 54 years old who participated in the training conducted earlier

Table 3: Bivariate association between future usefulness of skills development/empowerment and background factors

Variables	self-employed (%)	Independence (%)	Others (%)	P-Value
Total N = 36				
Age at last birthday				
34 or younger	26.1	28.6	16.7	
35 to 39	30.4	14.3	16.7	
40 to 44	17.4	28.6	66.7	
45 or older	26.1	28.6		.345
Marital status				
single/divorced/widowed	34.8	28.6	50.0	
Married	65.2	71.4	50.0	.708
Level of education				
primary/no response	30.4			
secondary/tertiary	69.6	100.0	100.0	.086
Years worked as campus keeper				
2 or less	26.1	28.6	50.0	
3 to 6	26.1	14.3	16.7	
over 6	47.8	57.1	33.3	.785
Number of people living with the respondent				
4 or less	36.8	57.1	50.0	
5 or more	63.2	42.9	50.0	.615
The breadwinner in the family				
others/non response	30.4	14.3		
spouse/both	34.8	57.1	33.3	
Self	34.8	28.6	66.7	.347
Why enroll for the empowerment program				
improved business/additional income	4.3	28.6		
more knowledge/skill	43.5		66.7	
make progress in life	52.2	71.4	33.3	.054
Cumulative index on knowledge/information about skills development				
8 to 11	50.0	33.3	100.0	
12 to 16	50.0	66.7		.067
Perceived knowledge/information about intervention topics				
little knowledge	4.3		16.7	
average knowledge	34.8	14.3	33.3	
much knowledge	60.9	85.7	50.0	.513

suggest that knowing what to do is one thing but translating to making additional income may need additional support like seed grant:

"I am one of the few male beneficiaries at the training. I have interest in fish farming which made me go for that training. And I learnt a lot. After that training I saved and started a small fish farming in my house using a customized container. It is still on a small scale, I sell occasionally and combine this with my job. I am very grateful for the free training. However, how I wish the trainers gave us a seed grant of up to ₦50,000 (fifty thousand Naira each) to start the business by now my fishing farming would have grown."

Table 5 presents the relationships between the perceived realization that training improved business and selected independent factors. Although only one factor was significantly related to the perceived realization that training leads to the improved business, the equation's factors explained about 42% of the Model's variations. The odds that respondents realized that the training/empowerment program they attended leads to improved business was higher for those knowledgeable/informed of 12 to 16 topics (OR = 29.19 [CI = 1.1, 777.48]) than their counterparts who knew 8 to 11 topics treated at the training. The realization that training leads to improved business is important, bearing in mind that women's economic empowerment is a cornerstone

Table 4: Bivariate association between the perceived realization of training expectations by background factors

Variables	Increased income / additional income			More knowledge/skills			Improved business		
Total N = 37	No (%)	Yes (%)	P-value	No (%)	Yes (%)	P-value	No (%)	Yes (%)	P-value
Age at last birthday									
34 or younger	24.0	33.3		12.5	30.8		26.7	25.0	
35 to 39	24.0	22.2		25.0	23.1		16.7	75.0	
40 to 44	32.0	22.2		37.5	26.9		33.3		
45 or older	20.0	22.2	.928	25.0	19.2	.774	23.3		.061
Marital status									
single/divorced/widowed	40.0	33.3		25.0	42.3		36.7	50.0	
Married	60.0	66.7	.724	75.0	57.7	.378	63.3	50.0	.606
Level of education									
primary/no response	16.0	22.2		12.5	19.2		20.0		
secondary/tertiary	84.0	77.8	.675	87.5	80.8	.662	80.0	100.0	.324
Years worked as campus keeper									
2 or less	32.0	22.2		12.5	34.6		30.0	25.0	
3 to 6	20.0	33.3		25.0	23.1		26.7		
over 6	48.0	44.4	.693	62.5	42.3	.459	43.3	75.0	.397
Number of people living with you in the same house									
4 or less	50.0	25.0		37.5	45.8		46.4	25.0	
5 or more	50.0	75.0	.217	62.5	54.2	.681	53.6	75.0	.419
The breadwinner in the family									
others/non response	20.0	33.3			30.8		26.7		
spouse/both	36.0	44.4		62.5	30.8		40.0	25.0	
Self	44.0	22.2	.486	37.5	38.5	.130	33.3	75.0	.237
Why enroll for the empowerment program									
improved business/additional income	4.0	22.2		37.5			10.0		
more knowledge/skill	44.0	33.3		37.5	42.3		40.0	50.0	
make progress in life	52.0	44.4	.253	25.0	57.7	.004	50.0	50.0	.784
Cumulative index on knowledge /information about intervention indicators									
8 to 11	45.0	100.0		50.0	57.9		50.0	100.0	
12 to 16	55.0		.027	50.0	42.1	.734	50.0		.102
Perceived knowledge about intervention topics									
little knowledge	8.0				7.7			50.0	
average knowledge	28.0	44.4		50.0	26.9		33.3	25.0	
much knowledge	64.0	55.6	.509	50.0	65.4	.395	66.7	25.0	.000

