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Decent and sustainable work in a recyclable materials cooperative

Trabalho decente e sustentável em cooperativa de materiais recicláveis

Abstract

Objective: To show how the organization of recyclable materials collectors in a cooperative can contribute to the development of a sustainable economy, favoring the achievement of the Sustainable Development Goals in Brazil and the realization of Decent Work. **Methods:** This is a qualitative, ethnographic study carried out in a recyclable materials cooperative. Initially, documents were examined to understand the historical data that motivated the organization of the cooperative. Interviews were then conducted with the cooperative's management and workers. **Results:** The cooperative's history began in the 2000s, based on an analysis of the working conditions of the dump's waste pickers. The organization of these workers into a cooperative showed an improvement in working conditions. **Conclusion:** The organization of waste pickers into a cooperative has contributed to achieving the Sustainable Development Goals 1, 3, 5 and 10, by promoting social inclusion, sustainability and decent work, thus making the concept of Decent Work a reality.

Keywords: Waste Pickers; Working Conditions; Cooperatives; Sustainable Development; Solidarity Economy; Occupational Health.

Resumo

Objetivos: Investigar como a organização de catadores de materiais recicláveis em uma cooperativa pode contribuir para o desenvolvimento da economia sustentável, favorecendo o alcance dos Objetivos de Desenvolvimento Sustentável (ODS) no Brasil e a concretização do Trabalho Decente. **Métodos:** Trata-se de um estudo qualitativo, de caráter etnográfico, realizado com trabalhadores de uma cooperativa de materiais recicláveis. Inicialmente, foram examinados documentos para compreensão dos dados históricos que motivaram a organização da cooperativa. Em seguida, foram realizadas entrevistas com a gestão da cooperativa e com os trabalhadores cooperados. **Resultados:** A história da cooperativa teve início nos anos 2000, a partir da análise das condições de trabalho dos catadores do lixão. A organização desses trabalhadores em uma cooperativa mostrou melhoria nas condições de trabalho. A análise entre as condições de trabalho no lixão e na cooperativa apresenta diferenças importantes. **Conclusão:** A organização dos catadores de materiais recicláveis em cooperativa contribuiu para atingir os ODS 1, 3, 5 e 10, ao promover a inclusão social, a sustentabilidade e o trabalho digno, concretizando, assim, o conceito de Trabalho Decente.

Palavras-chave: Catadores; Condições de Trabalho; Cooperativas; Desenvolvimento Sustentável; Economia Solidária; Saúde do Trabalhador.



Introduction

The solidarity economy is a concept that refers to forms of production, consumption, and distribution of wealth based on cooperation, solidarity, and self-management¹. It is seen as a manifestation contrary to the conditions imposed by the capitalist production system and the social environment, since, unlike the traditional capitalist model, the solidarity economy values collectivity and social justice, promoting practices aimed at the common good and sustainability^{1,2}. One of its main objectives is to end the cycle of products created in the system and reuse the materials that make up the chain, so that they circulate throughout the production process³.

The context of recyclable solid waste faces environmental problems, mainly related to the high consumption and generation of waste without planning and correct disposal, in addition to facing other social problems, such as unemployment³. In this sense, the solidarity economy aims to transform recyclable solid waste into new raw materials for the production sector and cooperatives are emerging as a way for the working class to stay in the labor market³.

In the context of recyclable materials cooperatives, the actors that make up the recycling chain comprise institutions and individuals with a common goal³. In this way, the solidarity economy manifests itself through the democratic organization of workers, where decisions are made collectively and profits are distributed fairly among members¹. This is in line with the 8th Sustainable Development Goal (SDG), proposed as part of 2030 Agenda by the UN, which addresses the economic, social, and environmental spheres, promoting decent work and sustainable economic growth⁴.

Changes in the characteristics of work are due to a multitude of factors, such as demographics, social and economic changes, technology, and, more recently, pandemics⁵. And among the goals to which the United Nations is contributing in order to achieve the 2030 Agenda in Brazil, the following stand out: (i) SDG 1: End poverty in all its forms everywhere; (ii) SDG 3: Ensure healthy lives and promote well-being for all at all ages; (iii) SDG 5: Achieve gender equality and empower all women and girls; (iv) SDG 8: Promote sustained economic growth, inclusive and sustainable, full and productive employment and decent work for all; (v) SDG 10: Reduce inequality within and among countries; and (vi) SDG 11: Make cities and human settlements inclusive, safe, resilient and sustainable⁶.

