



# Formation of a solidarity kitchen, use of post-harvest losses, and food safety: advances and challenges in addressing social vulnerability

## A constituição de uma cozinha solidária, o aproveitamento de perdas pós-colheita e a segurança de alimentos: avanços e desafios no enfrentamento da vulnerabilidade social

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### Abstract

In Brazil, poverty and hunger are conditions that damage the dignity of human life and represent exclusions for the majority of the population. Simultaneously, there is a high rate of food loss, which is a paradox when considering the concept of food security and nutrition. To reduce problems in this area, initiatives have been conducted based on principles of a solidarity economy. Thus, this study had the goal of analyzing advances and challenges in the formation of a solidarity kitchen and focused on the use of post-harvest losses and the promotion of food safety in vulnerable communities in the city of Salvador, Brazil. This is an intervention study that involved activities in four areas: popular mobilization to work in a solidarity economy, formation of the workspace, training in food hygiene and production, and marketing of food. The evaluation process followed an analysis matrix, with indicators for all studied areas. Different challenges were observed in the establishment of the solidarity enterprise, especially concerning the mobilization and formation of the group, internal conflicts, the flow of production, and the formalization of the activity. Despite these limitations, progress was observed regarding citizen training, the establishment of solidarity principles (equality, cooperation, respect, economy, and care for others), and professional qualification. Thus, the solidarity kitchen is evaluated as a relevant strategy to soften the harsh living conditions of the lower classes by combining social inclusion with a new perspective on work that is distinct from the hegemonic production system.

**Keywords:** Food Security. Social Work. Social Networking. Food Production.

## Resumo

No Brasil, a pobreza e a fome incluem condições que ferem a dignidade da vida humana e representam exclusões para a maior parte da população. Ao mesmo tempo, observa-se elevado índice de perda de alimentos, o que é um paradoxo à luz do conceito de segurança alimentar e nutricional. De modo a reduzir problemas nesta área, algumas iniciativas têm sido conduzidas, pautadas em princípios de Economia Solidária. Assim, este estudo objetivou analisar avanços e desafios na experiência de constituição de uma cozinha solidária, voltada para o aproveitamento de perdas pós-colheita e a promoção da segurança de alimentos, junto a comunidades vulneráveis, em Salvador, Brasil. Trata-se de estudo de intervenção, descritivo, envolvendo atividades em quatro dimensões: mobilização popular para o trabalho em Economia Solidária; a constituição do espaço de trabalho; formações em higiene e para a produção e comercialização de alimentos. A avaliação do processo seguiu uma matriz de análise própria, com indicadores para todas as dimensões consideradas. Observaram-se diferentes desafios no estabelecimento do empreendimento solidário, especialmente na mobilização e na constituição do grupo, conflitos internos, no escoamento dos produtos e na formalização da atividade. Apesar desses limites, registraram-se avanços quanto à formação cidadã, ao estabelecimento de princípios solidários - igualdade, cooperação, respeito, economia e cuidado com o outro, e à qualificação profissional. Assim, avalia-se a cozinha solidária como estratégia relevante para amenizar as adversidades vividas pelos menos favorecidos, ao aliar inclusão social em uma nova ótica de trabalho, diferente do sistema hegemônico de produção.

**Palavras-chave:** Segurança Alimentar e Nutricional. Trabalho Social. Rede Social. Produção de Alimentos.

## Introduction

In Brazil, the issues of inequality and poverty as factors of social exclusion have been the subjects of research and the concerns of various segments of organized civil society and government entities.<sup>1</sup> Poverty is primarily a result of extreme inequality due to a large concentration of income, which has been aggravated by the recent economic crisis in the country.<sup>2</sup>

In the context of human rights, inequality and poverty are exclusions that attack the dignity of human life in a large portion of the population.<sup>3</sup> Within the scope of food and nutrition security<sup>a</sup>, poverty involves the absence of the right to food at different levels, with harmful and irreversible health consequences.<sup>5</sup> Consequently, a great paradox is observed in Brazil: a large contingent of poor people in one of the countries with the highest food production rate and highest rate of food loss in the world.

According to estimates, there are 16.27 million people in a state of extreme poverty,<sup>6</sup> and the loss of food is on the order of 10 million tons annually, which could be on the table of the 54 million Brazilians living below the poverty line.<sup>7</sup> Thus, food losses are a flagrant embarrassment for food and nutrition security, as they cause losses in all production chains and limit the population's supply and access to products.

