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Labor conditions, risk and health of forestry workers in Misiones, Corrientes and Entre Ríos (Argentina), 2010-2014

Condiciones laborales, riesgo y salud de los trabajadores forestales de Misiones, Corrientes y Entre Ríos (Argentina), 2010-2014

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ABSTRACT In the last decades in Argentina, forestry activity has seen an important expansion, promoted by the State through incentives encouraging the implantation of forest species. This article examines the working conditions of a number of forestry workers in the three main timber producing provinces of Argentina (Corrientes, Misiones and Entre Ríos). Using data from the Survey on Employment, Social Protection and Labor Conditions of Salaried Agricultural Workers, information on forest workers of the aforementioned provinces was processed and analyzed (n = 113). In addition, in-depth interviews with workers (n = 30) and forest contractors (n = 8), carried out from 2010-2014, contributed to the explanation of the studied phenomenon as a whole. The results show that more than 50% of workers consider themselves exposed to unfavorable conditions in the physical working environment, with 16% having had a work accident in the last year. The high precariousness of this type of employment, in conjunction with the forms of contracting (outsourcing), makes it difficult to identify actions to be taken to reverse the processes analyzed.
KEY WORDS Working Conditions; Occupational Health; Forestry; Argentina.

RESUMEN En la Argentina, en las últimas décadas, la actividad forestal ha evidenciado una importante expansión promovida por el Estado a través de incentivos que alentaron la implantación de especies forestales. En este artículo se examinan las condiciones laborales de un número de trabajadores forestales de las tres principales provincias productoras de madera de la Argentina (Corrientes, Misiones y Entre Ríos). Con los datos de la Encuesta sobre Empleo, Protección Social y Condiciones de Trabajo de los Asalariados Agrarios se efectuó un procesamiento y análisis de la información referida a los trabajadores forestales de las provincias mencionadas (n = 113). A su vez, la realización de entrevistas en profundidad a trabajadores (n = 30) y contratistas forestales (n = 8), entre 2010 y 2014, contribuyó a explicar el fenómeno estudiado en su totalidad. Los resultados obtenidos muestran que más del 50% de los trabajadores considera estar expuesto a condiciones desfavorables del medio ambiente físico de trabajo. El 16% ha tenido un accidente laboral en el último año. La alta precariedad de este tipo de empleo, sumada a las formas de contratación (tercerización), dificulta la identificación de acciones a seguir para revertir los procesos analizados.
PALABRAS CLAVES Condiciones de Trabajo; Salud Laboral; Forestación; Argentina.

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INTRODUCTION

Forestry is globally known for being one of the most dangerous activities. The extensive bibliography reveals the poor working conditions workers are exposed to and the consequences on their health. The International Labour Organization (ILO) remarks that forestry activity – along with construction and mining – is one of the most hazardous industries due to the high rate of work-related accidents and fatal incidents at the workplace.[1]

The several tasks demand a great physical effort, as well as a high exposure to adverse physical conditions. On the other hand, workers often live on plantations where camps are set up. Generally, these places are isolated and have poor communication with urban centers, which usually makes it difficult to access health care or immediate assistance when an emergency occurs. Housing facilities, food and drinking water supply are other important issues that contribute to the quality of life of forestry workers during their work hours, although they may not always meet the required conditions. The distribution and the isolation of plantations, which are far away from major population centers, and the high-rate mobility of forestry workers, contribute to their invisibility, as well as the lack of statistics that show the extent of the workforce involved. On the other hand, the intensity of the work tasks involved, the working conditions and the environment where activities are carried out mean that in many timber-producing countries the workforce is mainly male.

Forestry activity in Argentina has undergone an important expansion, promoted by government incentives encouraging the implantation of forest species. The provinces of Misiones, Corrientes and Entre Ríos account for more than 90% of Argentina's timber production, with a planted surface of 932,379 hectares (77.36% of the National total)[2,3] (Table 1). The purpose of timber production is the manufacturing of medium density fibreboard, the production of cellulose, paper, and solid timber.

Table 1. Total forested surface (in hectares) and total production (in tons), by species and province. Argentina, 2013.