of the 2030 agenda for sustainable development espoused by the United Nations[27].

Another female participant who attended the earlier training/empowerment program reported that she started to practice what she learned, although on a small scale. According to her, the knowledge/information acquired from the training programme can help establish a small vocational skill or small business.

"I thank God for making me to be among those selected for the training. I now earn income from making perfumes. Here are some samples; please I will like you to patronize me. It smells nice, you will like it. I have been making sales though in small quantity. I plan to expand my production once I make more sales and save some money. I am happy I learnt perfumery during the training. I thank the organizers."

Discussion

This study examined the usefulness of skills development/empowerment and perceived

Table 5: Logistics Regression on the relationship between the usefulness of skills development/empowerment in self-employment by predictors

Variables	Self-employment Model I OR (95 CI)	Sig	Independence/others Model II OR (95 CI)	Sig
Age at last birthday				
34 or younger	--	--	1.00	
35 to 39	--	--	0.21(0, 23.87)	.519
40 to 44	--	--	9.13(0.12, 673.13)	.314
45 or older	--	--	0.44(0.01, 19.62)	.671
Marital status				
single/divorced/widowed	1.00		1.00	
Married	0.3(0.01, 9.72)	.499	0.46(0.01, 17.54)	.676
Level of education				
primary/no response	1.00		--	
secondary/tertiary	0.00(0.00, --)	.999	--	--
Years worked as campus keeper				
5 or less	1.00		--	
6 or more	0.66(0.02, 21.99)	.816	--	--
Number of people living with you in the same house				
4 or less	1.00		1.00	
5 or more	22.7(0.56, 921.31)	.098	0.19(0.01, 5.27)	.328
The breadwinner in the family				
Both/others/non response	1.00		1.00	
Self/spouse	0.25(0.01, 10.77)	.468	4.46(0.15, 135.32)	.390
Why enroll for the empowerment program				
improved business/additional income	1.00		1.00	
more knowledge/skill	1.3(0.01, 302.32)	.926	0.07(0, 7.98)	.274
make progress in life	1(0.01, 115.39)	1.000	0.59(0.01, 30.04)	.790
Cumulative index on knowledge/information about intervention indicators				
8 to 11	1.00		1.00	
12 to 16	2.06(0.09, 48.11)	.654	0.13(0, 4.91)	.271