Considering the imperative to mitigate both problems, strategies have been sought to make it possible to take advantage of the losses and alleviate food insecurity. Of note is the establishment of production arrangements with food, with a highlight being the food banks and community kitchens that seek to utilize and distribute food to people in vulnerable food situations.<sup>8</sup> In addition to encouraging the associative work of mobilized groups to guarantee a minimum amount of food for the least privileged, the kitchens create favorable conditions for communities' organized participation.

Parallel to these trends and given the State's inability to solve the poverty problem, new models of economic organization of collective work have begun to be established, including the solidarity economy<sup>b</sup> (ECOSOL), which is a new modality that encourages defense against social exclusion and operates as a mechanism of socioeconomic integration.<sup>10</sup> In the solidarity economy, the principles of collective work include cooperation; solidarity; valuing of community feelings; reciprocity; and democratic, participatory, and self-managed organizations.<sup>10,11</sup>

In Brazil, the solidarity economy has been presented as a response in favor of social inclusion,<sup>12</sup> despite there being a scientific gap in its relation to the local arrangements for food production. In the city of Salvador, Bahia state (BA), which is characterized by its pockets of poverty and great social inequality,<sup>13</sup> some experiences with community kitchens and efforts with food in the solidarity economy have been conducted, for example, community bakeries and the Rede de Cozinhas Solidárias (Network of Solidarity Kitchens).<sup>14,15</sup> Studies and publications regarding the issue are insufficient.

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a Food and nutrition security "involves exercising the right of all to regular and permanent access to sufficient quality food without compromising access to other essential needs, based on health-promoting food practices that respect cultural diversity and are environmentally, culturally, economically, and socially sustainable".<sup>4</sup>

b The solidarity economy is understood to be effective for consolidating a different type of work organization, based on the recognition of working individuals as the center of the organization they undertake.<sup>9</sup>

Thus, this study has the goal of analyzing the advances and challenges in the training experience of a community kitchen—with mobilization in the solidarity economy—focused on the utilization of post-harvest losses and the promotion of food safety, as a strategy for addressing the context of social vulnerability in the communities of Nordeste de Amaralina, Salvador, BA.

## Methodology

This is a descriptive intervention study, developed as part of the project “Tecnologias de aproveitamento de descartes vegetais: integrando saúde, sustentabilidade e desenvolvimento social, junto a comunidades vulneráveis de Salvador-BA” (Technologies for utilizing discarded vegetables: integrating health, sustainability, and social development in vulnerable communities of Salvador, BA).

The work communities in the Nordeste de Amaralina neighborhood, which has a population of 82,976 residents, were selected because the population is predominantly composed of blacks and afro-descendants. A considerable portion of the economically active population (61%) was unemployed and had a low-income profile compared to the city’s average.<sup>6</sup>

The study was implemented based on a solidarity network consisting of a fruit and vegetable distribution company; a religious organization (via the Parish Community Center); residents of vulnerable communities of Nordeste de Amaralina; an NGO; and three institutions of higher education and research.

The project was designed based on the fruit and vegetable losses in the company, and its development was linked to the utilization of the discarded food donated to the communities and research institutions, which resulted in the organization of seven subprojects. This study involved three subprojects: mediation for the organization of a low-income group with a view to the collective production of foods in a solidarity kitchen; orientation for the production of collective meals for needy communities based on concepts of integral utilization and food safety; and development of social technologies for the production of processed foods from fruits and vegetables to generate of income. Accordingly, it is emphasized that the training of the group for work in the kitchen did not include people younger than 18.

Activities were planned, with monitoring, evaluation of the results, and analysis of four aspects: 1) Social mobilization and training of the group for the collective work; 2) Formation, sanitary adequacy (in accordance with the Resolution of the Board of Directors (RDC no. 275/2002 of the National Agency for Sanitary Surveillance (ANVISA)),<sup>16</sup> and access to and use of the kitchen space; 3) Training in food safety; and 4) Specific training for the production and commercialization of food. Figure 1 shows the analysis matrix with these aspects and their respective indicators.