In this regard, Schulte et al. (2022) sought to identify the elements of Occupational Health and Safety (OHS) for decent work using a framework containing four pillars and eight determinants⁷. The framework covers factors that influence workers' health and well-being. The objectives go beyond the traditional ones outlined by OSH, such as protecting workers from occupational risks, preventing illness, and promoting health, and take into account specific demographic profiles - for example, more women, immigrants, and older workers, and more chronic illnesses and mental health problems, varied employment arrangements, among other points⁸. Also, core values such as trust, connectedness, participation, fairness, responsibility, growth, and resilience are highlighted as necessary components of decent work for the OSH field to address the future of work⁹.

To assess the degree of dissemination of OSH for Decent Work, one must consider the pillars of decent work, which are strategic objectives of the International Labor Organization (ILO) to promote decent work, and the determinants of decent work, which are factors that positively or negatively influence the achievement of decent work¹⁰. The pillars include: (i) job creation, which has OSH aspects, as it depends on the level of training of workers, degree of precariousness, and adverse health effects that result from that; (ii) social protection, which is the integration of OSH practices and research to ensure safe and healthy working conditions, adequate rest and access to benefits; (iii) workers' rights, which include the ability to negotiate safe wages and conditions, refuse unsafe work, and trust employers to provide safe and healthy workplaces; and (iv) social dialogue, which is the right to exercise workplace democracy and input on issues that may affect workers' health and safety⁷. The determinants raise issues that the OSH field will have to address, and include new and emerging hazards and risks, demographics (ageing and gender), globalization, informal work, migration, pandemics, climate change, and OSH policies¹¹.

The OSH community still needs a broad approach to encompass the profound changes in the world of work and fulfill SDG 8. The Decent Work Agenda was launched by the ILO in 1999 and later became part of the United Nations (UN) agenda for sustainable development^{10,12}. SDG 8 recognizes that decent work supports inclusive and sustainable economic growth and full and productive employment. Decent work, a UN goal, is employment that respects “...*fundamental rights of workers in terms of safety, health, and remuneration...*” (p. 2), as well as respecting the physical and mental integrity of workers in the course of their employment^{7,12}. It is useful to identify the OSH aspects of Goal 8, as they relate to the four pillars of decent work: job creation, social protection, workers’ rights, and social dialogue⁷.

The determinants of decent work vary significantly between countries of different income levels. In high-income countries, job markets are often characterized by greater formalization, better working conditions, greater social protection, and opportunities for professional development¹³. In contrast, middle and low-income countries, such as Brazil, face challenges such as high informality, job insecurity, lack of social protection, and significant inequalities. These challenges are compounded by economic, social, and political issues that influence the quality of jobs available and the ability of workers to access decent work. In Brazil, the solidarity economy is emerging as an alternative for tackling these challenges, promoting social inclusion and economic justice through cooperative and self-managed practices¹³.

Considering and understanding the differences between decent and sustainable work when it takes place in a dump and later in a cooperative is crucial to understanding the improvements brought about by organizing waste pickers in cooperatives, both in terms of working conditions and social and environmental impact. At the dump, waste pickers work in extremely precarious conditions, without any kind of protection or labor rights. They are exposed to constant health risks, such as illnesses and accidents, and often face discrimination and social stigmatization¹⁴. In contrast, in recycling cooperatives, waste pickers work in a more organized and safer environment. The cooperative provides better working conditions, with access to personal protective equipment, adequate infrastructure, and social support^{15,16}. Furthermore, organizing in cooperatives allows waste pickers to have greater control over their work and income, promoting self-management and democratic participation in decision-making^{15,17}.

Cooperatives also play a key role in promoting the SDGs, contributing to poverty eradication, the promotion of health and well-being, gender equality, the reduction of inequalities, and the creation of more sustainable cities and communities^{1,6}. Organizing in cooperatives not only improves the working conditions of waste pickers, but also generates broader economic and social benefits, strengthening the solidarity economy and contributing to building a fairer and more sustainable future¹.

