

Introduction

Studies with waste pickers have identified several issues that affect the health and well-being of workers in waste picking warehouses and sorting processes. This results from exposure to dangerous materials, insalubrious workplace conditions, propensity for accidents, muscular pain caused by repetitive movements and even problems related to interpersonal relations and organizational processes. During WIEGO's work with waste picker cooperatives in the Informal Economy Monitoring Study and the Gender and Waste Project, waste pickers expressed similar concerns. This report presents a summary of the findings from the Cuidar Project, which is a joint initiative of WIEGO's Social Protection Programme, Urban Policies Programme and Redesol, a second-level network of waste picker cooperatives in Belo Horizonte, Minas Gerais.

The Cuidar Project aimed to collect information on health risks waste pickers face. It also sought to understand workers' coping strategies and access to public health services. The project collected information to present such concerns in cooperatives and associations, along with recommendations for improving working conditions. **The health risk mapping considered how workplace environments, infrastructure and organizational processes affect workers' physical health and emotional well-being of workers.** The term "workers' health" signals the adoption of a comprehensive approach to health, which incorporates multiple dimensions of the workplace and work processes.

The project took place in five cooperatives belonging to Redesol: Comarp (Belo Horizonte, Minas Gerais), Associrecicle (Belo Horizonte, Minas Gerais), Ascar (Raposos, Minas Gerais), Coopersoli (Belo Horizonte Minas Gerais) and Unicicla (Nova União, Minas Gerais). These cooperatives were chosen based on their different work environments and infrastructure.



Waste Pickers report concerns regarding their health during the Cuidar Project. Photo: B. Greco.



Group Conversation at Associrecicle. Photo: B. Greco.



Focus Group and co-production of knowledge at Unicicla. Photo: S. Dias .

The exploratory health risk mapping involved technical visits to the cooperatives, group conversations (GC), participatory focus groups (FG), surveys, and interviews with leaders from September 2017 through December 2017. The findings cannot be generalizable for all of Redesol or other cooperatives in Minas Gerais, Brazil, but they provide important insights into what collective habits, processes and policies can improve working conditions and minimize certain health risks for waste pickers.

General Perceptions on Health and Well-Being

Waste pickers emphasized the importance of physical health, emotional well-being and a healthy work environment as essential factors in their lives. These elements point to the need for a broader conception of health, which is exemplified in the statement of a sorter: “Health for me is living a life with dignity, it’s not worrying about misery, when a person doesn’t know where s/he will make money, it gets difficult, when a person doesn’t know where to get money to pay for basic needs”, (GC 1). Other workers noted that having good health includes: “Healthy meals, exercising on a daily basis” (GC 1), “going to the doctor for check-ups” (GC 1), “understanding your own limits” (GC 3), “happiness” (GC 3), “good food” (GC3), “liking oneself” (GC 4), “sleeping well” (GC 4).

Several activities during the health risk mapping revealed waste pickers’ concerns with their emotional well-being. **Some of the main factors that cause emotional stress for workers include: low earnings, difficult interpersonal relations with co-workers, lack of materials, and lack of recognition from co-workers and society.** For waste pickers, this type of stress negatively impacts their productivity and produces a sense of “constant exhaustion” (FG 1).

Leaders also expressed similar concerns. The lack of resources, time and information to help the waste pickers was highlighted as additional factors that cause stress for leaders. Table 1 presents the various responsibilities leaders undertake.

Often times, these responsibilities are not visible by all members of cooperatives and associations. In addition, there is a perception that administrative work is physically less demanding. A waste picker who has worked in the administration of a cooperative observed: “In my case, I worked in administration. People thought this was easy, easy in the physical sense, but it is demanding in terms of what we need to remember. It is really demanding, I leave work with my many thoughts and I only stop thinking when I go to sleep. I go home thinking about all the problems. It is a mentally tiring and stressful job [...]. We need to turn off, have vacation, but since we don’t have paid vacation, we just keep postponing it” (GC 7). As a result, the consequences of these concerns are wide ranging. For many leaders, insomnia is common, as is the sense of responsibility for making things run smoothly in the cooperative. In general, leaders expressed a degree of suffering for all the problems they cannot solve. As Leader C recounted: “I would lose a night of sleep because I thought I had to find a solution for things. Then I realized I was ignoring people’s capacities. And I was suffering a lot. I wouldn’t sleep, I was always worried and tired! Tired, you know? It was a very heavy burden on me”.