Aspect	Indicator	Methods/Instruments
Social mobilization and training for the collective work in ECOSOL	No. of participation invitations No. of political-pedagogical workshops No. of participants in the meetings Frequency in the work collective Semestral non-attendance rate Factors favorable and unfavorable to permanence of the group	Survey Record of activity performed Attendance list Observation of behaviors that express belonging, cooperation, estrangement, conflicts, and ruptures within the group
Formation, sanitary adequacy, access, and use of the kitchen space	Structure, accessibility, and use of the facilities Index of conformation to the sanitary requirements of the physical facility Good production practices	Record of monitoring Verification list - RDC 216/04 (BRASIL, 2004).
Training in food safety	No. and types of workshops No. of participants Active participation during training Learning (practical application) Autonomy without monitoring of the team	Survey Record of activities performed Attendance list Observation of the intensity of dialogues and exchanges during training Test of knowledge, before and after the course Observation of practices during production
Training for food production	No. and types of workshops No. of participants Active participation during training Learning (practical application) Autonomy without monitoring of the team	Record of activities performed Attendance list Observation of the intensity of dialogues and exchanges during training Monitoring the production

**Figure 1.** Aspects, indicators, and methods/instruments adopted for monitoring and evaluating the training of the group and the development of the work in the solidarity kitchen.

The activities, which occurred between November 2013 and October 2015, were documented in reports, log books, field diaries, monitoring forms, and photographic records. The project was approved by the Research Ethics Committee of the School of Nutrition of the UFBA (Appraisal no. 284.735/2013).

## Results and Discussion

The process for the formation of the solidarity kitchen and the analysis of the results are organized into the four previously established aspects.

### Social mobilization and training of the work collective

Social mobilization relied on support from the technical team, whose objective was to establish an environment and perform sensitization for participative work. It is emphasized that the history of the women's collective arose not from a desire of the community but due to an invitation from outside agents, thus characterizing it as a movement distinct from those described in the literature.

According to França Filho,<sup>17</sup> the establishment of socio-productive activities occurs due to real demands expressed by the residents in a given territory politically debating their common problems.<sup>17</sup> Thus, to form mass groups in disadvantaged communities that have the desire to consolidate an initiative for sources of income, people who have the same desires must be brought together.<sup>18</sup>

During the mobilizations, four meetings were held near the communities in the Parish Community Center and the Urban Social Center of Nordeste de Amaralina. However, it is emphasized that in the invitation presented by the institutions to the communities, there was no clarification of the purpose of the collective work. Thus, in both the meetings and the kitchen space, it was common for people to participate based on their interest in courses or in individual training. It was also found that men did not participate in the meetings to be a part of the group.

The women were black, aged between 36 and 58, living in a stable relationship or separated, with one child on average. Ninety percent had completed elementary education and had an average monthly family income of R\$ 450.00. Eighty percent were receiving the Bolsa Família<sup>c</sup> benefit, which indicates a condition of social vulnerability; they performed individual, sporadic, or even regular informal work providing domestic services.

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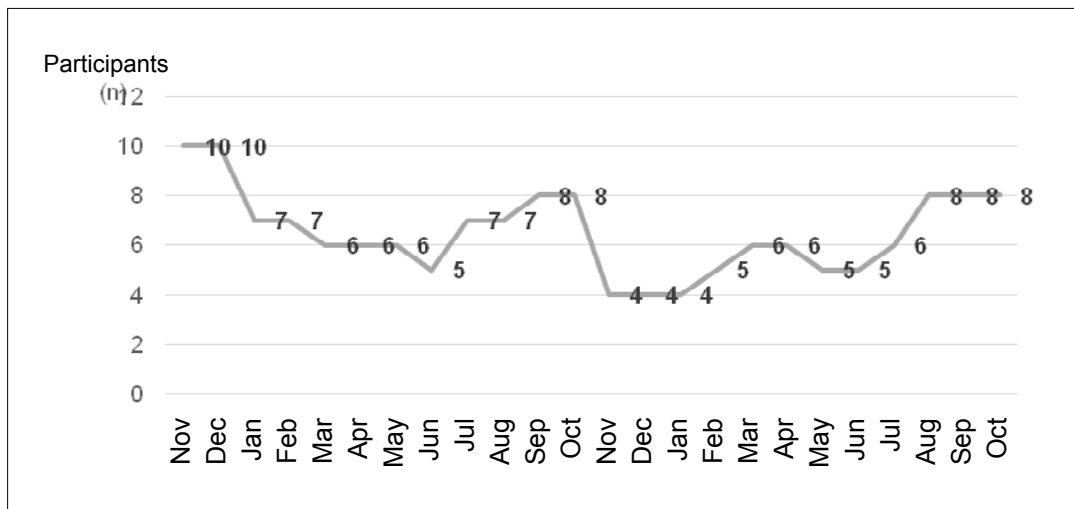
c The Bolsa Família is a social program created by the Brazilian government in 2003 to combat hunger and misery and promote the emancipation of families in situations of greatest poverty throughout the country. Through the Bolsa Família program, monetary benefits are granted monthly to the neediest families.<sup>19</sup>