Note: Level of Significance; $p \leq .1$, $p \leq .05$, $p \leq .01$, $p \leq .001$. OR = Odds Ratios; CI = Confidence Interval
Model 1: Self-employment by selected independent factors; Chi-square = 10.329, -2 Log likelihood = 19.987[a], Nagelkerke R Square = .501.
Model 2: independence/others by selected independent factors; Chi-square = 11.374, -2 Log likelihood = 20.467[a], Nagelkerke R Square = .521

realization of training expectation and key explanatory factors, including selected background factors, reasons for enrolling in empowerment program, and knowledge/information about entrepreneurship. The aim was to provide additional information to enable more campus keepers to benefit and make the best use of future training/empowerment programs. The campus keepers represent the lowest socioeconomic class in society, which constitutes those in the poverty category that are strategically identified to alleviate their predicament within the Sustainable Development Goals framework. The quantitative survey sample included 37 respondents of the 40 Campus Keepers who participated in a training/empowerment program organized by a university research cluster. While the qualitative component of the study purposively selected five key informants, four women and one man, from a group of campus keepers that had participated in past training/empowerment programs.

Findings showed that few factors could make a difference in how campus keepers view the usefulness of the skills development/empowerment program organized for them. For instance, the number of people living with the respondent is the only explanatory significant factor of the dependent variable in Model 1, i.e., self-employment is the usefulness of skills development/empowerment training, and this and other insignificant factors accounted for at least 50% of the explained variation in the equation. The evidence showed that the skills

Table 6: Logistics Regression on the relationships between the perceived realization of skills development/empowerment in terms of increase additional income by predictors

Variables	Model 3 OR (95 CI)	Sig	Model 4 OR (95 CI)	Sig	Model 5 OR (95 CI)	Sig
Age at last birthday						
34 or younger			1.00		1.00	
35 to 39	--	--	0.88(0.03, 27.6)	.943	--	--
40 to 44	--	--	0.49(0.02, 10.83)	.652	--	--
45 or older	--	--	0.62(0.02, 18.05)	.778	--	--
Marital status						
single/divorced/widowed			1.00		1.00	
Married	--	--	0.44(0.04, 4.81)	.500	5.14(0.3, 88.52)	.260
Level of education						
primary/no response					1.00	
secondary/tertiary	--	--	--	--	2.02(0.07, 61.56)	.686
Years worked as campus keeper						
5 or less	1.00		1.00		1.00	
6 or more	0.51(0.02, 12.39)	.676	1.84(0.2, 17.12)	.594	1.57(0.12, 20.82)	.735
Number of people living with you in the same house						
4 or less						
5 or more	--	--	1(0.14, 7.15)	.998	1.64(0.14, 19.86)	.698
The breadwinner in the family						
Both/others/non response	1.00		1.00			
Self/spouse	0.05(0, 1.2)	.065	5.67(0.69, 46.45)	.106	--	--
Why enroll for the empowerment program						
improved business/additional income	1.00		1.00		1.00	
more knowledge/skill	--	--	--	--	6.91(0.08, 567.15)	.390
make progress in life	--	--	--	--	0.42(0.01, 18.24)	.654
Cumulative index on knowledge/information about intervention indicators						
8 to 11	1.00				1.00	
12 to 16	0.00(0.00, --)	.998	--	--	29.19(1.1, 777.48)	.044

Note: Level of Significance; p ≤ .1, p ≤ .05, p ≤ .01, p ≤.001. OR = Odds Ratios; CI = Confidence Interval
Model 3: perceived realization that training leads to additional income by selected factors; Chi-square = 10.899, -2 Log likelihood = 10.355[a], Nagelkerke R Square = .626
Model 4: perceived realization that training leads to more knowledge/skills by selected factors ; Chi-square = 3.863, -2 Log likelihood = 31.541[a], Nagelkerke R Square = .172
Model 5: perceived realization that training results in improved business by selected factors; Chi-square =8.250, -2 Log likelihood = 22.066[a], Nagelkerke R Square = .418

acquired from the vocational training organized by the research cluster on women and the center for the University's entrepreneurial studies were most impactful and value-adding.