While leaders recognized how the stress affects their health, they also reported how helping the cooperative was fulfilling both personally and professionally.

Table 2. Waste Picker Leader Responsibilities

Administrative tasks

- Solving technical problems at the cooperative
- Negotiations with municipal government
- Planning production processes
- Organizing cooperative members' payment
- Working on all accounting issues
- Financial monitoring of cooperative bank account
- Promoting meetings with cooperative members
- Controlling materials in stock
- Registry of sales
- Overseeing invoices
- Working on reports with partners

Interpersonal Relations

- Promoting meetings with group
- Clarifying members' doubts
- Handling conflicts among workers
- Listening and caring for difficulties faced by members
- Dealing with complaints and criticism from the community and large generators of materials
- Dealing with conflicts in the network

Institutional Representation

- Representation in meetings, forums and events
- Organizing events
- Promoting meetings to strengthen claims-making
- Receiving visitors at cooperatives
- Elaborating and monitoring projects

Participation in Other Social Movements

- Participation in social movements
- Building links among movements

Source: Interviews with leaders (2017)

Impacts of work routine, work space and handling of materials

I. Impacts of Strenuous Work Routine on Body

Of the 48 waste pickers interviewed, 47% (36 respondents) work nine to twelve hour day shifts, while another 31.25% (15 respondents) work more than twelve hours. In addition, 33.3% (16 respondents) of those interviewed claim they carry out three or more activities in the cooperative.

Group conversations and focus groups revealed how **work processes and routines affect workers with musculo-skeletal pains. These result from poor postures, having to carry and/or drag heavy materials in tight and/**

or often disorganized work spaces, poorly designed or improvised work stations and repetitive movements.

In addition to the above stated problems, findings from the mapping also revealed concerns with: **headaches, respiratory problems, hypertension, gastrointestinal problems and joint pain/disease.**

Based on discussions in the focus groups, findings show that **workers feel the most pain in the lower back pain and leg pains.** Body pain maps used in the survey reinforce these findings.

For men waste pickers, lower back pain is the area with most responses as reflected by the red area in Figure 1, followed by back, leg and arm pains as reflected by the orange areas. For women, upper back pain,



Fabiana Ovído discusses the importance of eating healthier meals and going for regular check-ups as ways of taking better care of one's health. Photo Credit: B. Greco



Anderson Viana emphasizes the need for support from the municipality to improve work conditions and the quality of selective waste collection. Photo Credit: B. Greco

upper leg pain, lower back pain and calves were the areas with most responses as reflected by the red spots on the map. Other areas of pain for women waste pickers include neck pain, arm pain, and hand pain as reflected by the orange areas.

As a result of these problems, **waste pickers said they:**

- **Felt more pain during and particularly after work;**
- **Had frequent leg cramps;**
- **Had problems to bend at work or carry out certain movements;**
- **Felt exhausted;**
- **Had sleeping problems.**

II. Impacts of Work Space, Operational Infrastructure and/or Equipment

Of the five cooperatives, four discussed the problems with the current operational infrastructure for sorting and management of waste materials. **The main problem noted by workers is that when materials arrive at the warehouses or open areas for sorting, they are dumped on the floor, requiring strenuous efforts and repetitive movements.**

In many cooperatives, sorting spaces are still improvised, which can intensify the ergonomic problems related to this activity. Some of these improvisations, for example, can increase the work load of sorters who have to carry heavy bags to and from the specific sorting and baling areas. Other cooperatives also do not have support equipment for sorting