In this sense, this article reports on a case study carried out in a recyclable materials cooperative, with the aim of investigating how the organization of recyclable materials collectors in a cooperative can contribute to the development of the sustainable economy, favoring the achievement of the SDGs in Brazil and the realization of Decent Work.

Methods

This was a qualitative, ethnographic study carried out in a recyclable materials cooperative located in the western region of the state of São Paulo in the municipality of Presidente Prudente. Initially, documents were examined to understand the historical data that motivated the organization of the cooperative. Individual and collective interviews were then conducted in focus groups with workers in 2023.

Interviews were conducted with the management to find out about issues related to work organization and health and safety aspects. Cooperative workers were interviewed to find out, from their perspective, about their health and safety conditions at work. The cooperative has 90 cooperative workers, all of whom were able to respond to the interviews. In all, 47 workers agreed to take part in the study (56% of the workers) and filled in the Informed Consent Form (ICF).

The interviews conducted with the management team and cooperative workers were of two types: structured and semi-structured. The structured interviews, conducted based on a previously prepared script, were aimed at collecting demographic data on the participants. The semi-structured interviews, on the other hand, were guided by a flexible set of questions, allowing us to delve deeper into specific topics related to the management's knowledge of the cooperative members' health, work organization and safety, as well as the workers' perception of their health and safety conditions in the workplace.

All the interviews were recorded with the consent of the participants, ensuring the reliability of the answers. The data from the structured interviews were organized into tables and submitted to descriptive statistical analysis using the Excel tool. The semi-structured interviews were fully transcribed and subjected to qualitative analysis based on content analysis¹⁸, enabling the identification of categories and patterns relevant to the study's objectives

The study project was approved by the Research Ethics Committee of the Faculty of Science and Technology (FCT) of Unesp, Presidente Prudente *campus*, under CAAE number 52463421.3.0000.5402, on January 6th, 2022

Results

The formation of a recyclable materials cooperative

In the early 2000s, data were collected from workers at the Presidente Prudente dump, with the aim of checking how many workers earned a subsistence income from working at the dumpsite, how much their income was, how many dependents they had, and the reasons that led them to work there, among others¹⁸. This was an initiative of the Public Policy Project, linked to the Unesp Presidente Prudente/SP *campus*, and the analysis of the data collected showed that organizing the dump workers into a cooperative that had autonomy and could offer better social and economic conditions would be a better alternative in terms of working conditions. It was also noted that the dump workers felt forgotten by the municipal authorities¹⁹.

The initiative to learn about working conditions led to the formation of a group that was willing to understand the proposal to implement selective waste collection in the municipality and, as a result, leave the dump and organize themselves into a cooperative²⁰.

Despite the improvement in working conditions reported by the workers, who are now cooperative members, they had to adapt to a different type and rhythm of work, as each one had a specific task in the organization of the work¹⁹. In addition, a process of education on selective waste collection began to be carried out by the public authorities with the population. As well as spreading the word, residents' doubts were clarified so that the collection could be implemented¹⁹. The work in the cooperative was divided between those who would collect the waste selectively discarded by the residents, accompanying the collection truck, and the workers who would remain at the cooperative's headquarters to carry out other tasks such as separating the collected waste, pressing it and selling it. It was decided that the profits would be divided equally between them, regardless of the activity carried out¹⁹.

To encourage and support the organization of the cooperative, strategic collaborations were established with different institutions, which played a fundamental role in making the planned actions viable and legitimate^{19,20}. FCT-Unesp was the institution that conceived the Public Policy project, and was accompanied by *Companhia Prudentina de Desenvolvimento* (Prudenco), the company in charge of municipal public cleaning, providing technical, operational, and logistical support. Moreover, the municipal administration, through the Social Assistance and Environment departments, plays a crucial role in promoting campaigns and assisting cooperative members during the cooperative's initial phase. For initial meetings and as a starting point for selective collection, spaces were used at the *Escola Francisco Pessoa* (Francisco Pessoa School) located in the *Conjunto Habitacional Ana Jacinta* (Ana Jacinta Housing Complex). Finally, the *Universidade do Oeste Paulista* (Unoeste – University

of Western São Paulo) joined in the projects derived from the main initiative, contributing to the formation and maintenance of the cooperative^{19,20}.

