



Systematic Review

Can Informal Savings Groups Promote Food Security and Social, Economic and Health Transformations, Especially among Women in Urban Sub-Saharan Africa: A Narrative Systematic Review

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Abstract: This narrative review aimed to identify if roles of common informal savings groups known as Accumulating Savings and Credit Associations (ASCAs) or Rotating Savings and Credit Associations (ROSCAs) can play a significant role in mitigating food insecurity, socioeconomic inequality, promoting health, and/or increasing agency in women in urban sub-Saharan Africa (SSA). These organizations exist in most low- and middle-income countries (LMICs) worldwide under various names. A comprehensive search of scholarly outputs across six electronic databases (PubMed, Google Scholar, EBSCOhost, Scopus, Sabinet, and Cochrane) from 2000 to 2021 was completed. Twenty-eight (28) records met our inclusion criteria, and their quality was appraised using the Critical Appraisal Skills Programme (CASP) qualitative checklist. We identified through thematic analysis that ROSCAs/ASCAs play a crucial role in advancing social, economic, and health transformations, especially among women in urban SSA. However, while ROSCAs/ASCAs played important roles in food security, it was often not the primary motivation for participation. None of the selected studies identified the importance of dietary quality or access to healthy food in relation to food security. This review suggests a window of opportunity to promote partnerships and collaborations of ROSCAs/ASCAs with relevant stakeholders to leverage the functionalities of ROSCAs/ASCAs as vehicles for re-alignment of priorities, increased knowledge, and opportunities to encourage affordable healthy diets in urban SSA.

Keywords: informal savings groups; ROSCAs; ASCAs; food (in)security



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1. Introduction

The “wicked” problem of food insecurity juxtaposed with overweight/obesity disproportionately affects women and the vulnerable urban poor globally, particularly in the global south, including sub-Saharan Africa (SSA) [1–5]. Women in sub-Saharan Africa (SSA) are more likely to be food insecure than men, even though women play a more significant role in ensuring household food security [6]. However, food insecurity has been linked to factors such as poverty, gender, unemployment, low educational attainment, and low socioeconomic status [7]. Furthermore, the continuous rise of the wicked problem

has also been attributed to: nutrition transition, lack of dietary diversity and quality, cost of healthy food, poor ability to store food, expansion of the food retail environment “big box” stores, issues of last mile distribution, and greater body size tolerance [5,8–10]. Consequently, households adopt several strategies to mitigate food insecurity and socioeconomic inequality.

One such strategy for mitigating food insecurity and socioeconomic inequality involves participation in informal savings groups [11]. Worldwide, the most common types of informal savings groups are often referred to as either Accumulating Savings and Credit Associations (ASCAs) or Rotating Savings and Credit Associations (ROSCAs). ROSCAs represent community-based financial initiatives that comprise self-selected members of a group who regularly meet and contribute an equal amount of savings towards a common fund, with one member rotationally taking the whole sum [12]. ASCAs, on the other hand, are savings groups where funds contributed regularly are not immediately withdrawn like the ROSCAs but are left to grow as loan opportunities for members, for bulk purchases, or collective investments [13]. They are found in almost every LMIC and fulfill the role of informal financial institutions, typically providing credit to low-income consumers that often do not have access to more formal financial services.

ROSCAs/ASCAs are known by many names globally, for example, Ajo/Isusu in Nigeria, Tontines in Francophone West African countries, such as Senegal and Cameroon, Hui in China, Muzikis or Likelambas in the Democratic Republic of Congo, Ekub in Ethiopia, Stokvel in South Africa, Mukando in Zimbabwe, Susu in Ghana, Chama in Kenya, Tandas in Mexico, and Chits/Kuries in India. Notably, the attributes and functions of South Africa’s informal saving groups, stokvels, have been widely described in the literature. Stokvels has been practiced for many years by most South Africans and highlighted as a key poverty-alleviation strategy [14]. Of these groups, nearly 30% (of over 800,000) have been described as “grocery stokvels” and typically leverage collective buying power to garner discounts on long-shelf-life items from major retailers and wholesalers, particularly leading up to the festive season. The bulk of these items are highly processed or energy dense foods, often of lower nutritional quality.

There appears to be substantial evidence that ROSCAs/ASCAs promote community development, social interaction, and social capital [15]. They also provide an important means of livelihood, sustenance for poor women, especially those who are heads of households [7,16–19]. However, there is no evidence on the role of ROSCAs/ASCAs as a potential public health multi-faceted intervention tool to promote agency in women, healthy lifestyle, and social and economic stability. Of note, the COVID-19 pandemic has been cited to have aggravated the situation of food insecurity, poverty, and unemployment disproportionately in women, resulting in adverse public health consequences globally [20,21]. The novelty of this paper is that it will provide insights into the strengths and importance of informal saving groups. Furthermore, ROSCAs/ASCAs could be used as a public health multi-faceted intervention tool, to promote agency in women, healthy lifestyle, and social and economic stability. This review will address the gaps in the literature focusing on the following research questions: to what extent have ROSCAs/ASCAs been used to address food insecurity (i) to increase agency in women and their economic leverage in urban areas sub-Saharan African settings, (ii) to promote healthy lifestyles and well-being amongst their members, and (iii) to increase demand for and access to healthier food options.

As a narrative review that was conducted systematically, the structure of the review is as follows. Section 1 comprises the introduction, highlighting the gap the review aims to fill. Section 2 includes detailed information on the methods used to conduct the review and assess the quality of the selected documents, the identification and definition of themes for the review, a summary of included studies, and the study quality and description of the types of stokvels, as the most common type of ROSCA/ASCA in the literature. Section 3 comprises the findings under each theme, consisting of a thematic description with relevant quotes from the literature. Section 4 is the discussion section to draw more insights from the findings, their policy and health implications, the importance of ROSCAs/ASCAs in SSA,

especially for women, and to foster further research and development activities. Section 5 highlights the strengths and limitations of the study, and Section 6 provides the conclusion of the review with a short summary.

2. Methods

This narrative systematic review was registered in the International Prospective Register of Systematic Reviews [22], and evidence was extracted and synthesized using the SPICE mnemonic [23]. The SPICE mnemonic is guided by five distinctive sub-groups: setting (*where*), perspective (*for whom*), intervention (*what*), comparison (*what else*), and evaluation (*what result*) [24]. This narrative systematic review used the five sub-groups to extract the required information. We conducted a comprehensive search of scholarly outputs from six electronic databases (Pubmed, Google Scholar, EBSCOhost, Scopus, Sabinet, and Cochrane) to identify studies that focused on the role of ROSCAs/ASCAs in addressing issues of food security, health promotion, socioeconomic challenges, and agency in women from urban SSA.