The impact was evident from the explanatory variable, the number of people in the respondent's household, which was a significant factor in seeing the training's usefulness. The results suggest the need to target more low socioeconomic large families with self-employment training schemes. They are more likely to see the usefulness of it more than any other sub-groups. Likewise, intervention programs should target low socioeconomic small families with information that will boost their interest in participating in skills development/empowerment programs for self-employment to enhance their quality of life in the long-run. This result is supported by Ezeibe *et al.*[31], which focused on the benefits of women empowerment, such as strengthening their existing skills and capacities to participate and perform better towards improving themselves and their families. Skills strengthening and capacity findings are supported by Odoemene[11] and Mansor[12.] The

findings are on women's multiple roles. The roles include mothers, wives, breadwinners, and struggle as entrepreneurs.

Similar to the findings in Model 1, only the explanatory variable—the breadwinner in the family and a few other insignificant factors accounted for about 63% of the explained variation in Model 3. Interestingly, the findings suggest that campus keepers who reported sole breadwinners in the family had significantly lower odds of perceiving increased additional income from the skills development/empowerment training received than those who had two/other breadwinners in the household. This result implies that campus keepers who are sole breadwinners or whose spouse is the sole breadwinner should be given additional support in the form of information or seed grants to realize the additional income. The implication is in tandem with the views expressed in other studies stating that the challenges female entrepreneurs face are the shortage of capital and low education. As a result, they are often not aware of business technology and market knowledge[24-26]. The result translates to the fact that the training does not incorporate support to implement and succeed in small-scale businesses. Thus, the sole breadwinner in a family is more likely to face more challenges based on pressure on the only income source. Indeed, this is the view of Kato and Kratze[17]. As women prepare for entrepreneurship and try to gain relevant knowledge, including access to credit facilities, their situation is compounded by their low quality of education and lack of requisite skills to manage such business ventures.

Further research should be done to examine other factors that are critical for low socioeconomic status. According to Oladosun *et al.*[34], education is crucial and has a positive relationship with sustainable development. For instance, women with tertiary education are likely to make better and informed decisions than their counterparts who do not possess the same experience or education level. This study's third main finding is on the relationship between knowledge/information acquired and selected explanatory factors. Despite the increase in perceived knowledge/information based on the training, this did not translate into effective business start-ups and success. This finding is corroborated by findings from the key informant interviews of past training participants stating little or no business improvement over the years due to lack of funds or seed grant to establish their businesses sustainably. The costs of start-up materials are not affordable by the training participants. Part of their expectation was a seed grant or credits for their businesses to take off. For sustainable development, entrepreneurs should stand on their own to meet their present needs and be empowered to overcome their future problems [33]. This view agrees with the affirmation of Adetayo[23] that women empowerment and entrepreneurship can be a tool for achieving economic development if their skills and talents are nurtured and utilized.

Conclusion

The study presented empirical data on how skills development/entrepreneurship programs can lead to self-employment, increased additional income, and improved business for low socioeconomic status households. The findings are useful in improving the participation and involvement of members of this sub-group vocational skills training/empowerment programs. The study also provided evidence on the weakest and challenging aspect of entrepreneurship or business venture-value-chain, starting and maintaining a small business in a profitable manner over the long-term. Understanding the weakest linkages in the business cycle and strengthening such areas of weaknesses will be vital to reducing Nigeria's poverty rate. Thus, contributing to achieving sustainable development goals 1, 2, and 5 on poverty alleviation, zero hunger, and gender equality in the country

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Appendices

Appendix I: Correlation matrix and diagnosis on usefulness of skills development/empowerment with respect to self-employment by key predictors

Variance Proportion													
	1	2	3	4	5	6	7	8	Sig	Tol	VIF	EV	CI
1	.12	.01	.01	.01	.04	.00	.03	.10	.468	.711	1.406	.214	6.257
2	.14	.01	.01	.04	.00	.09	.00	.13	.725	.529	1.891	.142	7.690
3	.31	.19	.00	.00	.02	.05	.03	.04	.180	.618	1.619	.091	9.599
4	.20	.01	.03	.42	.05	.02	.09	.19	.468	.637	1.570	.062	11.640
5	.06	.04	.00	.33	.77	.01	.01	.04	.094	.541	1.849	.045	13.599
6	.05	.05	.23	.02	.02	.00	.69	.00	.785	.404	2.472	.038	14.805
7	.06	.27	.38	.14	.07	.82	.14	.17	.668	.747	1.338	.019	20.994
8	.07	.42	.34	.03	.03	.02	.00	.33	.690	.672	1.489	.007	33.893