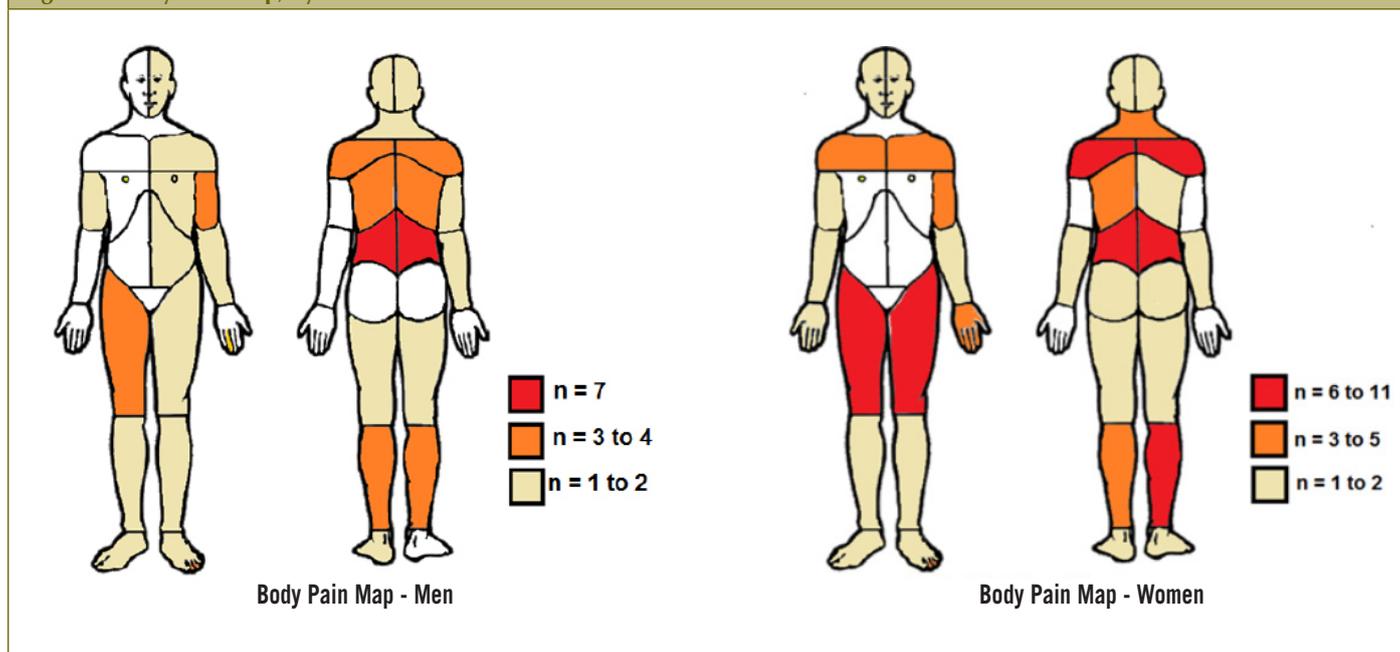
materials. In addition, waste pickers noted that there is additional dust in the air when materials get dropped onto sorting tables or sorting belts and when materials are moved or brushed aside to make room for more materials at the warehouse. As a result, waste pickers mentioned a greater tendency for allergies, as well as eye irritations (group conversations and focus groups).

Smaller work spaces, with less lighting and ventilation, also impact the work routine in a negative manner as waste pickers have to continuously drag heavy bags of materials back and forth.

The implementation of sorting belts is seen as an important development to assist workers both in terms of productivity and in diminishing health risks. Nevertheless, waste pickers emphasized how working on the sorting belt demands great attention and agility of sorters. In addition, waste pickers claimed there is a need to adapt the design of sorting belts to the realities and needs of waste picker cooperatives.

The lack of proper storing and sorting facilities also exposes waste pickers to severe weather conditions, such as rain, wind and the sun. These, in turn, not only affect the work process, but also waste pickers' health. *"When it rains we all get wet and everything inside, especially when it rains and is windy. A lot of sun is also bad"* (FG 1). As a result of working in such conditions, workers claimed they catch colds frequently. A waste picker stated: *"I have had a cold for more than 20 days because of all this dust"* (FG 1).

Figure 1. Body Pain Map, by Gender



Source: Survey data (2017) (n=48)

Table 2. Main Health Hazards at Waste Picker Cooperatives

Health Hazard	Example given by waste picker
Chemical	Residues in packaging such as toxic cleaning products containers, printer ink/toner.
Biological	Bacteria in packaging, food scraps mixed with recyclable materials, infections due to disease vectors such as pigeons, rats, insects, etc.
Physical	Lack of ventilation, irregular floor surfaces or damaged floor pavements, lack of roof cover or damaged roof and water leaks.
Accidents	Accidents during the collection in the street (car accidents), accidents in the cooperative, such as cuts due to sharp instruments, hospital waste, glass, metal and others.
Ergonomic	Inadequate posture due to lack of correct infrastructure in the collection, separation and processing of recyclable materials.
Emotional vulnerabilities	Social stigma, stress, depression, anxiety, power imbalances, dependencies (drugs, alcohol), violence in communities.
Gender-based vulnerabilities	Violence at the workplace and home, double/triple workloads.

Source: Adapted from Gutberlet et al. (2013)¹ Focus groups, group conversations, interviews with leaders, interviews with waste pickers (2017).