2.1. Search Strategy

The following search strategy was developed with the guidance of a librarian and adapted for the various databases using appropriate controlled vocabulary and syntax: (“Rotating Savings and Credit Associations” OR “Stokvel” OR “Community Savings Groups” OR “Saving Promotion Interventions”) AND (“Food Security” OR “Food systems” OR “Health promotion” OR “Health” OR “Well-being” OR “Obesity” OR “Women” OR “Gender equity” OR “Agency” OR “Leadership” OR “Community Development” OR “Collective efficacy” OR “Non-communicable diseases”) AND (“Global South” OR “Southern Africa” OR “South Africa” OR “Lower- and Middle-Income Countries” OR “AFRICA”) NOT (“Banking” OR “Microfinance” OR “Financial institutions”). Additionally, a manual search of references of relevant studies and grey literature was performed, including conference abstracts and proceedings.

Only research studies from 2000 to 2021 were selected guided by the following keywords: “Rotating Savings and Credit Associations”, “Stokvel”, “Community Savings Groups”, “Saving Promotion Interventions”, “Food Security”, “Food Systems”, “Health Promotion”, “Health”, and “Well-being”. All identified abstracts were assessed for relevance to the focus of the narrative systematic review, and a full report was retrieved for studies with the relevant keywords. Studies identified as parts of reference list searches were also assessed for relevance to the review based on the information provided in the study title.

2.2. Inclusion Criteria

Only studies that were conducted in urban SSA with a focus on ROCSAs/ASCAs were considered, with the inclusion criteria guided by the following themes: agency in women, food security, well-being or nutrition, behavioral economics (peer pressure, social marketing), and economic leverage (Table 1). Community development, social interactions, and social capital were excluded in this study as themes, as there have been substantial studies conducted in SSA that have shown that ROCSAs/ASCAs promote these themes, as highlighted in the introduction.

2.3. Data Extraction and Abstraction

This narrative review used a thematic analysis to systematically review the roles that ROSCAs/ASCAs play in mitigating food insecurity, promoting health, and/or increasing agency in women in urban sub-Saharan African settings. As such, a deductive thematic approach based on the existing knowledge and objective of the current study was used to analyze the relevant literature. The themes against which we examined the role of ROSCAs/ASCAs were (1) mitigating food insecurity, (2) promoting health and well-being, (3) increasing agency in women, and (4) encouraging economic leverage and behavioral

economics in urban sub-Saharan African settings. Once data extraction tables were completed, two reviewers used qualitative software (Nvivo) to thematically organize the data from all included studies into these deductive themes (Table 1), which were agreed upon a priori with the review team and based on the objective of the current study.

Although the final selected articles were guided by the deductive themes, inductive coding was used to derive relevant sub-themes within the larger themes. All major themes and sub-themes were verified by at least two members of the review team, and discrepancies were discussed until a consensus was reached. Quotes and statistics from included studies are presented in the results for the purposes of elucidation and illustration.

We used an adapted Critical Appraisals Skills Programme (CASP) qualitative checklist to assess the quality of the selected studies. The CASP qualitative checklist is a common tool for quality appraisal in health-related qualitative evidence syntheses. It is also used for assessing mixed-method and qualitative research [25]. Details on the study quality based on the seven adapted questions can be found in Appendix A. These questions include whether there were clear aims and objectives for the research, if the method and data collection used were appropriate to address the aims of the research, if there was a clear statement of findings, if the data analysis were sufficient and rigorous, and if the extent to which the research related to the current study was sufficient.

Table 1. Narrative review deductive themes.

Theme	Definition	Keywords
Agency in women	This is the ability of women to identify goals or make choices and then act upon them as individuals and collectively within the family. It includes their participation in markets, politics, and other formal and informal networks. It also refers to women's ability to make and act on their own life choices, even in the face of others' opposition [26,27].	"Choices for myself and my household", "individual decision making", "collective decision making", and "empowerment autonomy"
Food security and well-being	Food security exists when "all people, at all times, have physical and economic access to sufficient, safe and nutritious food that meets their dietary needs and promotes an active and healthy life" [28]. Food security encompasses the following: Food availability: The availability of sufficient quantities of food of appropriate quality. Food access: Access by individuals to adequate amounts of appropriate foods for a nutritious and healthy diet. Utilization: Utilization of food through adequate diet, clean water, sanitation, and health care to reach a state of nutritional well-being where all physiological needs are met. Stability: To be food secure, a population, household, or individual must always have access to adequate food.	"Buy more food", "enough to eat", "eat better, healthy food", "food that I like", "eat more", "well-being", and "not worrying about food or going hungry"
Behavioral economics	In this study context, Behavioral Economics was defined as emotional, cultural, and social factors affecting the economic decisions of individuals [29].	"Peer pressure", "social marketing", "habits", "social norms", "culture", "why you buy," "value proposition", "value for money".
Economic leverage	Economic Leverage in this context will refer to the use of the Accumulating Savings and Credit Associations (ASCAs) or Rotating Savings and Credit Associations (ROSCAs) as sources of incentive for borrowing or saving funds to meet needs and wants for the members individually or as a group and members of their households.	"Bulk buying", "access to capital", "profit, increased income".

The literature search generated a total of 20,757 records. In the initial phase, screening was performed by titles, and we excluded 20,351 irrelevant records. The remaining 406 records were screened by abstracts, and 258 records were excluded after abstract screening. The retained 148 records were screened by full text, guided by the themes (agency in women, food security, behavioral economics, and economic leverage) in urban SSA, and 120 records were excluded. Only 28 records met our inclusion criteria and were considered relevant for this narrative systematic review. Figure 1 shows the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) flow diagram of the study selection process.

