

## EDUCATIONAL ACTIONS WITH WOMEN FROM AN ASSOCIATION OF RECYCLABLE MATERIALS<sup>1</sup>

### AÇÕES EDUCATIVAS COM MULHERES DE UMA ASSOCIAÇÃO DE MATERIAIS RECICLÁVEIS

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#### ABSTRACT

The objective of this study was, based on a previous investigative process, to carry out educational actions with women from a recyclable materials association, with a view to the promotion and protection of health. The study is associated with an action research project. This manuscript address the final stages of the method, which are related to the interventions in the participants' reality. To this end, regular health education workshops were conducted between March/2021 and July/2022, based on a previously designed and organized plan with the women from the association of recyclable materials. The results of this study demonstrate that health education transcends preconceived mental schemes and previously agreed schedules. It involves interactive and dialogical skills to try to influence the users' behavior, as well as the mobilization of latent forces, in which each subject perceives himself as the protagonist of his own history. The authors conclude that education and health promotion require proactive leadership in the defense of life and health, through integral and effective dialogue with the various social actors.

**Keywords:** Qualitative Research; Health Education; Health Promotion; Recycling; Public Health.

#### RESUMO

*Objetivou-se, a partir de um processo investigativo prévio, realizar ações educativas com mulheres de uma Associação de Materiais Recicláveis, com vistas à promoção e proteção da saúde. O manuscrito está associado a um projeto de pesquisa-ação e aborda as etapas finais do método, relacionadas às intervenções na realidade dos participantes. Para tanto, foram realizadas oficinas*

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*regulares de educação em saúde entre março/2021 e julho/2022, a partir de um planejamento previamente elaborado e organizado com as mulheres da Associação de Materiais Recicláveis. Os resultados deste estudo demonstram que a educação em saúde transcende esquemas mentais pré-concebidos e horários previamente combinados. Envolve habilidades interativas e dialógicas para tentar influenciar o comportamento dos usuários, bem como a mobilização de forças latentes, em que cada sujeito se percebe como protagonista de sua própria história. Concluiu-se, que a educação e a promoção da saúde requerem uma liderança proativa na defesa da vida e da saúde, por meio do diálogo integral e efetivo com os diversos atores sociais.*

**Palavras-chave:** *Pesquisa Qualitativa; Educação em saúde; Promoção de saúde; Reciclagem; Saúde pública.*

## INTRODUCTION

Environmental problems, more specifically the treatment of the urban solid, are currently a recurrent theme. Its inappropriate management may result in risks both to the environment and to the health of the population, in particular, to the health of workers directly involved in its processing. In this dynamic, solid material recyclers stand out that, although benefiting from the National Solid Waste Policy (PNRS), they are still exposed to a variety of risks associated with unhealthy working conditions (Brasil, 2010; Miller *et al.*, 2016).

The PNRS makes reference to solid waste management and processing mechanisms which, among other investments, include the inclusion of solid material recyclers (Brasil, 2010). The institutionalization of policies and/or laws for the destination of solid waste, however, is not enough to guarantee environmental sustainability or even ensure the health of these workers. Recyclers are still exposed to a variety of risks related to handling, separation and their final destination. Such risks can trigger specific infectious diseases, in addition to compromising the health of the workers in its unique and multidimensional dimension (Pereira *et al.*, 2016; Nazari, 2017).

From this perspective, the inclusion of recyclers in the selective collection process has become the subject of study and investigation in different areas of knowledge. Studies show that waste collectors/recyclers are important allies in the maintenance of urban cleaning services and, above all, in the preservation of the environment. In addition, recycled material starts to add market value and is reintegrated into the production and reuse chain (Souza *et al.*, 2018; Chierrito-Arruda *et al.*, 2018).