Note: Adjusted R Square = -.012, Std. Error of the Estimate = .51277; Sig = significant levels, .1, .05, .01, .001; Tol = Tolerance; VIF= Variance Inflation Factor; EV = Eigenvalue; and CI = Condition Index; Dependent Variable: usefulness of skills development and empowerment in the future (self-employed); 1 = age at last birthday, 2= marital status, 3= level of education, 4= years worked as campus keepers, 5= number of people living with you in same house, 6= the breadwinner in family, 7= why enrol for the empowerment programme, 8= knowledge/information about intervention indicators.

Appendix II: Correlation matrix and diagnosis on usefulness of skills development/empowerment in terms of independence/others by key predictors

Variance Proportion													
	1	2	3	4	5	6	7	8	Sig	Tol	VIF	EV	CI
1	.12	.01	.01	.01	.04	.00	.03	.10	.468	.711	1.406	.214	6.257
2	.14	.01	.01	.04	.00	.09	.00	.13	.725	.529	1.891	.142	7.690
3	.31	.19	.00	.00	.02	.05	.03	.04	.180	.618	1.619	.091	9.599
4	.20	.01	.03	.42	.05	.02	.09	.19	.468	.637	1.570	.062	11.640
5	.06	.04	.00	.33	.77	.01	.01	.04	.094	.541	1.849	.045	13.599
6	.05	.05	.23	.02	.02	.00	.69	.00	.785	.404	2.472	.038	14.805
7	.06	.27	.38	.14	.07	.82	.14	.17	.668	.747	1.338	.019	20.994
8	.07	.42	.34	.03	.03	.02	.00	.33	.690	.672	1.489	.007	33.893

Note: Adjusted R Square = -.012, Std. Error of the Estimate = .51277; Sig = significant levels, .1, .05, .01, .001; Tol = Tolerance; VIF= Variance Inflation Factor; EV = Eigenvalue; and CI = Condition Index; Dependent Variable: usefulness of skills development and empowerment in the future (independence/others); 1 = age at last birthday, 2= marital status, 3= level of education, 4= years worked as campus keepers, 5= number of people living with you in same house, 6= the breadwinner in family, 7= why enrol for the empowerment programme, 8= knowledge/information about intervention indicators.

Appendix III: Correlation matrix and diagnosis on perceived realization of skills development/empowerment with respect to increased additional income by key predictors

Variance Proportion													
	1	2	3	4	5	6	7	8	Sig	Tol	VIF	EV	CI
1	.12	.01	.01	.01	.04	.00	.03	.10	.634	.711	1.406	.214	6.257
2	.14	.01	.01	.04	.00	.09	.00	.13	.766	.529	1.891	.142	7.690
3	.31	.19	.00	.00	.02	.05	.03	.04	.428	.618	1.619	.091	9.599
4	.20	.01	.03	.42	.05	.02	.09	.19	.965	.637	1.570	.062	11.640
5	.06	.04	.00	.33	.77	.01	.01	.04	.855	.541	1.849	.045	13.599
6	.05	.05	.23	.02	.02	.00	.69	.00	.175	.404	2.472	.038	14.805
7	.06	.27	.38	.14	.07	.82	.14	.17	.754	.747	1.338	.019	20.994
8	.07	.42	.34	.03	.03	.02	.00	.33	.082	.672	1.489	.007	33.893