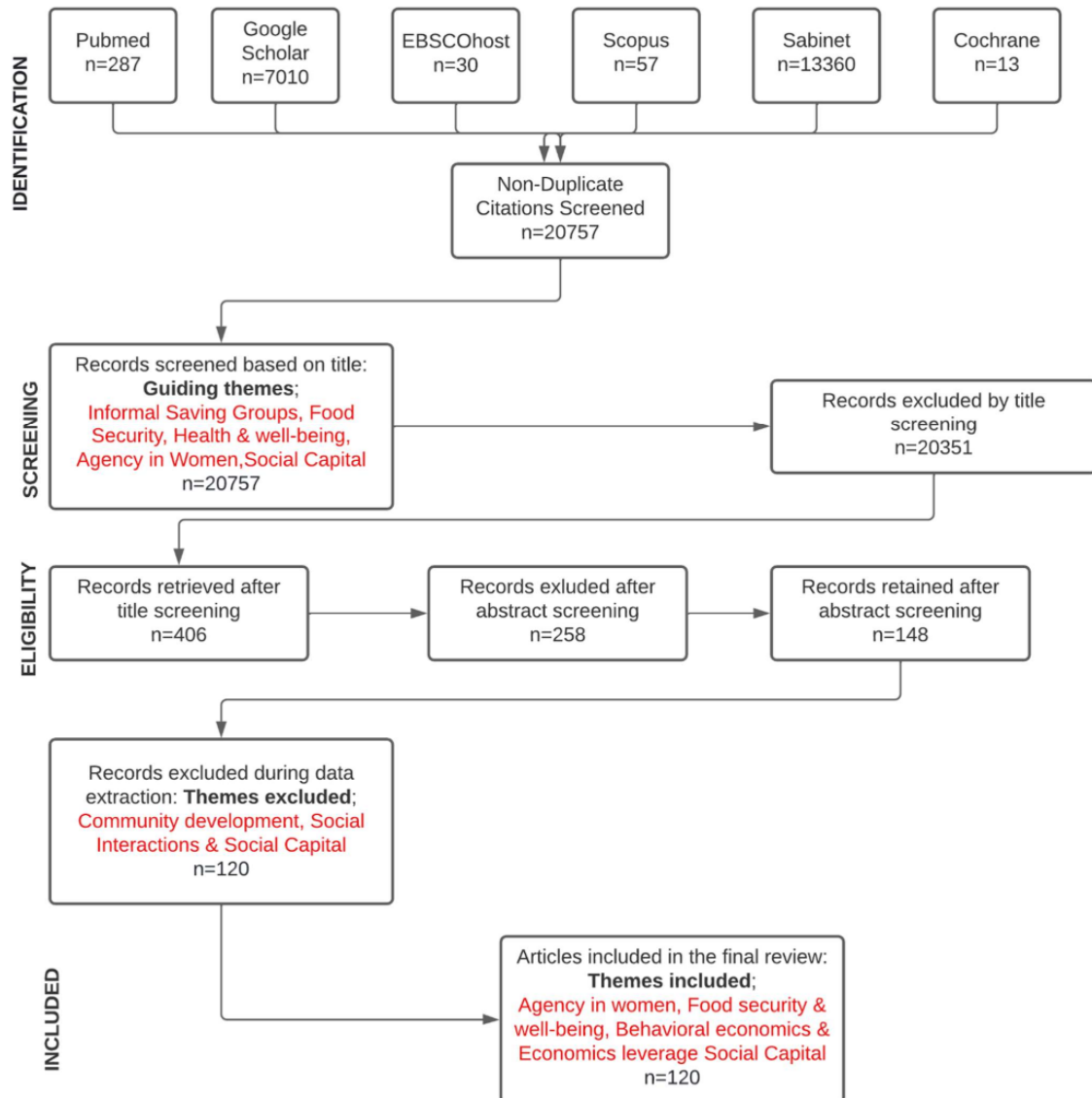


Figure 1. Prisma diagram on the role of “informal saving groups” in mitigating food insecurity, promoting health, and increasing agency in women in urban sub-Saharan Africa settings.

2.4. Summary of Included Studies and Study Quality

All studies included in this review had a primary focus on ROSCAs/ASCAs in one or more of our deductive themes. Of the 28 selected studies, 19 were conducted in South Africa, 3 in Kenya, 2 in Tanzania, and 1 each in Ethiopia, Zimbabwe, Senegal, and Nigeria. The selected studies consisted of qualitative (10), quantitative (9), and mixed-method (9) research methodologies. Further details on summary characteristics of selected studies are given in the Appendix A, Table A2.

Most ($n = 24$) of the included studies met all the CASP qualitative checklist criteria; however, one lacked sufficient rigorous data analysis [14], and one comprised data that were not collected in a way that addressed the research issue [30]. Two other studies did not have an adequate methodology to address the aims of the study and appropriate data analysis [31,32] (Appendix A, Table A1). As such, these may be impacted by selection and information bias. As most of the studies were conducted in South Africa, this review will provide some specific insights into the types and structure of ROSCAs/ASCAs commonly known as stokvels in South Africa.

2.5. Types of Stokvels

Stokvels in South Africa exist in different structures and types, the major types of which are as follows: savings stokvels, burial stokvels, investment stokvels, high-budget stokvels, and grocery stokvels (described in Table 2) [33,34].

Table 2. Typologies of South African ROSCAs (stokvels).

Type of Stokvel	Definition and Structure
Savings stokvels	The sole mandate of this type of stokvel is to promote savings; therefore, members contribute a fixed amount of money into a common pool and mutually agree upon the order or cycle of receiving the pooled funds [14]. Saving stokvels have been argued to have the largest membership in comparison to all other types of stokvels [35].
Burial stokvels	This type of stokvel offers material and non-material support to members and their families in the event of death. In this stokvel structure, members make fixed contributions to cover funeral expenses, and the specific benefits are defined in the conditions of the relevant stokvel [14].
Investment stokvels	The standard objective of investment stokvels is the accumulation of capital by investing in business ventures. However, investment stokvels also promote savings through the bulk purchases of goods [14]. Stokvels that promote savings through bulk purchasing are commonly referred to as cooperative buying societies [32]. With this type of stokvel, members contribute a fixed amount of money—usually monthly—and funds are allowed to accumulate before investment in business ventures [14]. Savings, burial, and investment stokvels are mainly women-dominated.
High-budget stokvels	These forms of stokvels function as financial institutions and are established to promote savings and investments [14]. High-budget stokvels do not serve the poor or persons of limited means; members contribute substantial amounts in keeping up with their high standing in society. These substantial contributions enable members to receive large lump-sum payments, which are mostly used to meet needs that require an outlay of considerable resources. The literature shows that high-budget stokvels are dominated by men, and that very few women are members of these schemes [36].
Grocery stokvels	Grocery stokvels are formed to accumulate funds for the purchasing of basic foods and groceries for the households of members [37]. Groceries are purchased on a monthly or annual basis, depending upon the agreements on which individual stokvels are based, and purchases are shared equally among members [37]. Owing to the latter, grocery stokvels therefore enable members to contribute affordable amounts of money over specified periods of time to buy groceries to share among themselves.

3. Results

3.1. Thematic Analysis

3.1.1. Food Security and Well-Being

Eleven [14,34,37–45] of the included studies directly discussed the impact that ROSCAs/ASCAs have on individual or household food security status and/or well-being. Studies also showed that women contributed more to the well-being of their households rather than spending the money for personal use when compared to men [26,41,46]. However, it is acknowledged that even though financial empowerment might often be the primary aim when joining ROSCAs/ASCAs, the result often offers benefits beyond this goal. For example, in this quote from a South African study of stokvels, financial well-being was integrally linked to health and physical well-being.

“Wealth is actual possession that comes as a result of your working effort. The reality of wealth is not cash, it is what is visible. Most importantly for me is your health, you cannot be wealthy when you are not healthy.” [41]

Many of the studies identified that funds from ROSCAs/ASCAs were used primarily for non-consumption purposes, and that the acquisition of food was rarely a priority, except for the grocery stokvel members (which are primarily dominated by women). Even though it is undeniable that ROSCAs/ASCAs contribute to food security, it is not often the major focus of ROSCAs/ASCAs' members when joining. However, a study conducted in South Africa indicated that 67.5% of 36,333 stokvels surveyed in the eThekweni Municipality—which constitutes 14% of the total stokvels—were grocery stokvels [34], thus highlighting the relevance of grocery stokvels. A participant in one of the studies in South Africa stated the following:

“It has benefited me a lot, I do not have that headache when it comes to food, I don't want to lie, and even now I am still eating food that I bought in December.”“Participants explained that they have not experienced hunger or food insecurity ever since they joined stokvels . . . ” [14]

3.1.2. Grocery Stokvels and Food Security

Only two of the included studies [34,37] focused specifically on grocery stokvels. The two studies were conducted in South Africa, although one of the studies focused on Zimbabwean grocery stokvels in South Africa [34,37]. Grocery stokvels, which mostly comprise women, harness the advantage of collective and bulk purchases. This allows them to buy more for less and to provide access to food for not only themselves and their immediate households, but also their relatives within and outside the country of residence of the stokvel members [37,47].