In 2002, the cooperative started its selective collection program but faced significant initial challenges. Among them were: the reduction in the cooperative members' income due to the insufficient amount of waste collected, even with the support of the residents; the lack of adequate infrastructure for sorting the materials; and the lack of a specific vehicle for transporting the recyclables²⁰. In response to these difficulties, the Social Assistance Department offered direct support to the workers, while Prudencio provided a truck for the temporary storage of the waste, which was then sorted in a shed provided by a local businessman²⁰. These joint actions enabled the cooperative to overcome the initial adversities and consolidate itself as Cooperlix.

The cooperative's headquarters were inaugurated a year after its formation, in December 2003. With a specific place to carry out their work, the cooperative members have also gained the prestige of the population, as well as the recovery of their self-esteem, desire to grow, and value their work, according to data reported in the work of Cantoia and Leal (2007)¹⁹.

According to data from the *Consórcio Intermunicipal de Resíduos Sólidos do Oeste Paulista* (CIRSOP - Intermunicipal Solid Waste Consortium of Western São Paulo), in 2020, the selective collection carried out by the cooperative covered 71.48% of the municipality²¹.

CIRSOP is part of a portfolio of projects structured by *Caixa Econômica Federal*, financed by the Federal Government, and covers the joint concession of collection, transshipment, transportation, treatment, and final disposal services for urban solid waste (USW) in 10 of the 13 consortium municipalities, including the municipality of Presidente Prudente²¹. The aim of CIRSOP is to change the reality of waste, reversing the logic of sending material that has commercial value to landfills, adopting a model of reducing generation, recovering recyclables, using organic waste, generating energy, protecting the environment, and valuing recyclable material workers such as waste pickers, as well as implementing economically sustainable and socially fair tariffs and encouraging environmental education among the population²¹. CIRSOP meets targets and collaborates with the National Solid Waste Plan (Planares) and the Intermunicipal Plan for Integrated Solid Waste Management (PIGIRS). Both establish gradual and growing reductions in the volume of waste generated, a significant increase in the use of recyclable materials, and the generation of jobs and income for waste pickers, among other objectives²¹.

The PIGIRS is an instrument of the National Solid Waste Policy and its preparation is a condition for municipalities to have access to federal funds for projects and services related to urban cleaning and solid waste management²¹. In this way, it has the function of diagnosing existing problems in solid waste management, pointing out strategies and actions so that the problems can be solved efficiently²¹. The environmental targets for a company to take on consortium waste management services through PIGIRS are high, with the expectation of recovering 65% of the waste generated, using 35% of recyclable waste, 18% of wet waste, and 15% of the total waste to generate energy, thus opening up the possibility for cooperatives and associations of waste pickers to carry out selective collection, as in the case of Presidente Prudente²¹.

Selective collection in the municipality of Presidente Prudente has so far been carried out exclusively by Cooperlix, which collects approximately seven tons of recyclable waste every day²².

Figure 1 shows a timeline with the main critical historical events in the formation of the cooperative.

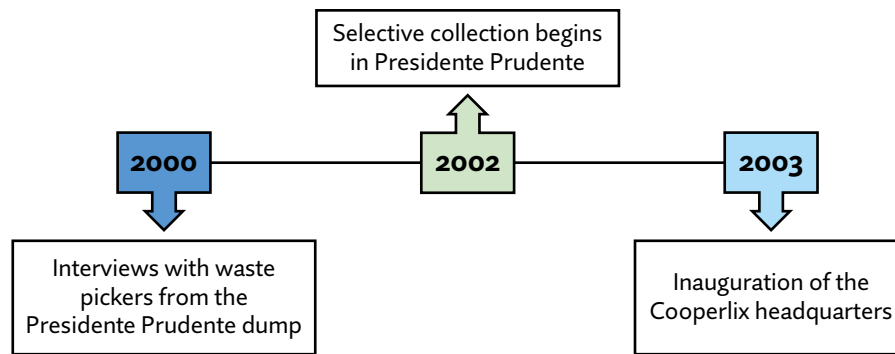


Figure 1 Timeline of critical historical events up to the formation of Cooperlix.
Source: Own elaboration.