To encourage and support the group in training for the collective work opportunity, the project's technical team conducted training activities and close monitoring in the three areas of political-pedagogical training, food safety, and food production.

During the monitoring period of the study, 95 meetings were held, including eight political-pedagogical training workshops, 15 food safety training sessions, 39 food production practices workshops, 30 planning and evaluation sessions, three economic feasibility studies, and three technical visits. The activities occurred in a participative and scheduled manner in the Parish Community Center and the Urban Social Center of Nordeste de Amaralina.

The political-pedagogical training activities were characterized by the rich content and reflections and discussions of different themes, including history and society, human rights, citizenship, social inequality, gender, socio-political identity, phenomena that impede the understanding of society, solidarity entrepreneurship, and empowerment for collective work. With this approach, the goal was to present the historical and social context in a more critical manner, making the participants aware of new methods of viewing society and its social role, as well as awakening in them the potential for solidarity in work in the face of the adversities of reality.

In this area, however, difficulties were identified for the training and support of the group, including the expectations of the women regarding immediate financial remuneration; the predominance of female household managers (heads of families), leading them to seek resources for their daily expenses; and the difficulties of staying in the group. Thus, a fluctuation in the number of participants (Figure 2), absences, and a fear of non-attendance were observed, which were a constant concern. The fluctuation in the number of participants was more pronounced during the school holiday periods (January, February, and June). The non-attendances occurred primarily at the beginning of the project due to the mismatch in the expectations of the women who sought courses with the group's proposal for collective work; in mid-2014, when some women decided to continue their studies or had an opportunity for formal work; and in mid-2015, when the commercialization of the products in the parish that had been ensuring remuneration for the women was suspended.



**Figure 2.** Monthly average (n) number of women participating in the activities: November 2013 to October 2015. Salvador, 2013–2015.

Although the majority of the women embraced the meaning of the solidarity economy, factors unfavorable to establishment and permanence in the group were observed. As an example, one participant assumed a position of divisive leadership, which led to conflicts and the deconstructing of social bonds. França Filho and Cunha<sup>20</sup> reported conflicts with similar collective work, with a description of authoritarian leadership leading to problems in relationships and the inhibition of new leadership. Through this context, they highlighted the efforts of the project team to strengthen the group and include new women.

In this context, Lima et al.<sup>21</sup> reported the predominance of women in low-income sectors, which makes it difficult to remain in these undertakings. For Kraychete<sup>22</sup>, the great challenge for the sustainability of low-income sectors, especially those in an urban environment, includes great resistance to collective and combined work, since many of the participants opt for individual informal work.

However, solidarity practices were perceived in the group, for example, close interaction, sharing of activities, and caring for others. In this movement, it is stressed that solidarity—because it is an indicator of collective awareness in relation to humanization in relationships and to the development of work processes<sup>20</sup>—values individuals and contributes to the emancipatory process. Additionally, it is considered that the kitchen is a therapeutic space, a fact also reported in a study by Barreto and Paula.<sup>23</sup>

Over time, the establishment of ties among the women was seen; however, they consider production arrangements that establish faster production and commercialization strategies with returns in shorter periods of time to be relevant factors for maintaining their motivation and taking a chance on the viability of their “business”.