In this work process, cooperatives or associations of recyclable materials are gaining increasing prominence. Although exposed to contamination by biological and chemical materials, work overload and physical and mental strain, workers in associations benefit in several ways. Recycling is considered a prospective strategic alternative, considering that 30% of all waste produced in Brazil has the

potential for reuse. In addition to the social and coexistence dimension, recyclers are protagonists in means of solidary production, where the added value is shared among all and, collectively, they develop reorganizing mechanisms that contribute to the social and economic development of a country (Souza *et al.*, 2012).

This study is justified considering the relevance of Recyclable Materials Associations for sustainable social and economic development, but also the need to develop emancipatory processes that contribute to minimizing the physical, biological, chemical, ergonomic and occupational accident risks of these workers. The study also adds to the global framework of the 2030 Agenda, which aims at integrated and indivisible development between the economic, social and environmental dimensions. The objective of this study was, based on a previous investigative process, to carry out educational actions with women from a recyclable materials association, with a view to the promotion and protection of health.

Thus, environmental and health education is conceived as a systemic and emancipatory process. Its objective, with a multidisciplinary and interdisciplinary character, implies rethinking training and intervention approaches, based on meaningful learning. Along this path, each participant is an active citizen in the construction of new knowledge and practices (Schwanke, 2013).

## **METHODOLOGY**

The study is part of an action research project focused on an Association of Recyclable Materials located in the central region of Rio Grande do Sul. In this manuscript, however, the final steps of the method will be addressed, which are related to interventions in the reality of the participants and in their evaluation. Therefore, a systematized path of health education was conducted, based on a plan previously conceived and organized with the women who work in this Association. The action research followed its course in a period of the pandemic, from the observance of the contingency protocols, to the urgency of support to women in vulnerable situations.

The group of 28 women share the same social environment - Association of Recyclable Materials - and have common interests and goals related to family subsistence. They perform a daily activity at the Association for eight hours and have an income of approximately 500 reais a month. In addition to this daily work in the Association, women are mostly home care providers. They are between 26 and 58 years old, have three to eight children and work in this Association by personal choice.

Data previously collected through interviews and analysed according to the thematic analysis criteria proposed by Minayo: a) to organize the reports and observation data in a certain order; b) The horizontal pervasion readings gave way to a transversal creation of the set or each subset of empirical material, with a specific intention: to cut out each text item, as it was presented by the interviewee; c) Understanding the relevance structures presented by the interviewees. Throughout the process, the

meaning that the interviewees expressed (Thiolent, 2011).

Evidence that women experience daily physical, chemical, biological and ergonomic risks, which interfere with their occupational health. In addition to these initial data, participant observation was also carried out on previously scheduled days and times, where excessive exposure to heat, humidity, noise, risk of falls and bad smell, among others was found. There was also a growing concern among workers with regard to incorrect household disposal of individual protective equipment, especially masks and gloves by patients positive for Covid-19.

It was then discussed, based on the course of immersion in the field, through research and participant observation, intervention strategies in the Association, which could corroborate with better health promotion and protection practices. Initially, a schedule of thematic workshops and interventions in the living world of work was structured, based on individual or collective guidelines, in order to expand interaction and promote awareness regarding the use of Individual Protective Equipment (IPE).

Educational interventions were carried out weekly from March/2021 and July/2022, on days and times previously agreed with the participants. In this way, it was considered the social contingency protocols that were elaborated as a result of the pandemic caused by Covid-19 and the eventual demands of the service. Data collected through previous investigations and participant observation were organized and presented in descriptive axes.

Throughout the course of the action research, Resolution No. 466 of December 12, 2012, of the National Health Council (Brasil, 2012) was observed. In compliance, the project was submitted and approved by the ethics committee under the number CAAE 29152819.5.0000.5306. In order to maintain the anonymity of the participants, they were identified with names of flowers, according to the order of the speeches/ pronouncements.

## RESULTS

The action research revealed, throughout its itinerary, the social invisibility of the women who work in an Association of Recyclable Materials. Among the issues concerning their working conditions, the participants shared their continuous and permanent movement of personal and collective (re)organization, which involves aspects associated with work interactions, but question the lack of environmental awareness on the part of the community, in general.