As part of the study, we observed that the cooperative waste pickers, despite gaining an important foothold in the municipality's recycling circuit, with an improved quality of life and work, are suffering from complications. For example, in September 2023, no aid was passed on from the City Council, which jeopardized the workers' salaries and the supply and maintenance of the cooperative's trucks, which only happened sixty days later, requiring the workers to be resilient in managing the unexpected difficulties^{23,24}. Of the 47 cooperative members interviewed, four worked at the dump and, consequently, have been with the cooperative since its creation.

The average age of the cooperative members interviewed was 41.54 years, with a range between 21 and 71 years, $\frac{1}{4}$ of the participants being between 21 and 30 years old. Of the 47 cooperative members who took part in the study, 30 identified themselves as female and 17 as male. The four workers interviewed who worked at the dump occupy the largest age groups and were, at the time of the interview, between 58 and 78 years old.

The management of the cooperative, carried out by the members themselves, is divided into administrative and operational. The administrative duties are carried out by the members who hold the positions of president, vice-president, and secretary, who are democratically elected every two years. However, these members simultaneously hold positions in the production chain.

Moreover, there is an agreement among the cooperative members that everyone can take on any job or function, regardless of the activity to be carried out. However, according to the cooperative members themselves, some specific jobs and positions, such as collecting solid waste in the streets, are usually taken up by younger workers due to the physical demands, such as strength and motor dexterity. On the other hand, the job of sorting materials on the conveyor belt is usually carried out by women, who are considered by their peers to be more skilled at tasks that require fine dexterity and more qualified for this activity.

When the cooperative members take on a new job, they are instructed and trained by their colleagues who already work there. Collections are carried out by the cooperative members themselves and not by waste pickers. They are given guidance on the risks and precautions they should take in this activity, as well as in the other activities carried out by the cooperative.

The cooperative has an Internal Accident Prevention Commission (CIPA) organized in compliance with Regulatory Standard 5 (NR-5)²⁵, which is responsible for advising workers on the use of personal protective equipment (PPE). According to the administrative management, there are no formal records of accidents at work.

During the observations, it became clear that the workers who have direct contact with recyclable material use PPE and, depending on the activity (when there is no direct contact), some workers don't use protective gloves and goggles (even though this is mandatory, and they have been instructed on how to use them). These workers were asked why they didn't use PPE and said that they felt experienced and safe because they had been working in the cooperative for many years. In the reports obtained, tacit knowledge was pointed out as the cause of the non-occurrence of accidents at work within the cooperative.

Perception of prevention measures

When the cooperative members were asked what measures or methods they use to avoid health risks in the workplace, 98% answered that they pay attention to their work activities and, above all, use the appropriate PPE. They reported that when handling dangerous objects such as shards of glass and hospital waste - which, although they should be collected by a responsible specialist company, are often disposed of incorrectly by the public alongside recyclable waste - they use PPE.

Of those interviewed, 93.2% recognize CIPA as a supervisory agent in guaranteeing health and safety in the workplace. Also, when asked if they had ever received any guidance on health prevention in the workplace other than that offered by CIPA (through training or lectures, for example), they cited lectures by the fire department, the Unesp team, the cooperative's management, and occupational safety technicians.

Discussion

The eradication of poverty: dump versus cooperative

The study presents working in cooperatives as an alternative that strengthens SDG 1, which is the eradication of poverty²⁶. The analysis of working conditions at the dump and in the cooperative shows important differences. At the dump, waste pickers work informally, without any guarantee of a fixed income, without social protection and exposed to various health risks. In contrast, in the cooperative, workers have access to a safer environment, adequate infrastructure and a more stable income¹⁶.

The interviews and narratives of the dump workers highlight the extreme precariousness and vulnerability. The lack of PPE and exposure to hazardous materials increases the risk of accidents and illnesses. In addition, informal work prevents access to social benefits, perpetuating the cycle of poverty.

Furthermore, workers' health and well-being (SDG 3) are drastically affected by the working conditions at the dumpsite²⁷. The continuous risks due to exposure to hazardous waste, the lack of PPE, the unhealthy environment, among others, distance the dump workers from their work activities through degradation¹⁴. In the cooperative, actions such as the adoption of safety measures, the use of PPE and training promote better working conditions. Multivocality is valued and know-how is put into practice^{28,29}.