### Formation of the space, access, use, and sanitary adequacy

The kitchen was physically built in August 2013 from the funds raised by the Parish Community Center through a program of the Bahia State Government’s Secretary for Social Development and Combat of Poverty. The goals were to acquire equipment for the installation of a community kitchen at its headquarters and to form a group of women entrepreneurs, assisted by the Socio-Productive Inclusion Unit of Nordeste de Amaralina (UNIS). At the time, it was anticipated that this initiative would benefit approximately 30 families given the opportunity to form groups for work and income generation in the food sector.<sup>24</sup> The donation and installation of equipment and utensils for the kitchen were intermediated by the NGO with monitoring from the higher education institutions.

After discussions and preparations, in November 2013, the kitchen was recognized by the residents of the communities (a group of 11 women), thus initializing the process for the access and use of this space for food production.

Regarding the site for installation of the kitchen, it should be noted that the Parish Community Center is not located within Nordeste de Amaralina but is approximately three kilometers from the communities. Thus, performing activities in the kitchen required the women, who usually walk because of the absence of adequate public transportation in the neighborhood, to travel further. Consequently, despite the interest shown by some women in participating in the activities, the distance between the communities and the solidarity kitchen was a factor that limited participation.

Additionally, given that the kitchen had a community function with other users of the Parish Community Center two days a week, there was difficulty for the group to access and fully use the space. Often, other users were given preferential access, or the group’s use of the kitchen was monitored. Thus, the shared resource resulted in the generation of conflicts and difficulties in the use of the kitchen, contributing to feelings of insecurity and non-autonomy in the women, because they saw themselves threatened in the legitimacy of their work, with discriminatory treatment by other users.

In this context, Kraychete<sup>25</sup> reported that a substantial number of solidarity projects function in borrowed locations, which is a problem. Additionally, because the installation of the kitchen occurred via a public program conducted by the State and the Parish Community Center, many

considered that it did not fulfill its purpose because the restrictions on the use of the space did not allow for achievement of the program's objectives.

Thus, seeking to overcome this serious limitation, the team of researchers, representatives of the women, and municipal and state government agencies attempted to identify other equipment and collective spaces in the neighborhood. However, there was a lack of structures in the neighborhood, or potential sites were located in areas considered to be violent and controlled by drug traffickers, which prevented the installation or transfer of the kitchen to the community.

Regarding the hygienic-sanitary adequacy of the kitchen based on the checklist, a 40% non-conformity rate was found for the issues evaluated. Among the most problematic areas were deficiencies in the physical structure, in the control of food quality, and in food storage, which required the adoption of reorientation and restructuring measures.

In the solidarity kitchen under analysis, the inadequacies were overcome through monitoring and more effective orientations with the women and the management of the Parish Community Center, thus enabling better organization in the operations. With these measures, the kitchen has become a true space for food production, favorable to enhancement of knowledge and safety in the work environment.

In diagnosing the physical and hygienic-sanitary conditions in 18 community kitchens in Joinville, Santa Catarina state, Bramorski et al.<sup>26</sup> found inadequacies in their levels of function; 89% were classified as deficient, while 11% were satisfactory. In a larger study, with an evaluation of 240 community kitchens in Brazil, Sparovek et al.<sup>27</sup> verified partial compliance (42.7%) or non-compliance (22.7%) with the requirements for installation and operation of the units, which indicates common limitations in these spaces.

## Training in food safety

The training included activities in two modalities: a course for good production practices and subsequently workshops for reorientation and reinforcement of knowledge.

For the course, the women's knowledge demands regarding the topic were initially identified using a survey to support the training plan. According to Leite et al.,<sup>28</sup> a survey allows a more oriented construction, based on premises that describe greater effectiveness for the training.

The content covered in the course included fundamentals of food microbiology; personal hygiene for food and the environment and good production practices in the preparation and preservation of food; and operational hygiene procedures. The training duration was 20 hours (five hours per day), in four blocks of activities conducted by teachers and students from the higher education institutions.

Among the methodological strategies, the following were adopted: presentations with discussions, group work, practical activities, games, dynamics, and moments for listening. The *Cartilha sobre Boas Práticas para Serviços de Alimentação* (Primer on Good Practices for Food Services) was distributed as supporting training material (in accordance with the Resolution of the Board of Directors, RDC no. 216/2004, of the National Agency for Sanitary Surveillance (ANVISA)).<sup>29</sup> At the end of the training, with the content understood, some criteria were established by the group for the organization of the solidarity kitchen, with the goal of the safe production of food.