“Grocery savings are often perceived by members as being supplementary to the money which they allocate to purchasing groceries during the year, and to make it possible to purchase extra groceries in their Christmas shopping.” [37]

“In our stokvel, we have two males, one of which one is divorced and the other has a wife but the wife is back in Zimbabwe taking care of the kids. If you look, most stokvels are female-dominated; the few with males, those males are either divorced or widowed.” [37]

The need for food storage is, however, a challenge, as indicated by one member of a grocery stokvel in one study in South Africa,

“Most of us rent one room or two rooms it's difficult to store bulk groceries for a long time to share. So, we go to wholesale X and they keep our money and also we have an agreement that we buy from them.” [47]

Some retailers have made an initiative to support stokvels by providing opportunities to spread their purchases over a period of time, in a bid to dissuade bulk buying, which has been argued to pose storage challenges, spoilage, and nutritional value loss [34,37,47].

3.1.3. Agency in Women

The importance of ROSCAs/ASCAs to women is apparent in the review; more than half (16) of the studies [14,16,37–40,42,44,46,48–54] highlighted the role of ROSCAs/ASCAs in women's empowerment, and most showed an overall dominance of women's participation in ROSCAs/ASCAs. Notably, 10 of the studies [14,16,42,44,46,48–50,54,55] focused specifically on women and informal savings/ROSCAs/ASCAs, whereas only one study focused specifically on an all-male stokvel [31].

Most of the studies showed gender-specific differences in participation in ROSCAs/ASCAs and the use of the funds. As there are various types of ROSCAs/ASCAs, studies indicate that women are more involved in saving, burial, and grocery stokvels, whereas men are more involved in high-budget, investment, and saving stokvels [14,16,42,44,46,48–50,54,55]. The participation of women in ROSCAs/ASCAs is often linked to the needs of children

and the household [16,19,26,40,48,49,53]. Some of our studies characterized ROSCA/ASCA members as poor women who are often unemployed [14,16]. However, other studies showed that stokvels in urban areas involved women of varying socioeconomic statuses, who were mostly employed and either married or female heads of households, albeit with limited funds [37,56,57]. Only one study indicated that there were more single people than married involved in stokvels, but it was not clearly stated whether they were female heads of households with children [43]. Five sub-themes associated with agency in women emerged in our review and were discussed.

- **Collective efficacy**

While many of the studies have shown that ROSCAs/ASCAs may comprise mixed-gender groups, some studies implied that a women-only group was often favored, as it creates a space where women can let their guard down and have a sense of belonging and support [37,54]. ROSCAs/ASCAs are seen as financial, emotional, and social safety mechanisms in times of need for vulnerable women, where these women are also able to collectively address challenging issues [54]. Some of the studies highlighted this, as evidenced in these quotes:

“Women needed themselves and not external saviours to defy poverty.” [44]

“That’s how we help each other, not because it’s your turn then and you want to just take the money without caring about your friends and their problems. We listen to each other, and we listen to our friends’ problems, how big their problems are and how we can help them.” [54]

“We wanted only women in the group, we are freer, and we can talk and laugh. Men always want to take the lead. They are like children. They are not interested in improving the situation of the family.” [39]

- **Assertion in decision making**

ROSCAs/ASCAs have increased the level of control or assertion in individual or household decision making [48,53]. Collegial support within groups appears to be instrumental in empowering women in their interactions with their husbands or in being able to influence their livelihoods. This is seen in a quote from a member of a sex workers’ ROSCA in Tanzania:

“The Mchezo (ROSCAs are also called Mchezo in Tanzania) has helped me a lot. For example, you might get a client, and he will refuse to use a condom. But I can decide to refuse because I know even though he doesn’t pay me, I have money at home from the mchezo. It’s different from when you’re not in a mchezo, you might just go without a condom because you want money. But now I make my own decisions” [54]

Consequently, solidarity is reinforced by a wide range of mechanisms [53]. Overall, studies have shown that ROSCAs/ASCAs encourage a certain level of self-sufficiency in women by promoting gender equality; they are empowered to have access to a significant amount of funds, thereby reducing or eliminating their dependence on men [14,53]. This sense of empowerment is manifested through their confidence and capabilities as women who significantly contribute to the well-being of their families, both immediate and extended, without having to depend heavily on their husbands, relatives, or clients [14].

- **Savings protection mechanism**

Several studies highlighted that participation in ROSCAs/ASCAs acted as a protective tool for women for themselves, and from their spouses and demanding relatives, as it prevented immediate and purposeless consumption [39,46,53]. Studies documented that ROSCAs/ASCAs “can serve as a socially acceptable excuse to refuse the financial requests of a demanding relative” [46], and women use ROSCAs to prevent men from “misusing” household resources [53]. Quotes from some of the studies portray this mechanism:

“Joining a merry-go-round (i.e., a local ROSCA) is the only way to save some money. If I leave it at home, it will disappear.” [39]

“... encourage women to use their savings for their purposes, and to stand up against the demands of others ...” [53]

“... to save up money for my children as I am the breadwinner and it's difficult for me to manage the family.” [40]

- **Promotes entrepreneurship, acquisition of assets, and social networking**

Several of the studies emphasized that ROSCAs/ASCAs provide the opportunity for women to access credit or lump sums to start businesses or to expand current businesses, acquire assets, and to social network for business or job opportunities [14,16,19,41,46,48,54]. Other studies showcased ROSCAs/ASCAs as a platform for the availability, affordability, and accessibility of credit, which has led to the positive growth of women-owned enterprises [14,16]. This is especially important as most of these women do not have access to formal credit due to lack of collateral or individual economic rights. Additionally, ROSCAs/ASCAs serve as an avenue for business and social networking, helping to bring together women of different social statuses [12].

- **Increased knowledge and skills**

Although ROSCAs/ASCAs seem to attract mostly resource-poor women, some consist of women from different backgrounds with diverse educations, occupations, incomes, and social connections [34,45,54]. As such, they can benefit from shared knowledge and acquire skills. A participant in one study stated the following:

“I see more benefits because you will gain knowledge and you will know how to save money.” [14]

Studies indicated that ROSCAs/ASCAs

“help poor women to make the most of what little resources they have” [16], and that *“women whose savings groups had regular meetings described the meetings as opportunities for information sharing, exchanging advice, and addressing group dynamics and community issues”* [54]

3.1.4. Behavioral Economics

In this section, we will consider the impact of social, cultural, emotional, cognitive, and other influences on stokvel decision-making processes as they relate to food security, food choice decisions, and the decision of individuals to join or participate in stokvels. Eighteen studies [14,16,30,32,37–42,47,50,52,58–62] included in the review were classified under the economic leverage theme.