In various moments of dialogue, the workers discussed the precariousness of how solid waste arrives at the association and portrayed the contradictions between what is recommended in legal documents and what is feasible in daily practice. In this sense, they asked for support to carry out a public call for the proper disposal of urban solid waste, especially for masks and gloves worn by patients affected by Covid-19.

With regard to relationships and working conditions, the workers emphasized physical and

emotional exhaustion, which added to the precarious economic and financial conditions, end up influencing the daily work process. They also demonstrated that the pandemic caused by Covid-19 added new risks, which are related to insecurity and ignorance, as expressed in the statements below:

*Sometimes people get annoyed and rub each other and this ends up being a risk... the agent already has a health problem, which increases the risk even more. Sometimes the person is saying things and the colleague is doubting, cursing, distracting. (Rose)*

*I felt a lot of itching and irritation in my eyes and hands, in addition to the intense smell. We were wearing masks, but the smell was unbearable...I felt a headache and malaise in general. (Lavender)*

*I think that the person suffers the consequences of insecurity, fear, the unknown... I know that the pandemic is a highly contagious disease. (Orchid)*

Based on these and other findings, a systematic sequence of interventions and interlocutions that allowed the (re)thinking of daily practice and, in particular, professional relationships and interactions, was carried out, with a view to building pertinent and meaningful knowledge for those involved. Among the educational interventions developed in a constructive and participatory manner, participant observations, interactive dynamics and practical demonstrations at and during work stand out, as expressed by the participants, whose resonance will be described in the following axes.

## AXIS 1: PERCEIVING THEMSELVES AS THE SUBJECT OF THE ACTION

Through participant observation, it was possible to develop a process of empathy with each of the participants, so that the example became the driving force. In the midst of frank and open dialogue, each participant began to perceive themselves as “the subject of the action” and to take co-responsibility for their own work, but also for the work of the other. *“I recognize that I need to be responsible for my work... I need to cooperate with my colleagues’ work. It’s a team work”* (Rose).

This process was developed in the workplace itself, that is, during the recycling event, in which all were face to face with each other so that they could perceive themselves as actors of the action and not mere recipients of information. From recurrent discussions and reflections, all women perceived themselves as part of the whole and, at the same time, protagonists of self-care and health promotion.

In this first moment of intervention, the intention was to develop reflexive movements and self-analysis of the daily work process. Under this approach, reflections were carried out during the work, through questioning, provocations and individual and collective instigations. In addition to answers, participants were encouraged to think and reflect on their professional attitudes and conduct.

## AXIS 2: STRENGTHENING PROFESSIONAL INTERRELATIONSHIPS AND POTENTIALIZING TALENTS.

In various individual and collective dynamics, space was made possible for women to recognize themselves as part of a team and not just aggregated in a number of people. Individual potentials were developed and strengthened and the collaborative sense between all participants was challenged, in order to value the performance of each worker in the whole team. It was demonstrated that extended health is related to integrated and collaborative work, as well as the welcoming atmosphere and synergy of its members.

At various times, the women mentioned that the physical and psychological overload at work brought them harm, including in family life and, not rarely, interfered with sleep and rest. In the speech of one of the participants, it was expressed that the psychic load was greater than the physical strain caused by daily work. In this direction, moments of active individual and collective listening were made possible, as well as spaces for dialogue for everyone to get to know each other in their uniqueness. Therapeutic groups were also carried out with professionals in the field of psychology, in order to alleviate the psychic load and prospect strategies for dialogue in the midst of conflicts.

It was demonstrated, through field interventions, that the improvement and qualification strategies of the work process need to be thought of as a team. Although the Association has a local leadership that is responsible for promoting articulations between the various public and private entities, the importance of the active participation of each member in building an integrated and harmonious team was emphasized.