Of the ten participants in the course, none had received prior training in food hygiene. The average attendance rate for the training was 80%, with very active participation during the meetings. The performance in the activity was high, and correct response rates of 90.91, 100, and 88.83% were recorded in the three evaluations performed.

The reinforcement workshops occurred due to both the need for adjustments and corrections during production to ensure food safety and the arrival of new participants who had not had previous training. The majority of the women adhered to the guidelines, while others demonstrated a smaller change in behavior.

There were notable changes in the behaviors of the women in applying their knowledge of cooking practices, ranging from basic care with personal hygiene to care with finished food, although some practices required reinforcement for the correct execution of good production practices.

When presenting post-intervention evaluation results for food handlers of a production unit in Santa Maria-RS, Saccol et al.<sup>30</sup> observed a great increase in the percentage of correct answers to all the questions related to good production practices. According to Soares,<sup>31</sup> a well-planned evaluation with easily measured outcome criteria is considered to be an integral part of any intervention.

### Specific training for the production and commercialization of food

To support the collective production of food, practical workshops were held on gastronomy and nutrition, with the goals of learning, exchanging experiences, and sharing knowledge, applying principles of good production practices together with guidelines on healthy eating and integral use of foods.

For these activities, several preparations were initially planned and detailed based on the supplier's donations. The transportation was provided by the Parish Community Center because the women did not have any means to transfer the products, a common situation in other community kitchens.<sup>32</sup>

At the initiative of the women, there were also suggestions for the preparation of other products. To establish a greater exchange relationship between the women and the team, workshops were planned primarily for bakery and confectionery products, such as fine sweets, savory items, decorated cakes, Christmas products, and *sequilho* cookies. In this context, it is worth emphasizing the importance of listening and valuing the ideas presented by the members, given that the participation of the individuals in the management of these undertakings is of great value; as explained by Goerck,<sup>33</sup> suggestions and criticisms presented must be considered by the collective.

In addition to addressing the specific contents of foods, the production moments were opportunities for strengthening ties between the participants, promoting a sense of cooperation, and reinforcing the kitchen as a space that was provided for their use. The members continually failed to recognize this right and the autonomy to use it.

Technical workshops were held for the processing and storage of sweets, jellies, and sauces, although their production could not be predicted because it was dependent on the donated material. In general, the production decision depended on the type and quantity of vegetables made available, a limitation also reported by Sarti et al.<sup>34</sup> and Castro and Maciel<sup>32</sup> in other community kitchens.

In the solidarity kitchen, donation of surplus food to the neighborhood's nursery and to the women themselves also occurred, and there was a monthly production of soup for distribution in the community (Figure 3), which encouraged access to healthy food for groups in extreme poverty. In this context, especially during the preparation and distribution of the soup, it was possible to see behaviors of solidarity and cooperation among the women.

The distributions of the food and the soup were special occasions for the women, when they demonstrated the importance of their work to the community and received recognition for it in a process known as "personalization of the donation", as described by Castro and Maciel.<sup>32</sup> In these moments, it was also possible to observe the full assumption of autonomy by the women and the feeling of importance within their territory, which contrasted sharply with the inferiority experienced in the Parish Community Center.



**Figure 3.** Organization (3A) and distribution of the soup (3B) prepared in the solidarity kitchen for residents of communities of Nordeste de Amaralina, Salvador, BA. 2014–2015.

Other activities within this training included technical visits to other production units in the solidarity economy, with the goal of observing the management of a collective undertaking and the food commercialization stage.

To foster a better understanding of costs and sales values for income generation, economic viability workshops were held. In August 2014, with the support of the parish leadership, products began to be sold in front of the main church to ensure an effective customer base. With this strategy, the production and sale of the vegetable by-products and the *sequilho* cookies occurred for 11 months. Additionally, the group was invited to sell their products at fairs and exhibitions in the city, which improved sales. However, there was frequently resistance on the part of some women to assume financial control of the undertaking.

Some factors caused interference throughout the process. For example, the day established for selling the products (Sunday) is the day on which the women would be performing their domestic duties. Another issue was their inexperience in the sales process. In February 2015, after a change in the leadership of the religious institution and with the Brazilian economic crisis, the kitchen's activities were strongly impacted by the suspension of both the transportation of food and the sale of the products in front of the main church. Thus, there was an impediment to the acquisition of the food, a failure in the original purpose of the project, and an accumulation of the products that already had regular production, which generated congestion in the market.