The participation of women in ROSCAs/ASCAs has helped them to identify with a specific group [14,16,19,34,38,40,42,47,48,53,54]; they have created opportunities of belonging and a means of sharing and socializing among members. However, several studies have indicated that sometimes, circumstances beyond these reasons seemed to have driven women to become members and to participate in a stokvel as a desperate attempt for survival [14,38,39,42,46]. For instance, women are often the immediate food suppliers at the household level [63]; therefore, their inability to access microfinance institutions to meet this need has forced them to participate in ROSCAs/ASCAs to meet their household's needs.

Our review showed that ROSCAs/ASCAs are growing in popularity as savings vehicles. In most of the studies, they were identified as a forced savings mechanism. This is one of the major reasons for joining ROSCAs/ASCAs, as indicated by quotes in two of the studies:

“My saving is much better now since I joined this group. Every single cent is allocated ahead of time; I don't just spend my money any how because I cannot fail to make my contribution. I am no longer reckless with my finances.” [41]

“Because I could not save when I was alone the stokvel helps me to save” ... “I feel obliged to pay and therefore benefit in that it is a savings scheme of some sort.” [40]

The quotes above also showed that the contribution is a commitment that the members place as high priority to prevent default. Notably, ROSCAs/ASCAs are characterized by highly organized structures with rules related to accountability. They are also reliant on the behaviors of the members of the group, who are mostly either friends or from the same community, workplace, religious body, or cultural background. As such, the group functionality is based on the trust and commitment of the members in the group, and members of ROSCAs/ASCAs try to meet their contributions.

“The thing that has kept us to survive is honesty and understanding each other. If you are honest and sit down and talk, everything will be alright.” [14]

In a study conducted in Zimbabwe, a study participant highlighted the following:

“Other members who wish to join must be from the same community because they can be trustworthy, are easy to locate, and it reduces the distance to be travelled for meetings, which causes lateness and absenteeism.” [42]

The review also highlighted that participation in ROSCAs/ASCAs is driven by immediate environments, such as family, neighborhoods, and friends [37,41,42]. In one of the studies, almost all (98%) the parents of ROSCAs/ASCAs members had been members of an ROSCA/ASCA [42]. Additionally, participants of ROSCAs/ASCAs in South Africa highlighted the following:

“When I was growing up, my mother taught me that money is not kept behind doors like brooms; that is why I joined this group, because I did not want to keep my money under a pillow. The little money that I have I contribute to the group and we buy relish because I cannot afford it on my own . . . ” [42]

“I am just doing [it] because my friends are doing it.” [37]

Another study in South Africa also indicated that more than three-quarters (77%) of stokvel members taught their children about the importance of ROSCAs/ASCAs [52].

In addition, the fact that no bank fees are charged in ROSCAs/ASCAs, which function in a similar capacity to formal financial institutions, is another of the major reasons for participating in these groups, as seen in the quotes below about banks, indicating preference and trust in ROSCAs/ASCAs when compared to banks (formal financial institutions):

“This is called a savings account but at the end of the day there is no money . . . you put in R5000 and when you come back you find there is R500.” [32]

“There is no difference between banks and criminals. When you put your money into your bank account they charge you. When you take it out, they charge you. Now you tell me why should I keep my money in a bank account?” [32,41]

Evidence from this narrative systematic review shows that ROSCAs are an important component of the behavioral economic component of finance, as financialization may require the principles of self-organization and solidarity, which are distinctive attributes of ROSCAs [14,34,38,39,42]. It can be deduced that societal and cultural differences in gender roles and the economic behavior of stokvel participants (mostly women) has adapted and driven women to use stokvels as their economic “voice” for financial independence and power [14,34,38,39,42].

3.1.5. Economic Leverage

Eighteen studies [16,30–32,34,38–41,47,51–53,57,58,64,65] included in this review were classified under the economic leverage theme. Financial strategies are strongly influenced by social relations [46], which might explain why the majority of ROSCA/ASCA members are women. Evidence from our review showed that, owing to a lack of resources and access to formal financial institutions, poor households are often forced to rely on community-based self-help initiatives for survival. In the context of South Africa, stokvels have been cited to be amongst the key poverty-alleviation strategies that have been practiced for many years by the majority of black South Africans [14].

ROSCAs/ASCAs have also been regarded as a form of social security [66]. Evidence from the review reflects stokvels as mutual aid arrangements whose mandate is to provide mutual assistance to members. However, the establishment of mutual aid arrangements aims to address gaps in social protection [66]. ROSCAs/ASCAs provide a platform for periodic collective savings for members, whereby the total amount collected during a year is either reserved on behalf of the members or disbursed as an equally shared lump sum [67]. Female-headed households were highlighted as supporting themselves through small business enterprises formed through participation in ROSCAs/ASCAs [16].

Our review also showed that ROSCAs played an important role in improving household livelihoods. For instance, in ROSCAs/ASCAs in Zimbabwe [42], one of the members, when asked about the benefits of the group, indicated that:

“I joined this group because sitting at home and depending on salary was not helping in any way. The salary that my husband and I are getting was not enough for us to do anything. But ever since I started being a member of this group, we managed to extend our house from a two- to a four-roomed house in 2013, and we are managing to pay our children’s school fees; one is at Empandeni High School, and another is at MSU in her second year.”

Our review also highlighted that stokvels played a critical role in financial support during tough times [14,31,34,38,42,46]; thus, stokvels are a means of eradicating poverty. Several studies [14,31,34,38,42,46] have indicated that poor women find refuge in the income, asset accumulation, and livelihoods made available by their access to ROSCAs/ASCAs.

4. Discussion

Our findings highlight that ROSCAs/ASCAs are a crucial piece of the puzzle in advancing social, economic, and health transformations, especially for women in sub-Saharan Africa. Aside from the broad definition of ROSCAs/ASCAs, which are primarily for savings and credit for various purposes, they are used as a multifaceted tool that can be used for financial, social, and emotional safety, as well as support, protection, insurance, improved well-being, and opportunity, by women (Figure 2). ROSCAs/ASCAs are tools that seemingly make women more visible, both economically and socially. Our review has demonstrated that women’s participation in ROSCAs/ASCAs is directly or indirectly linked to their well-being and that of their households. Although ROSCAs/ASCAs do play a role in food security, it was not often the primary focus, and none of the studies reviewed identified the nutritious and healthy part of food security, although the accessibility, availability, and stability of food and the purchase of non-perishable products were highlighted.

Notably, ROSCAs/ASCAs are used by women to prevent funds from being misused or demanded by their husbands or relatives [53]. They also prevent women from being solely financially dependent on their spouses and enable them to start businesses and have a voice in household decisions [53]. In addition, ROSCAs/ASCAs provide the opportunity for women to address issues of self-realization and to make informed decisions through knowledge and skill sharing and personal development [68]. They provide support socially and emotionally as members bear each other’s burdens, and there is a sense of belonging and kinship with the group [38,69]. ROSCAs/ASCAs also provide women with the opportunity to connect or meet with people they might not otherwise have had the opportunity to relate with, which might be beneficial to them individually or as a group [16]. Perhaps the most important role of stokvels for women is that they provide either short- or long-term insurance; they can access credit or bulk money for important and emergency purchases [69]. Studies [14,31,34,38,39,42,45,46] have shown that ROSCAs/ASCAs have both economic and social functions; the economic function related to the use of ROSCAs/ASCAs is to promote income security, whereas the social function speaks to social capital, which manifests itself through friendships and social networks.