Note: Adjusted R Square = .024, Std. Error of the Estimate = .39010; Sig = significant levels, .1, .05, .01, .001; Tol = Tolerance; VIF= Variance Inflation Factor; EV = Eigenvalue; and CI = Condition Index; Dependent Variable: usefulness of skills development and empowerment in the future (increased additional income); 1 = age at last birthday, 2= marital status, 3= level of education, 4= years worked as campus keepers, 5= number of people living with you in same house, 6= the breadwinner in family, 7= why enrol for the empowerment programme, 8= knowledge/information about intervention indicators

Appendix IV: Correlation matrix and diagnosis on perceived realization on skills development/empowerment for more knowledge/skills by key predictors

Variance Proportion													
	1	2	3	4	5	6	7	8	Sig	Tol	VIF	EV	CI
1	.12	.01	.01	.01	.04	.00	.03	.10	.979	.711	1.406	.214	6.257
2	.14	.01	.01	.04	.00	.09	.00	.13	.012	.529	1.891	.142	7.690
3	.31	.19	.00	.00	.02	.05	.03	.04	.612	.618	1.619	.091	9.599
4	.20	.01	.03	.42	.05	.02	.09	.19	.977	.637	1.570	.062	11.640
5	.06	.04	.00	.33	.77	.01	.01	.04	.174	.541	1.849	.045	13.599
6	.05	.05	.23	.02	.02	.00	.69	.00	.025	.404	2.472	.038	14.805
7	.06	.27	.38	.14	.07	.82	.14	.17	.001	.747	1.338	.019	20.994
8	.07	.42	.34	.03	.03	.02	.00	.33	.022	.672	1.489	.007	33.893

Note: Adjusted R Square = .413, Std. Error of the Estimate = .34928; Sig = significant levels, .1, .05, .01, .001; Tol = Tolerance; VIF= Variance Inflation Factor; EV = Eigenvalue; and CI = Condition Index; Dependent Variable: perceived realization of training expectations (more knowledge/skills); 1 = age at last birthday, 2= marital status, 3= level of education, 4= years worked as campus keepers, 5= number of people living with you in same house, 6= the breadwinner in family, 7= why enrol for the empowerment programme, 8= knowledge/information about intervention indicators.

Appendix V: Correlation matrix and diagnosis on perceived realization on skills development/empowerment for improving business by key predictors

Variance Proportion														
	1	2	3	4	5	6	7	8	9	Sig	Tol	VIF	EV	CI
1	.00	.01	.00	.05	.06	.01	.01	.14	.01	.213	.635	1.575	.195	6.949
2	.01	.07	.03	.00	.03	.11	.02	.01	.00	.202	.466	2.148	.127	8.633
3	.03	.12	.01	.12	.02	.00	.22	.11	.00	.810	.611	1.637	.074	11.255
4	.02	.01	.05	.23	.00	.00	.17	.18	.13	.379	.619	1.616	.053	13.381
5	.00	.03	.00	.36	.58	.02	.03	.06	.03	.738	.523	1.914	.046	14.304
6	.12	.10	.17	.01	.00	.01	.46	.24	.07	.335	.370	2.702	.033	16.927
7	.27	.11	.13	.20	.26	.38	.06	.01	.08	.249	.791	1.264	.023	20.183
8	.55	.02	.52	.00	.00	.33	.03	.06	.32	.161	.621	1.611	.014	25.737
9	.00	.53	.08	.02	.05	.13	.00	.19	.36	.829	.666	1.502	.005	44.642

Note: Adjusted R Square = -.040, Std. Error of the Estimate = .51975; Sig = significant levels, .1, .05, .01, .001; Tol = Tolerance; VIF= Variance Inflation Factor; EV = Eigenvalue; and CI = Condition Index; Dependent Variable: perceived realization of training expectations (improved business); 1 = age at last birthday, 2= marital status, 3= level of education, 4= years worked as campus keepers, 5= number of people living with you in same house, 6= the breadwinner in family, 7= why enrol for the empowerment programme, 8= cumulative inded on knowledge/information about intervention indicators, 9= perceived knowledge/information about intervention topics.