We sought to develop, throughout the entire process, the active and responsible participation of each worker. With this, the role of leadership and the elements that characterize it were strengthened, as well as the achievements that are greater and more effective as each participant develops shared leadership. In this aggregating path, advances were noticed and sharing of ideas, motivations and resources, as expressed by one of the participants: *“Look, yesterday I cried for happiness, you know what? that I can take a bag and give it to my daughter and help my son. That they are without service, they are not starving, but they are eating what they have”*. (Sunflower)

## AXIS 3: (RE)SIGNIFYING ATTITUDES AND BEHAVIORS

In various moments of dialogue, the members of the Association were motivated to rethink their attitudes and behaviors at work, considering that some overlapped the others or considered themselves superior and more important than others. Recurrently, some participants did not have IPE which put their personal and collective health at risk. Expressions were frequently heard: *“I can’t handle waste with gloves”* (Sunflower); *“I feel suffocated with the mask”* (Rose); *“I feel very hot with*

*this apron*” (*Lavander*), among others.

Based on these findings, practical demonstrations were carried out on how to correctly use and carry IPE. A process of sensitization and re-signification was promoted, reflecting that the IPE constitutes a “encumbrance” as the worker does not accept them internally. It was also reflected that a health problem resulting from contamination could be much worse than correctly and effectively carrying IPE.

It was demonstrated, through two thematic workshops on self-esteem and self-promotion of health, that individual and collective valuation and recognition translate into daily achievement, but that they demand commitment and collaboration from each one, in particular. It made possible, at different times, spaces for discussion, dialogue and reflection on personal and collective attitudes.

Thus, throughout the work intervention process, strategies to promote self-care and the development of healthy habits were discussed, although the conditions were not always favorable to them. Healthy eating habits were discussed, based on the resources available to them; frequent physical activities; the conscious and responsible use of IPE, among others. Based on these reflections and discussions, one of the participants said: “*How do I take care of my own food and physical exercise, if when I get home I have all the housework and care for my four children? What time do I have for myself?*”. (*Camellia*)

Under this impulse, the demands coming from the participants themselves were considered. At various times, healthy living strategies were discussed and negotiated, but they ended up being unfeasible due to the lack of resources, conditions and time.

#### AXIS 4: CHALLENGING YOURSELF TO THE NEW

It was demonstrated, through self-knowledge and teamwork workshops, that each person has qualities, but that these need to be stimulated and strengthened, with a view to achieving personal and collective dreams. It is a wish that all of them grow and challenge themselves to the new, considering that training is procedural and lifelong. This process of sensitization and instigation for the search for the new was constant, although not all of them made the necessary effort.

It was demonstrated that the new and the different are within the reach of one of the members of the Association, but that it is necessary that each one makes its own autonomous search, although the process is built collaboratively. It was reinforced, through motivational messages and interactive dynamics, that the new desire does not come from outside, but from internal motivations and the desire of each one. Under this reflective and driving impulse, one of the women immediately declared: “*What prevents me from having my own house?*” (*Camellia*). Thus, it denotes that the new needs to be awakened and the initiatives potentialized in each one of the women, from external mediations.

## DISCUSSION

Educational actions with women from the Association of Recyclable Materials, with a view to promoting and protecting health, are not limited to specific and linear actions. In addition to thematic workshops, it was necessary to consider the dialogue of the researchers and active immersion in the living world of work, in order to get to know the various movements and, from then on, to outline collaborative and prospective strategies for intervention and transformation.

This dialogue process demonstrated that health education must increasingly take on constructivist characteristics, in which actors/subjects effectively participate in the entire process of knowledge construction and transformation of their practice. In other words, it is essential to transcend reproductive approaches to health intervention, centred on the transmission of generic and sterile information that do not find meaning in the lives of social actors (Costa, 2012; Morin, 2018).