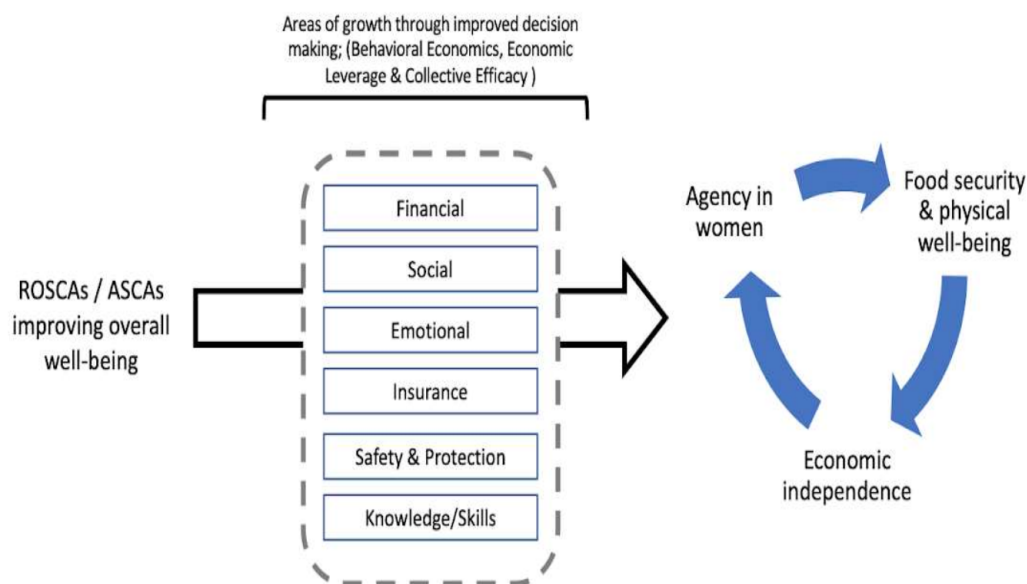


Figure 2. Illustration of the role of ROSCAs/ASCAs for women in urban sub-Saharan Africa settings.

Grocery stokvels are one of the major types of stokvels dominated by women. Importantly, although it is evidenced in some of our studies that these stokvels help women and their families (immediate and sometimes extended) put food on the table and improve their food security status, none of the studies emphasized the purchase of healthy and nutritious food options. Instead, one study showed that the top food types purchased by these grocery stokvels (in descending order) staple foods, cooking products, and tinned goods. Perishable foods, such as fruits and vegetables, were not on the list of food purchased by grocery stokvels, except for when the purchases were made on a monthly or frequent basis, which is not common. According to one study in South Africa, almost 80% of grocery stokvels make their purchases once a year, often during the festive season [47], resulting in bulk purchases and a significant flow of funds into the economy. However, these purchases largely comprise less nutritious and highly processed foods, with a long shelf-life.

Retailers and suppliers have recognized the relevance of grocery stokvels from a profit-making perspective. Hence, they are employing various strategies to retain stokvels as customers while dissuading bulk buying because of challenges such as storage, spoilage, and the loss of nutritional value [37]. For instance, stokvels that bulk buy over the festive season typically take some time to evaluate and decide on their purchases. The decision-making concerns which products to purchase and in what quantities and retailers and suppliers can advertise their products to the stokvels and offer incentives and discounts. During this period, the suppliers and retailers have an open window to influence stokvels' decision-making [56]. In trying to maximize profits, retailers try to align their promotions and discounts to accommodate the usual shopping list of grocery stokvels, which are often not the healthiest options [70]. As such, the provision of healthier food options to ROSCAs/ASCAs is not prioritized, even though the consumption of processed food is associated with an increased risk of obesity and NCDs [71,72]. As it is evident that the decision-making of ROSCAs/ASCAs can be influenced, there exists a window of opportunity in these relationships that can be harnessed to promote demand for and access to healthy and affordable food options by offering various incentives and discounts, such as storage, transport, and frequent delivery opportunities, to dissuade bulk buying [71–73].

This review also shows that although stokvels are used advantageously by both urban men and women, the greater relevance of ROSCAs/ASCAs in the lives of urban women compared to that in case of men is undisputed. This is supported by evidence that stokvels were firmly established by women in urban environments [69]. Moreover, only a few studies have published reports on men-only stokvels, whereas most highlighted that men were mostly associated with investment and high-budget stokvels [16,32,47]. In conducting

this review, we observed similar findings to those of the African Response study [47]. The African Response research highlighted that in South Africa, stokvels used by men were skewed towards investment (53%), whereas women formed most of the grocery stokvel members (86%) [47].

Here, we were able to showcase the potential of ROSCAs/ASCAs to be harnessed to address the issues of health promotion and health equity, especially for resource-poor women in SSA. For instance, food vendors in informal dwellings in Nairobi, Kenya, who are mostly women, launched a savings group within their slum federation, '*Muungano wa Wanavijiji*', for capacity building and health promotion. They regularly engage in savings to help to purchase stock or cover other expenses, organize clean-up activities, and collaborate with non-governmental organizations (NGOs) that train them in food safety and advocate for changes, such as better storage facilities and infrastructure [72].

Health and Policy Implications

The findings from this study are imperative for health and policy implications for achieving overall well-being in urban SSA, especially among women who are evidently vulnerable socioeconomically, with a high risk to non-communicable diseases. As such, these findings could be a viable and sustainable tool to leverage on promoting partnerships and collaborations of ROSCAs/ASCAs with relevant stakeholders such as health-, empowerment-, and/ or community-based oriented NGOs, government agencies, retailers, wholesalers, food producers, and financial institutions in the realignment of priorities, increased knowledge, and opportunities to promote the overall well-being of ROSCA/ASCA members, especially women and their households in urban SSA. Inroads can be reached by the evident sustainability characteristics and impactful role of /ROSCAs/ASCAs as a collective group to be harnessed in addressing issues of health promotion and health equity, especially for resource-poor women in SSA. Additionally, this information might be relevant to help policymakers in formulating appropriate policy interventions channels through ROSCAs/ASCAs to establish relationships with the different layers in the food systems to improve better access to quality, healthy, and affordable foods throughout the year.

There is overwhelming evidence in the literature that suggests that the socio-economic empowerment of women opens opportunities for them to participate in public decision-making processes [73]. Our study findings show that women's participation in informal savings groups improves their confidence, skills, and ability to influence household decision-making. Armed with the latter, it can be deduced that social norms can be reshaped by leveraging the informal savings groups to promote healthy lifestyles to encourage healthy eating.

5. Strengths and Limitations of the Study

Strength: This narrative review on informal groups in urban SSA that focuses on our identified themes is novel and provides insights to the strengths and importance of informal saving groups and those opportunities that exist to leverage on ROSCAs/ASCAs, especially for women.