The cooperative's workers, regardless of age, enjoy better health and safety conditions. The presence of a CIPA and the implementation of accident prevention programs contribute to improving workers' well-being.

The unhealthy conditions and lack of safety measures at the dump result in a high occurrence of occupational diseases and accidents at work, negatively affecting the quality of life of waste pickers¹⁶.

Gender equality, a separate issue (SDG 5)

Some socially practiced principles, such as the division between work "for men" and "for women" and the hierarchization of these jobs, organize the sexual division of labor³⁰. In recyclable materials cooperatives, there is a division between men's work, predominantly linked to the operation of machinery and the use of physical strength, and women's work, which mostly involves skill, agility, and attention², a fact also observed in the cooperative studied.

The analysis of women's participation in the recycling chain also shows marked differences between the dump and the cooperative. At the dump, women face discrimination and have less access to decent work opportunities^{16,20}. In the cooperative, there is greater inclusion and appreciation of women's work. The data on the number of women and their role in sorting materials indicates that, in the cooperative, there

is a greater participation of women in sorting and management functions, promoting gender equality and female empowerment.

It's important to note that women are able to do any type of activity, and there is no greater predisposition for X or Y activity². In the cooperative in question, although men predominantly take on roles that require more physical strength (such as collection) and women activities related to attention and dexterity (such as sorting), these roles are reversed when the cooperative members deem it necessary - to cover for a colleague who has had to take time off work, for example - without affecting production.

Recyclable materials cooperatives offer an opportunity to access work and income, guaranteeing livelihood and social inclusion for thousands of women³¹. Participation in these spaces contributes to greater female autonomy. Also, when women are organized within cooperatives, they occupy representative positions, take on responsibilities, articulate themselves politically, launch campaigns, among other things. In other words, they re-signify their lives and, therefore, their social role³¹. Through their work, female cooperative members feel stronger and more capable of fighting for their rights and, consequently, create bonds of affection and reciprocity; they feel motivated to go back to school; they receive political training; they understand the gender dispute in the organizations they participate in; they perceive the domestic violence, racial discrimination, and social exclusion to which they are subjected, as well as recognizing sexism, the lack of opportunities, and the naturalization of the differences between the sexes³⁰.

In this way, the circular economy favors not only gender equality, but also the reduction of inequalities (SDG 10)³². Organization in cooperatives contributes to reducing inequalities by providing better working conditions and a more equitable distribution of income. In garbage dumps, inequality is accentuated by informality and a lack of social protection. The lack of access to labor rights and the absence of a social protection network amplifies the inequalities among waste pickers at the dump²⁰.

The recycling cooperative plays a key role in promoting more sustainable cities and communities. By formalizing the work of waste pickers, the cooperative improves waste management and contributes to reducing environmental impact. The implementation of selective waste collection in Presidente Prudente, facilitated by the cooperative, shows a positive impact on waste management and the community's environmental awareness.

The transition from informal work on the dump to organization in cooperatives represents a significant change in the quality of employment. The cooperative offers decent working conditions, with fair pay, job security, and access to social rights. Decent Work is therefore closely linked to other SDGs in addition to the eighth. Issues such as poverty eradication, health and well-being, gender equality, reducing inequalities, and sustainable cities and communities strengthen the connection with the 12 goals of SDG 8, which promotes inclusive and sustainable economic growth, full and productive employment, and decent work for all.

Conclusion

The solidarity economy, seen in cooperatives mainly through the democratic organization of workers and the fair distribution of profits among members, is a way of achieving decent and secure work, since it is based on job creation and workers' rights, as well as social protection and dialogue.

In the municipality of Presidente Prudente, the organization of waste pickers into a cooperative has contributed to achieving the SDGs, especially 1, 3, 5, 8, and 11, by promoting social inclusion, sustainability, and decent work, thus making the concept of Decent Work a reality.