A study shows that health education goes beyond a reproductive combination of learning activities that promote voluntary adaptations in health-related behavior. Unlike simplistic approaches to disease prevention, health education involves interactive and dialogic skills to positively influence user behavior (Seabra *et al.*, 2019).

The interactive approach and immersion in the Association's reality, adopted in this study, was of fundamental importance in the process of (re)construction of individual and collective knowledge and practices. When considering the demands from the actors themselves, dialogical and collaborative perspectives were considered, which enabled the (re)thinking of attitudes and behaviors in view of human evolution and the (re)organization of the work process (Luten *et al.*, 2016; Pinafo *et al.*, 2012).

Promoting health education in areas of social vulnerability, such as those of an Association of Recyclable Materials, means contributing to human, economic, social and environmental development. It is behind the scenes of intersubjective spaces that forces are mobilized, potentialized initiatives and awakened the autonomy of subjects. Both education and health promotion are not guided by the imposition of ready-made recipes but by the mobilization of latent forces, in which each subject perceives himself as the protagonist of his own health (Falkenberg *et al.*, 2014).

In this logic, health education transcends formal and institutionalized spaces. The movements for education are historical, procedural and evolutionary, which is why they happen throughout life. The commitment to health education and the option for human and social development, therefore, requires a clear political will on the part of government authorities, but also the lively dialogue of the University, as a trainer and aggregator of new knowledge and practices. This dynamic translates, ultimately, into an emancipatory process of building citizenship (Sink *et al.*, 2015).



In view of this, health education constitutes an emancipatory process that seeks, in addition to information, the apprehension of knowledge that leads to (re)thinking attitudes and behaviors, in practice. This involves significant methodologies that consider the individual and collective autonomy of those involved. Under this approach, verticalized academic speeches, campaigns or interventions are not enough. There needs to be a constant dialogue between academic knowledge and popular knowledge (Jih *et al.*, 2016).

The results of this study demonstrate that health education transcends preconceived mental schemas and previously agreed schedules. In spaces of social vulnerability, it is necessary to know the unique organizational dynamics of its actors and collaboratively discuss possible and viable strategies in practice. Corroborates this thinking by arguing that educational work in associations must be based on participatory approaches and carried out in order to empower workers so that they are protagonists of their own history (Pinhel, 2013).

## FINAL CONSIDERATIONS

The results of this study demonstrate that health education transcends preconceived mental schemas and previously scheduled moments. It involves interactive and dialogic skills capable of influencing the behavior of users, as well as the mobilization of latent forces, in which each subject perceives himself as the protagonist of his own story.

A limitation of this study was the impossibility of carrying out more educational actions with women from a recyclable materials association, which was desired by the participants but not possible due to the pandemic. This factor also contributed to the lack of deepening of some aspects, as face-to-face meetings could have given rise to more productive and prospective strategies.

Based on this study, it is suggested that further research be carried out in order to expand health education strategies in vulnerable realities. As well as education, health promotion also requires proactive leadership in defense of life and health, through comprehensive and effective dialogue with different social subjects.

## REFERENCES

Brasil. (2010). **Lei nº 12.305, de 2 de agosto de 2010**. Institui a Política Nacional de Resíduos Sólidos; altera a Lei nº 9.605, de 12 de fevereiro de 1998; e dá outras providências. Disponível em: <https://bit.ly/40KMm6m>. Acesso em: 01 Mar. 2021

Brasil. (2012). Ministério da Saúde. Conselho Nacional de Saúde. **Resolução nº 466, de 12 de**

**dezembro de 2012**. Aprova diretrizes e normas regulamentadoras de pesquisas envolvendo seres humanos. Diário Oficial da União, Brasília, DF, 13 jun. 2013. Seção 1, p. 59.

Chierrito-Arruda, E., Rosa, A. L. M. R., Paccola, E. A. S., & Grossi-Milani, R. S. M. (2018). Pro-environmental behavior and recycling: literature review and policy considerations. **Ambiente & Sociedade**, São Paulo, v. 21, p. e02093.