Limitation: Our study only focused on urban sub-Saharan Africa and excluded studies that focused on village savings groups; hence, the generalizability of our findings may only be applicable in urban settings that have similar economic structures to the studies included. There is also a possibility of not having covered all search options using keywords, and as such, we might have excluded some relevant documents that do not contain the keywords in either their title or abstract. Additionally, our review was limited to the deductive themes identified based on the objectives of our study. Furthermore, our CASP Qualitative Checklist for rigorous appraisal indicated that a few of the selected studies did not meet all the CASP criteria, which may impact on the reliability of conclusions drawn from them.

6. Conclusions and Recommendations

This narrative systematic review shows that opportunities exist to leverage ROSCAs/ASCAs as a tool in advocating for healthy eating. Retailers, food suppliers, NGOs, public health practitioners, and other relevant stakeholders should maximize the open window of opportunity during the decision-making phases of ROSCAs/ASCAs to advocate healthier, more affordable food choices. Discounts on the purchase of fruits and vegetables and other healthier options should be promoted instead of the promotion of highly processed food products. Alternatively, food suppliers and retailers could offer a means to have access to food products on a weekly or monthly basis, rather than wait for end-of-the-year purchases, while offering the same or better discounts. NGOs could also work within the structure and objectives of the ROSCAs/ASCAs to provide food-related health training or empower them to advocate for health-related changes.

ROSCAs/ASCAs play a significant role in the development of skills, social and financial empowerment, and dissemination of knowledge, especially in women, in SSA. Moreover, it is evidenced that they lead to improved household well-being and access to food. Our study findings suggest a window of opportunity to leverage on the functionalities of ROSCAs/ASCAs based on the four major themes discussed in this review as vehicles to encourage the demand for and access to healthy affordable food by their members.

Supplementary Materials: The following are available online at <https://www.mdpi.com/article/10.3390/su14063153/s1>.

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Conflicts of Interest: The authors declare no conflict of interest.

Table A1. Cont.

Study Title	Year Published	Was There a Clear Statement of the Aims of the Research?	Is the Methodology Appropriate?	Was the Research Appropriate to Address the Aims of the Research?	Was the Data Collected in a Way that Addressed the Research Issue?	Was the Data Analysis Sufficiently Rigorous?	Is There a Clear Statement of Findings?	How Valuable is the Research?	Total out of 7
Women and money: Lessons from Senegal.	2006	1	1	1	1	1	1	1	7
The Economics of Rotating Savings and Credit Association: Evidence from Ethiopia.	2005	1	1	1	1	1	1	1	7
That's how we help each other': Community savings groups, economic empowerment and HIV risk among female sex workers in Iringa, Tanzania.	2018	1	1	1	1	1	1	1	7
The role of savings and internal lending communities in women's economic empowerment: a case of Morogoro municipality, Tanzania.	2019	1	1	1	1	1	1	1	7
An Appraisal of the Role of Women's Rotating Savings and Credit Associations on Household Livelihoods: A Case of Mkhosana Township in Victoria Falls.	2016	1	1	1	1	1	1	1	7
Investigating informal savings as income generating and poverty alleviating tool in Nelson Mandela Bay Municipality.	2012	1	1	1	1	1	1	1	7
Reaping Profits at the Bottom of the Pyramid: Exploring different industries funded by stokvels in South Africa.	2001	1	1	1	0	1	1	1	6

Table A1. Cont.

Study Title	Year Published	Was There a Clear Statement of the Aims of the Research?	Is the Methodology Appropriate?	Was the Research Appropriate to Address the Aims of the Research?	Was the Data Collected in a Way that Addressed the Research Issue?	Was the Data Analysis Sufficiently Rigorous?	Is There a Clear Statement of Findings?	How Valuable is the Research?	Total out of 7
Defying the Odds, Not the Abuse: South African Women's Agency and Rotating Saving Schemes, 1994-2017.	2018								
The Dynamics of Education and Stokvels in South Africa	2019	1	1	1	1	1	1	1	7
Stokvels—A hidden economy: unpacking the potential of South African traditional saving schemes.	2012	1	1	1	1	1	1	1	7
Informal savings groups in South Africa: investing in social capital. University of Cape Town. Irving, Margaret	2005	1	0	0	0	1	0	1	3
Rotating And Savings Credit Association (Roscas): A Veritable Tool For Enhancing The Performance Of Micro And Small Enterprises In Nigeria	2020	1	1	1	1	1	1	1	7

1 = Yes, 0 = No.

Table A2. Summary characteristics of selected studies.

S/N	Title	Country of Study	Authors'	Year	Type of Document	Research Method	Sample	Agency in Women	Food Security and Well-Being	Behavioral Economics	Economic Leverage
1	The Economics of Rotating Savings and Credit Association: Evidence from Ethiopia	Ethiopia	Kedir, A.M.	2005	Article	Quantitative	The data used in this study were collected from seven urban centers in Ethiopia. A total of 1500 households were interviewed.	No	No	Yes	Yes
2	The economics of ROSCAs and intrahousehold resource allocation	Kenya	Anderson, S., & Baland, J.M.	2002	Article	Mixed methods	Forty-four informal groups	Yes	No	Yes	Yes
3	How does membership in local savings groups influence the determinants of national health insurance demand? A cross-sectional study in Kisumu, Kenya	Kenya	Tessa O.; Kaspar W.	2018	Article	Quantitative	A cross-sectional survey of 444 households	Yes	Yes	No	Yes
4	Influence of participation in "table banking" on the size of women-owned micro and small enterprises in Kenya	Kenya	Gichuki, C.N.; Mutuku, M.M.; Kinuthia, L.N.	2015	Article	Quantitative	A cross-sectional survey involving 225 randomly selected women entrepreneurs	Yes	No	No	No
5	Rotating and savings credit associations (ROSCAs): A veritable tool for enhancing the performance of micro and small enterprises in Nigeria	Nigeria	Ademola Abimbola, O.; Ben-Caleb Egbide; Adegboyegun Adekunle, E.; Eluyela Damilola, F.; Falaye Adebajo, J.; Ajayi Abiodun, S.	2020	Article	Quantitative	A sample of 240 ROSCAs	No	No	Yes	Yes
6	Women and money: Lessons from Senegal	Senegal	Guérin, Isabelle.	2006	Article	Qualitative	The empirical data for this paper were derived from field studies	Yes	Yes	Yes	No
7	The Dynamics of Education and Stokvels in South Africa	South Africa	Ngcobo, L.	2019	Article	Quantitative	Six hundred self-administered questionnaires were handed out to the stokvel members in the two cities of Gauteng.	No	No	No	Yes

Table A2. Cont.