Given that many women had participated in the baking workshops, with these changes, the group decided to redirect production to the *sequilho* cookies, whose ingredients were easy to acquire. However, the sales problem was not resolved, and the products were primarily sold within the community, which resulted in low financial returns.

In this scenario, another challenge is that the undertaking had not yet been legally organized for sales in the formal market, thus making turnover difficult. Therefore, to improve turnover, active participation in events such as exhibitions and fairs was used as a strategy, which also favored the dissemination of the solidarity kitchen's products.

According to Pereira,<sup>35</sup> commercialization is one of the most significant difficulties indicated by enterprises in the solidarity economy and the greatest challenge that development entities face in advising these enterprises in the country. According to França Filho and Cunha,<sup>20</sup> in a broader view, there are a significant number of difficulties; therefore, under market conditions, the possibility of survival for these undertakings decreases.

Thus, it is important to highlight the role of the entities for supporting and promoting the solidarity economy, which have a goal of providing support for entrepreneurs so that they can develop their ideas and convert them into successful enterprises. Due to their performance, these entities are generally placed as co-responsible, at least temporarily, for the management of the undertakings, with a view to their consolidation and sustainability.<sup>17,36</sup>

In the case of the solidarity kitchen in this study, although there was a partnership with a higher education institution as the support entity, this support was not incubation support, which limited the definition of viable strategies for the undertaking.

Despite the restrictions reported, an overall analysis determined that the activities encouraged the group to develop a work process, management, and commercialization of the products, which maintained the women's optimism that the undertaking would achieve sustainability. Until the final monitoring period of the project during a community fair, the women's motivation for work and sales was observed, which meant the forecast of some income for supporting daily survival.

## Final Considerations

This study sought to analyze the training process in a solidarity kitchen based on the mobilization of a group of socially vulnerable women with a view to the production of safe food, in the context of a solidarity economy. Thus, the work was a unique opportunity to establish a description in the area of nutrition, given the limited references in the literature.

The methodology adopted enabled evaluation of the different aspects of interest, including social mobilization for collective work; the formation, access, and use of the kitchen space; and training in hygiene and food production and commercialization, which enabled both the monitoring of the process and discussion of the adjustments for improving the conduct of the activities. Moreover, the study is an initiative that indicates the possibility for more in-depth work on the different issues included in the complexity of each of the defined aspects.

Although various challenges were reported in the course of the work, which limits the scope of the proposed objectives in their entirety, this initiative is viewed in terms of advancements (i.e., sowing of principles and practices that flourish in the medium to long-term) against the cycle of social exclusion in the search for a more egalitarian society. Thus, it can be said that in the context of the solidarity economy, the training in the kitchen was another valid alternative in the endeavor to mitigate the harsh living conditions of the least favored classes, with the differential of combining social inclusion with a new vision of work, economic autonomy, and the well-being of the participants.

The training process for technical qualification was successful because it was a defining moment in the personal and professional lives of the women, allowing them to consider themselves to be members of society. It is also worth mentioning that the participation of the women in events provided the motivation and circulation of their products in non-solidarity spaces, while also disseminating the dynamics of the solidarity economy in the city.

The major challenges of the solidarity kitchen were based on the sustainability of the group, especially regarding internal conflicts, commercialization, and the legalization of the undertaking. The determination and the strength of some women were notable, generating continuity of work and expressing encouragement and congratulations for the results achieved, which led to new goals and challenges to be overcome by the group.

Additionally, given the country's social inequalities, the vulnerability of large contingents, and the lack of studies integrating food security and the solidarity economy, this study showed the need for a closer integration of these areas as a strategy for mitigating the multiple consequences of poverty, exclusion, and hunger. It is expected that the content presented can provide support for the development of future studies, as well as assisting other groups in their solidarity practices.

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## Contributors

Soledade JAB and Cardoso RCV were responsible for the concept, the primary discussion, and the revision. Pena LCC, Figueiredo KVNA, and Oliveira TCO worked on all phases, from the conception of the study through the revision of the final version of the article.

Conflict of interest: The authors declare that there were no conflicts of interest.

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