Referências

1. Singer P. Introdução à economia solidária. São Paulo: Fundação Perseu Abramo, 2002.

2. Martins IG, Mota LLR, Segala NB, Santos TNS, Cabral LR. Reciclando as relações de gênero: a divisão sexual do trabalho em cooperativas de catadoras e catadores, e o papel de lideranças femininas na política pública de resíduos sólidos no Distrito Federal. In: Pereira BCJ, Goes FL J, organizadores. Catadores de materiais recicláveis: um encontro nacional. Rio de Janeiro: Ipea; 2016. p. 75-97.
3. Silva CL, Sauka JE. Desenvolvimento local e possibilidades de uma economia circular a partir de uma cooperativa de catadores de materiais recicláveis. *Interações (Campo Grande)*. 2024; 25 (2). p. 1-13. <https://doi.org/10.20435/inter.v25i2.4030>
4. Nações Unidas Brasil. Objetivo do desenvolvimento sustentável 8: trabalho decente e crescimento econômico. Brasília, DF: Nações Unidas [cited 2024 Jul 26]. Available from: <https://brasil.un.org/pt-br/sdgs/8>
5. World Economic Forum. The future of Jobs Report 2020. Geneva: World Economic Forum; 2020 [cited 2024 Jul 29]. Available from: <https://www.weforum.org/publications/the-future-of-jobs-report-2020/>
6. Nações Unidas Brasil. Agenda 2030 para o desenvolvimento sustentável. Brasília, DF: Nações Unidas; 2015 [cited 2024 Jul 26]. Available from: <https://brasil.un.org/pt-br/91863-agenda-2030-para-o-desenvolvimento-sustent%C3%A1vel>
7. Schulte PA, Iavicoli I, Fontana L, Leka S, Dollard MF, Salmen-Navarro A, et al. Occupational safety and health staging framework for decent work. *Int J Environ Res Public Health*. 2022 Jan;19(17):10842. <https://doi.org/10.3390/ijerph191710842>
8. Schulte PA, Delclos G, Felknor SA, Chosewood LC. Toward an expanded focus for occupational safety and health: a commentary. *Int J Environ Res Public Health*. 2019 Dec;16(24):4946. <https://doi.org/10.3390/ijerph16244946>
9. Schulte P, Vainio H. Well-being at work: overview and perspective. *Scand J Work Environ Health*. 2010;36(5):422-9. <https://doi.org/10.5271/sjweh.3076>
10. International Labour Conference. Report of the Director-General: decent work. Geneva: International Labour Conference; 2015 [cited 2024 Jul 26]. Available from: <https://webapps.ilo.org/public/english/standards/relm/ilc/ilc87/rep-i.htm>
11. Lancet T. The future of work and health. *Lancet*. 2023 Oct; 402(10410):1299.
12. United Nations. Department of Economic and Social Affairs. Transforming our world: the 2030 Agenda for sustainable development. New York: United Nations; 2015 [cited 2024 Jul 26]. Available from: <https://sdgs.un.org/publications/transforming-our-world-2030-agenda-sustainable-development-17981>
13. Frank J, Mustard C, Smith P, Siddiqi A, Cheng Y, Burdorf A, et al. Work as a social determinant of health in high-income countries: past, present, and future. *The Lancet*. 2023 Oct;402(10410):1357-67. Available from: [https://doi.org/10.1016/s0140-6736\(23\)00871-1](https://doi.org/10.1016/s0140-6736(23)00871-1)
14. Porto MFS, Juncá DCM, Gonçalves RS, Filhote MIF. Lixo, trabalho e saúde: um estudo de caso com catadores em um aterro metropolitano no Rio de Janeiro, Brasil. *Cad Saude Publica*. 2004 dez;20:1503-14. <https://doi.org/10.1590/S0102-311X2004000600007>
15. Rodrigues L, Gonçalves-Dias S. Cooperativas de catadores de materiais recicláveis: uma proposta de indicadores para segurança e saúde do trabalho. In: 8º Encontro Nacional da ANPPAS; out 2017, Natal, RN, Brasil.
16. Silva Hein A, Varela C. Qualidade de vida dos catadores de materiais recicláveis. São Paulo: Engema; 2019.
17. Rodrigues L, Gonçalves-Dias S. Indicadores de segurança e saúde do trabalho para cooperativas de catadores de materiais recicláveis: revisão, aplicação e recomendações. In: Gonçalves-Dias SLF, Sakurai T, Ziglio L. Catadores e espaços de (in) visibilidades. São Paulo: Blucher; 2020. p. 37-62.
18. Bardin L. Análise de conteúdo. São Paulo: Edições 70; 2015.
19. Cantóia SF, Leal AC. Cooperlix: história e implantação. *Revista Formação*. 2007;1(14):126-49.
20. Gonçalves MA. O trabalho no lixo [tese de doutorado]. Presidente Prudente: Universidade do Estado de São Paulo; 2005.
21. Consórcio Intermunicipal de Resíduos Sólidos do Oeste Paulista. Plano Intermunicipal de Gestão Integrada de Resíduos Sólidos. 31 dez 2020 [cited 2024 Jul 29] Disponível em: <https://www.cirsop.sp.gov.br/publicacoes/527>
22. G1. Presidente Prudente e Região. Cooperlix dá orientações sobre o funcionamento da coleta seletiva de lixo em Presidente Prudente. 20 ago 2023 [cited 2024 Jul 29]. Available from: <https://g1.globo.com/sp/presidente-prudente-regiao/noticia/2021/08/20/cooperlix-da-orientacoes-sobre-o-funcionamento-da-coleta-seletiva-de-lixo-em-presidente-prudente.ghtml>
23. G1. Presidente Prudente e Região. Ministério Público cobra providências urgentes da Prefeitura de Presidente Prudente para regularizar pagamentos destinados à Cooperlix. 29 set 2023 [cited 2024 Jul 29]. Available from: <https://g1.globo.com/sp/presidente-prudente-regiao/noticia/2023/09/29/ministerio-publico-cobra-providencias-urgentes-da-prefeitura-de-presidente-prudente-para-regularizar-pagamentos-destinados-a-cooperlix.ghtml>