S/N	Title	Country of Study	Authors'	Year	Type of Document	Research Method	Sample	Agency in Women	Food Security and Well-Being	Behavioral Economics	Economic Leverage
8	The role of stokvels in improving people's lives: The case in orange farm, Johannesburg, South Africa	South Africa	Matuku, S.; Kaseke, E.	2014	Article	Qualitative	The study population consisted of female adults (aged 30 years and above) who were members of stokvels and living in Orange Farm in Johannesburg.	Yes	No	Yes	No
9	Strengthening informal social security to provide meaningful social protection: The case of stokvels in Soweto	South Africa	Nkosiya, D.; Kaseke, E.	2018	Article	Qualitative	A snowballing sampling technique was utilized to sample stokvels within Soweto who participated in the study. Purposive sampling, a type of nonprobability sampling, was used to select participants for the interviews, focus group discussions and the key informants who participated in the study.	Yes	No	Yes	No
10	The role of stokvels in South Africa: A case of economic transformation of a municipality	South Africa	Mduduzi, J.K.; Bophela, Njabulo Khumalo.	2019	Article	Mixed methods	A sample size of 395 stokvel groups' respondents for the quantitative research was selected using a simple random probability sampling method.	No	No	No	Yes
11	Stokvels as vehicles of wealth accumulation amongst migrants in Johannesburg	South Africa	Katende, K.	2016	Thesis	Mixed methods	Eleven migrants of different nationalities that were members of stokvels living in the inner city of Johannesburg were interviewed.	No	Yes	Yes	Yes
12	Informal finance for the middle and high income individuals in South Africa: A case study of high budget "stokvels" in Pretoria	South Africa	Kibuuka, L.E.	2006	Thesis	Qualitative	Thirteen groups were involved in this study.	No	No	Yes	Yes
13	The Politics of Formalization and Financialization: Informal Savings and Credit Clubs in urban South Africa	South Africa	Detlev K.	2012	Conference paper	Qualitative-Narrative	N/A	No	No	Yes	

Table A2. Cont.

S/N	Title	Country of Study	Authors'	Year	Type of Document	Research Method	Sample	Agency in Women	Food Security and Well-Being	Behavioral Economics	Economic Leverage
14	Self-Organization and Financialization from Below in an All-Male Savings Club in Soweto	South Africa	Krige, D.	2014	Article	Qualitative	An all-male Soweto savings club of seven members (observation and	No	No	Yes	Yes
15	The motivation and success factors of Zimbabwean grocery stokvels in Cape Town, South Africa	South Africa	Mabika, S.	2018	Thesis	Mixed methods	One-on-one semi-structured interviews with leaders of Zimbabwean grocery stokvels, their spouses, and members of their families who did not belong to their stokvels)	Yes	Yes	Yes	No
16	Success factors and gender participation of stokvels in South Africa	South Africa	Ngcobo, L.; Chisasa, J.	2019	Article	Quantitative	A total of 386 respondents	No	No	Yes	Yes
17	The nature and benefits of participating in burial society stokvels in South Africa	South Africa	Ngcobo, L.; Chisasa, J.	2018	Article	Quantitative	A total of 386 stokvel members (both genders)	Yes	No	Yes	Yes
18	Rotating savings and credit associations and the pursuit of self-discipline: A case study in South Africa	South Africa	Aliber, M.	2001	Article	Mixed methods	A total of 340 stokvel members (both genders: 327 women and 13 men)	Yes	Yes	Yes	Yes
19	Rotating credit associations: Their formation and use by poverty-stricken African women in Rhini, Grahamstown, Eastern Cape	South Africa	Buijs, G.	2002	Article	Qualitative (unstructured interviews)	A total of 100 ROSCA members (both genders)	Yes	No	Yes	Yes
20	Stokvels: An investment opportunity in urban agriculture	South Africa	Calitz, Andre P.; Cullen, M.D.M.; Sonti, W.	2018	Conference paper	Quantitative	A total of 152 stokvel members (women 120, men 32)	Yes	Yes	Yes	Yes

Table A2. Cont.

S/N	Title	Country of Study	Authors'	Year	Type of Document	Research Method	Sample	Agency in Women	Food Security and Well-Being	Behavioral Economics	Economic Leverage
21	Investigating informal savings as income generating and poverty alleviating tool in Nelson Mandela Bay Municipality	South Africa	Netnou, N.S.	2012	Thesis	Mixed methods	A sample of informal savings groups of women in the surrounding areas of the Nelson Mandela Bay Municipality. The researcher interviewed members from three stokvel groups that operate in different locations of the Nelson Mandela Bay Municipality	Yes	No	Yes	Yes
22	Reaping Profits at the Bottom of the Pyramid: Exploring different industries funded by stokvels in South Africa	South Africa	Skenjana, B.	2015	Conference paper	Qualitative	Case studies of three stokvel groups	No	No	No	Yes
23	Defying the Odds, Not the Abuse: South African Women's Agency and Rotating Saving Schemes, 1994–2017	South Africa	Nyandoro, M.	2018	Article	Mixed methods	The initial stage of this work involved carrying out extensive desktop research and analysis of secondary literature, including media sources on rotating schemes. In the second stage, limited archival research and oral interviews with a South African colleague who requested anonymity were conducted to discern ordinary South Africans' and stokvel representatives' opinions.	Yes	No	No	No
24	Stokvels—A hidden economy: Unpacking the potential of South African traditional saving schemes	South Africa	African Response	2018	Article	Quantitative	A total 200 stokvel members (both genders) aged 16 years and above.	No	No	Yes	Yes
25	Informal savings groups in South Africa: Investing in social capital. University of Cape Town	South Africa	Irving, M.	2005	Article	Qualitative	A focus group was conducted with 12 women who participate in a ROSCA-type Informal Saving group (ISG). Members are all employed as researchers and translators in the Khayelitsha community.	No	No	Yes	Yes

Table A2. Cont.

S/N	Title	Country of Study	Authors'	Year	Type of Document	Research Method	Sample	Agency in Women	Food Security and Well-Being	Behavioral Economics	Economic Leverage
26	'That's how we help each other': Community savings groups, economic empowerment and HIV risk among female sex workers in Iringa, Tanzania.	Tanzania	Mantsios, A.; Shembilu, C.; Mbwambo, J.; Likindikoki, S.; Sherman, S.; Kennedy, C.; Kerrigan, D.	2018	Article	Qualitative	Twenty-seven in-depth interviews (IDIs) with 15 female sex workers (FSWs) over time and four focus group discussions (FGDs) with 35 female sex workers participating in Michezo, and 10 key informant interviews with group collectors.	Yes	No	No	No
27	The role of savings and internal lending communities in women's economic empowerment: a case of Morogoro municipality, Tanzania	Tanzania	Mulimila, S.	2019	Thesis	Mixed methods	A semi-structured questionnaire was used and administered to 100 women who are saving, and to internal community members. Two FGDs were conducted, which comprised men and women SILC members. Each group had eight members (four men and four women) in each group. Men were included to find out their perception since most of them have spouses who are SILC beneficiaries. A key informant interview was conducted using an interview guide administered to three key informants (one SILC project coordinator and two community resource persons (facilitators).	Yes	No	No	No
28	An appraisal of the role of women's rotating savings and credit associations on household livelihoods: A case of Mkhosana township in Victoria Falls	Zimbabwe	Nyoni, Y.V.	2016	Thesis	Mixed methods	The study population was drawn from residents of Mkhosana township ward 11 of Victoria Falls. A total of 32 respondents from five ROSCAs.	Yes	No	Yes	No

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