In general, **all of the cooperatives discussed the need to make improvements to their common spaces.** Areas that need most improvement include:

- Common spaces, particularly kitchens;
- Bathrooms (with more lighting, waste baskets, doors on stalls);
- Roof leaks to avoid damages to materials and equipments during heavy rains.

In several group conversations and focus groups, **waste pickers also mentioned the need for being more attentive to the organization of their work space. Part of this includes adopting good hygienic practices in the common spaces.**

III. Impacts of Handling Hazardous Materials

A central aspect of the health risk mapping was to understand how the handling of specific materials can negatively impact waste pickers' health. As Table 2 shows, there are different health risks in the cooperatives such as: ergonomic, chemical, biological, and physical hazards, accidents, emotional vulnerabilities and gender-based vulnerabilities.

During focus groups, waste pickers identified materials that arrive at cooperatives mixed in with recyclables and what health risks they face as a consequence.

¹ Gutberlet, Jutta, et. Al. 2013. "Participatory research revealing the work and occupational health hazards of cooperative recyclers in Brazil". *International journal of environmental research and public health*. 10.10, pp. 4607-4627.



Waste pickers from Comarp explain how they have adapted to working with a sorting belt and what improvements they have observed in the cooperative. Photo Credit: A. Ogando



Waste pickers at Associrecicle describe how they sort specific materials and which ones lead to more thirst and fatigue at the end of the day. Photo Credit: F. Goulart

Table 3. Waste Picker Perceptions of Handling Waste and Health Risks

Materials		Health Risks Posed to Waste Pickers
Organic Materials (dirty toilet paper, diapers, feces, rotten food/fruit, dead animals)	⇒	Contamination Disease Odors Disgust/Nausea/Lack of Appetite
Syringes/Needles (hospital waste, household waste)	⇒	Contamination Disease
Glass	⇒	Dengue Accidents Disease Heavy Weight
Tires	⇒	Dengue

Source: Focus Groups (2017)

Across all five focus groups, waste pickers listed several common materials as highlighted in Table 3.

The focus group discussions also revealed that most waste pickers were aware of some degree of risk materials posed through contamination, but were not always able to specify the health problems that can arise from being exposed to these risks. Some of the more frequent accidents discussed by waste pickers include: cuts, falls, and having more body pains. In some cases, waste pickers mentioned accidents with equipment as well.

Despite the fact that waste pickers have attempted to minimize risks associated with their daily routines, a common sentiment in all focus groups was the need for the community to provide greater support to cooperatives by learning to differentiate between waste and recyclable materials. **Hence, sensitizing the community and local governments on proper waste segregation particularly at the household level could reduce the amount of contaminated waste sent to cooperatives.**

Waste pickers also discussed many reasons for using or not using protective equipment. Even when waste pickers use protective gear, it became clear that **the gear they have available is not always adequate, comfortable or durable.** Much of this gear is not tailored for the specific activities waste pickers carry out. Waste pickers gave the example of gloves that are not tactical or resistant enough for the handling and sorting of waste.

Of the 48 waste pickers interviewed in the survey, 75% stated they use gloves frequently and 85.4% claimed they used boots frequently. The sporadic use of protective gear can be attributed to the diversity of materials waste pickers handle. Several waste pickers also mentioned that a lack of resources has limited the leaders' and/or cooperatives' capacities to purchase new protective gear.



Without adequate sorting infrastructure, materials are scattered and their recycling quality is compromised. Photo Credit: A. Ogando



Waste pickers at Ascar describe the daily work routine. Photo Credit: S. Dias

Box 1. Workers' Perceptions on Protective Equipment

Protective Gear	Positive Reaction	Negative Reaction
Gloves	"Gloves are essential, we need to change them every 15 days, we need to buy them, but we don't have any money. At the moment I'm most concerned about gloves." (FG 1)	"Gloves are bad, I only use them when I have to work with glass." (FG 4)
Masks	"We need masks, too, this dust causes colds." (FG 1)	"Not masks, I hate masks, they are terrible, they suffocate us." (FG 1)
Protective Glasses	"Protective glasses, too. I'm afraid of losing my eyesight." (FG 2)	-----
Boots/ Footwear	"One of these days I found orthopedic shoes here. It's what helped me when I got home... These boots are hard and very heavy. The orthopedic shoes were soft. We need one of those and compression socks." (FG 2)	"Boots are very heavy, especially for women." (FG 3)

Source: Focus Groups (2017)