24. G1. Presidente Prudente e Região. Após quase 60 dias de atraso, Cooperlix recebe repasse de R\$ 238 mil da Prefeitura de Presidente Prudente. 2023. [cited 2024 Jul 29]. Available from: <https://g1.globo.com/sp/presidente-prudente-regiao/noticia/2023/10/13/cooperlix-recebe-repasse-de-r-238-mil-da-prefeitura-de-presidente-prudente.ghml>
25. Ministério do Trabalho e Emprego (BR). Norma Regulamentadora N° 5. Comissão Interna de Prevenção de Acidentes e Assédio, atualizado em 20 de dezembro de 2022 [cited 2024 Jan 20]. Available from: <https://www.gov.br/trabalho-e-emprego/pt-br/aceso-a-informacao/participacao-social/conselhos-e-orgaos-colegiados/comissao-tripartite-partitaria-permanente/normas-regulamentadora/normas-regulamentadoras-vigentes/norma-regulamentadora-no-5-nr-5>
26. Nações Unidas Brasil. Objetivo do desenvolvimento sustentável 1: erradicação da pobreza. Brasília: DF: Nações Unidas Brasil. [cited 2024 Jul 30]. Available from: <https://brasil.un.org/pt-br/sdgs/1>
27. Nações Unidas Brasil. Objetivo do desenvolvimento sustentável 3: saúde e bem-estar. Brasília: DF: Nações Unidas Brasil. [cited 2024 Jul 30]. Available from: <https://brasil.un.org/pt-br/sdgs/3>
28. Engeström Y. From learning environments and implementation to activity systems and expansive learning. *Actio Int J Hum Act Theory*. 2009 Jan;2:17-33.
29. Clot Y. Clinique du travail et clinique de l'activité. *Nouv Rev Psychosociologie*. 2006; 1(1): p. 165–77.
30. Hirata H, Kergoat D. Novas configurações da divisão sexual do trabalho. *Cad. Pesqui*. 2007;37(132):595-609. <https://doi.org/10.1590/S0100-15742007000300005>
31. Paiva CC. Mulheres catadoras: articulação política e ressignificação social através do trabalho. *Ideias*. 2016;7(2):151-74. <https://doi.org/10.20396/ideias.v7i2.8649500>
32. Nações Unidas Brasil. Objetivo do desenvolvimento sustentável 10: redução das desigualdades Brasília: DF: Nações Unidas Brasil. [cited 2024 Jul 30]. Available from: <https://brasil.un.org/pt-br/sdgs/10>

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