Costa, V. V. (2012). Educação e Saúde. **Unisa Digital**, 7-9.

Falkenberg, M. B., Mendes, T. P. L., Moraes, E. P. , & Souza, E. M. (2014). Health education and education in the health system: concepts and implications for public health. **Ciência & Saúde Coletiva**, v. 19, n. 3, p. 847-852.

Jih, J., Le, G., Woo, K. Tsoh, J. Y., Stewart, S., & Gildengorin, G., *et al.* (2016). Educational interventions to promote healthy nutrition and physical activity among older Chinese Americans: a cluster-randomized trial. **Am J Public Health**, v. 106, n. 6, p. 1092-1098.

Luten, K. A., Reijneveld, S. A., Dijkstra, A., & Winter, A. F. (2015). Reach and effectiveness of an integrated community-based intervention on physical activity and healthy eating of older adults in a socioeconomically disadvantaged community. **Health Education Research**, v. 31, n. 1, p. 98-106.

Miller, N. D., Meindl, J. N., & Caradine, M. (2016). The effects of bin proximity and visual prompts on recycling in a university building. **Behavior and Social Issues**, v. 25, p. 4-10.

Morin, E. (2018). **Sete saberes necessários a educação do futuro**. 2. ed. Rio de Janeiro (RJ): Cortês.

Nazari, M. T., Gonçalves, C. S., Silva, P. L. C., Paz, M. F., Siqueira, T. M., Corrêa, E. K., & Corrêa, L. B. (2017). Incidência de resíduos de serviços de saúde em cooperativas de triagem de materiais recicláveis. **Engenharia Sanitária e Ambiental**, v. 25, n. 2, p. 271-279.

Pereira, B. C. J., Goes, F. L. (2016). **Catadores de Materiais Recicláveis** Um encontro Nacional. Rio de Janeiro, IPEA.

Pinafo, E., Nunes, E. F. P. A., Gonzalez, A. D. (2012). A educação em saúde na relação usuário-traba-

lhador no cotidiano de equipes de saúde da família. **Ciência. & saúde coletiva**, v. 17, n. 7, p. 1825-1832.

Pinhel, J. R. (2013). **Do lixo à cidadania**: guia para a formação de cooperativas de catadores de materiais recicláveis. São Paulo; Petrópolis.

Seabra, C. A. M., Xavier, S. P. L., Sampaio, Y. P. C. C., Oliveira, M. F., Quirino, G. S., & Machado, M. F. A. S. (2019). Health education as a strategy for the promotion of the health of the elderly: an integrative review. **Revista brasileira de geriatria e Gerontologia**, v. 22, n. 4, p. e190022.

Sink, K. M., Espeland, M. A., Castro, C. M., Church, T., Cohen, R., & John A Dodson, J. A., *et al.* (2015). Effect of a 24-month physical activity intervention vs health education on cognitive outcomes in sedentary older adults: the LIFE randomized trial. **JAMA**, v. 314, n. 8, p. 781-90.

Souza, J. C., Martins, M. F. (2018). Mapa de riscos em cooperativas de catadores de materiais recicláveis no Município de Campina Grande-PB. **Sistemas & Gestão**, v. 13, n. 2, p. 232-245.

Souza, M. T. S., Paula, M. B., Souza-Pinto, H. (2012). O papel das cooperativas de reciclagem nos canais reversos pós-consumo. **Revista Adm. Empresa**, São Paulo, v. 52, n. 2, p. 246-262.

Schwanke, C. Educação Ambiental. Ambiente: Conhecimentos e Práticas. Porto Alegre: Bookmann. Abers, R., Von Bulow, M. (Org.). Dossiê: movimentos sociais e ação coletiva. **Revista Brasileira de Ciência Política**, Brasília, n. 3.

Thiolent, M. (2011). **Metodologia da pesquisa-ação**. 18. ed. São Paulo: Cortez.