Table 4. Use and Frequency of Protective Gear

Use of Gear	Frequently Uses		Sometimes Uses		Never Uses	
	n	%	n	%	n	%
Gloves	36	75.0	9	18.8	3	6.3
Boots	41	85.4	2	4.2	5	10.4
Uniform	45	93.8	0	0.0	3	6.3
Hat/Cap	14	29.2	1	2.1	33	68.8
Mask	1	2.1	8	16.7	39	81.3
Apron	9	18.8	2	4.2	37	77.1
Sun Screen	1	2.1	6	12.5	41	85.4
Protective Glasses	0	0.0	7	14.6	41	85.4
Hearing Protection	1	2.1	3	6.3	44	91.7

Source: Survey data (2017) (n=48)

Waste Pickers' Coping Strategies and Access to Public Health Services

The Cuidar Project was able to explore the different strategies for minimizing some of the risks and body strains the workers experience on a daily basis. Workers are commonly dealing with pain on an individual basis at the workplace or once they arrive home. Over the counter medication alleviates the pain initially, but waste pickers expressed concern over using them on a long term basis. Others mentioned they do stretching exercises individually as a way to take a break from work and minimize their pains. In the cases of smaller accidents, waste pickers tend to ask for help at the cooperative since many have a first aid kit.

The findings reveal three general coping strategies across the cooperatives: self-medicalization to minimize impacts, problem solving measures and acceptance of the problem.



Syringe from hospital or household waste is found during the sorting process. Photo Credit: B. Greco



Waste picker uses gloves and boots while sorting through bags with glass. Photo Credit: F. Goulart

Table 5. Waste Pickers' Coping Strategies

Strategy		Example
Active Coping	Self Medicalization	Taking over the counter medication
	Seeking Help/ Professional Medicalization	Going to health center for pain injection
	Problem Solving Measures	Taking breaks/Sitting down/resting
		Using orthopedic shoes
		Stretching or doing something to ease the pain once at home
Passive Coping	Acceptance	Doing nothing

Fonte: Focus Groups (2017)

Access to and Quality of Public Health Services

Waste pickers tend to go to community public health centers (*postos de saúde*) more so than the health emergency units (*unidade de pronto atendimento*) or public hospitals for accidents or pains they feel as a result of work. They stressed that they avoid going to the health emergency units or hospitals as much as possible.

The two main reasons for going to the community public health center include the fact that they get free medication and it is free of charge. However, waste pickers also noted problems with the quality of treatment, the long referral periods for additional or specialized exams and the problem with the service hours of the community public health center. With regard to the quality of treatment during appointments, waste pickers mentioned appointments where doctors did not adequately prescribe medication to patients and/or were not attentive to health complaints. In addition,

waste pickers claimed the health center is far from their workplace and by the time they leave the warehouse, it is no longer open. These factors, as well as the fear of negatively impacting workers' productivity and earnings, prevent waste pickers from visiting the community health center. Waste pickers' perceptions on access to and quality of public health services reveal a need for health professionals to consider the knowledge and reality of many of these waste pickers and informal workers, in general.

Reinforcing data from the group conversations and focus groups, **44 of the 48 waste pickers (91.7%) interviewed stated they use public health services** with only two stating they have private health insurance and another two stating they do not go to the doctor. This data points to the fact that the majority of the workers interviewed in the project are using the Brazilian Universal Public Health System (SUS).



For Ivaneide Souza, it is essential for waste pickers to think more about prevention. Photo Credit: B. Greco



Young waste picker likes to share information about health issues with work colleagues to prevent diseases such as diabetes. Photo Credit: B. Greco

General Recommendations for Improving the Work Conditions and Health of Waste Pickers

1. Environmental education and social mobilization campaigns:

There is a need to invest in environmental education at schools, public entities, and businesses regarding inclusive selective waste collection with clear guidelines on the adequate segregation and destination of waste. This is central in diminishing the quantity of non-recyclable and hazardous waste sent to cooperatives and for improving waste pickers' health and working conditions. If municipal governments contract waste pickers cooperatives to carry out mobilization campaigns on recycling, they are effectively contributing to the comprehensive process of recycling. *The direct contact of waste pickers with the community tends to improve the quality of recycling and increases the community's interest in inclusive recycling in the municipalities.*

2. Adequate sorting infrastructure and equipments:

Sorting warehouses need to have adequate ergonomic layouts, including for equipment, decent work conditions, including bathrooms, kitchens, proper lighting and ventilation, and equipments that can facilitate the work processes and diminish the negative impacts on waste pickers' health. University research centers, specializing in areas such as ergonomics and design, along with incubators can be important sources for providing information on how to make such improvements.

3. Workers' Health Capacity-Building Workshops:

Municipal governments and local partners can contribute to and help organize capacity building workshops related to workers' health, safety and security, immunization campaigns, use of protective gear amongst other key priority health issues.

4. Protective Equipment: Protective equipment needs to be adequate and tailored to specific work processes and routines in waste picker cooperatives. This discussion also points to the responsibility and commitment of local municipalities and/or stakeholders, such as supporting business partners, who may be interested in adhering to corporate responsibility measures.

5. Quality of and Access to Public Health Services:

Health professionals need to learn more about the particular socio-economic vulnerabilities and health risks waste pickers face on a daily basis. This can be done through concerted efforts and dialogues between waste pickers and municipal health secretaries. Part of

Table 6. Vaccination History

Which vaccines have you taken?	Tetanus		Yellow Fever		Hepatitis B	
	n	%	n	%	n	%
Yes	37	77.1	34	70.8	35	72.9
No	4	8.3	9	18.8	5	10.4
Don't Know	7	14.6	5	10.4	8	16.7
Total	48	100	48	100	48	100

Source: Survey data (2017) (n=48)

The Cuidar Project sought to initially map waste pickers' vaccination history. With regard to having a vaccination card, 37 of the 48 waste pickers interviewed (77.1%) in the survey stated they had one, while 6 (12.5%) did not have one and 5 (10.4%) could not remember if they had one or not. Table 7 presents waste pickers' recollection of taking three specific vaccines.

These findings are important to help provide feedback to waste pickers who have expressed an interest in having such diagnoses and a greater awareness of the benefits of being vaccinated.

Conclusions

What became evident in the Cuidar Project is that waste pickers' perceive that strong **interpersonal relations within the cooperative, organized work processes, and proper infrastructure and/or equipment as the three most essential factors for establishing a healthier work environment.**

While waste pickers face many of the aforementioned challenges and others, there were many discussions on the importance of belonging to cooperatives. For some waste pickers, joining the cooperatives has improved their physical and emotional health. For others, cooperatives are considered places to strengthen friendships, improve skills and even learn more about health issues.

In general, waste picker cooperatives are a "refuge" and "safe haven" for those seeking to live dignified lives and sustain their livelihoods. As one waste picker emphasized, the cooperative is "*a place that recovers one's soul*" (GC 3).



Popular education tools and participatory methods created a favourable dynamic for engagement during fieldwork. Photo Credit: B. Greco



Participatory research requires constant communication between researchers and waste pickers. Photo Credit: B. Greco

this effort can draw attention to how the quality of and access to public health services can lead to a loss in earnings for those with the weakest link in the recycling value chain. Attentive and patient appointments are also important. The correct destination of hospital and household waste from recyclables is also a key issue for waste pickers' health and well-being. Municipal governments need to guide local health centers, both public and private, and the community on the risks created by the inadequate segregation and destination of waste from these centers.

6. Food Security: Food security is an important component of waste pickers' overall health. Initiatives to support community vegetable and fruit gardens can be one way to contribute to waste pickers' health.

7. Women's Health Issues: Cooperatives can seek to promote group discussions to address particular health issues affecting older women waste pickers, including the concern with non-communicable diseases. This can be an important learning space for younger and older women waste pickers to discuss the life cycle impacts of working at waste cooperatives.

8. Men's Health Issues: Cooperatives can seek to promote the dissemination of health information and concerns regarding men's health.



The Cuidar Project staff visit cooperatives belonging to Redesol. Photo Credit: B. Greco



For waste pickers at Coopersoli, discussing health concerns can lead to changes in waste pickers' daily habits. Photo Credit: B. Greco

COMPONENTS OF A HEALTHY AND DIGNIFIED LIFE



Photo: B. Greco

WIEGO is a global network focused on securing livelihoods for the working poor, especially women, in the informal economy. For more information please visit the WIEGO website where you will find stories and experiences of men and women informal workers from around the world.

For more information on the Cuidar Project, please contact: Redesol (redesolmg@gmail.com, Sonia Dias/WIEGO (sonia.dias@wiego.org) and Ana Carolina Ogando/WIEGO (anacarolina.ogando@wiego.org) or visit our page: <http://www.wiego.org/cuidar-project>

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