Provinces and species	Surface (in hectares)		Production (in tons)	
	n	% of the total country	n	% of the total country
Corrientes				
Conifers	312,369	-	2,337,287	-
Eucalyptus	107,457	-	1,596,522	-
Other	6,160	-	-	-
Provincial total	425,987	35.3	3,933,809	34.5
Entre Ríos				
Conifers	20,174	-	159,325	-
Eucalyptus	106,281	-	1,575,587	-
Salicaceae	26,967	-	10,623	-
Other	577	-	-	-
Provincial total	153,999	12.8	1,745,535	15.3
Misiones				
Conifers	306,592	-	4418,944	-
Eucalyptus	10,557	-	170,666	-
Other	35,243	-	57,756	-
Provincial total	352,392	29.2	4,647,366	40.77
Total of the three provinces	932,379	77.4	10,326,710	90.6
Country total	1,205,317	100.0	11,399,225	100.0

Source: Own elaboration based on surface and production data collected from the Ministry of Livestock, Agriculture and Fisheries, 2014 and 2013.[2,3]

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Timber harvesting is outsourced to service contractors, as is the case with most of the countries where forestry activity is carried out.[4,5,6] The occupations are related to different activities: plantation, weed and pest control, thinning, felling, cutting, loading and transportation of timber. Harvest mechanization is more widespread in the province of Misiones, where big companies have large, planted areas that justify equipment investment, whereas in the other two provinces there are few establishments that have harvesters. It is estimated that, in 2005, 4,391 workers were directly employed in the primary forestry sector of the Mesopotamia region.[7]

Between 2002 and 2004, timber harvesting led the ranking of incidence of occupational accidents and diseases in Argentina (incidence rate of 195/1000 workers), which highlights the conditions and risks of this occupation.[7]

Outsourcing of labor by contractors has provoked higher turnover of workforce, hence hindering their qualifications to a large extent. Most of the time, workers' "know-how" is exclusively acquired through experience, that is, the learning process does not include training at all.[8] This informal approach to learning, to which the use of inappropriate methods for tree cutting and timber harvesting is added, as well as job turnover, could be related to the high rate of labor accidents and the presence of pathologies in the activity.[9]

Another feature of forestry work is the prevalence of piece-rate pay or performance-based pay system, which encourages fast-paced work and self-exploitation of the workforce. The intensity of the work pace produces physical weariness that impacts negatively on the workers' health and, in addition, it conspires against the adoption of the best practices at the workplace, designed to prevent accidents and injuries.[6] Furthermore, this piece-rate pay system which accelerates the work pace, may contribute to the increase in labor accidents.[1]

In this sense, the context in which forestry work is performed, where registered and non-registered work coexist in the organization of the working process and the attention paid to standards and practices of prevention and occupational quality control, involves some complexity. This means that, along with the progress of institutionalization of standards, there are ways of relating with the job as a consequence of the socialization space and the social environment of workers, which although they are not institutionalized, they are still effective for the health of the workforce.

This article discusses the working conditions of forestry workers in the three main timber-producing provinces of Argentina (Corrientes, Misiones and Entre Ríos), on the basis of the analysis of the results of a broader survey conducted among agricultural workers and in-depth interviews with forestry workers and contractors.

The situation of forestry labor is assessed, considering the temporary character of work (as a manifestation of job stability/instability), formal employment (accessibility to social security benefits: retirement payment, health insurance, paid holidays, among others). Similarly, the analysis of working conditions covers safety at the workplace while the worker is carrying out his duties, the use of personal protective equipment, the physical environment in which they operate and the risk factors to which they are exposed (extreme temperatures, noise, vibrations, and chemical pollutants), length of work hours, rest breaks, among others. We also observe the health problems caused by work, self-perceived health status, the occurrence and causes of occupational accidents in the last 12 months and if they have coverage by an occupational risk insurance company (ART in Spanish) [*Aseguradora de riesgos del trabajo*]. Additionally, there is data collection detailing whether employee training by their employers is made available at the workplace on prevention and safety issues, work techniques and tool management.

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Work, health, and risks

The relationship among work, labor risks, disease, and health is a subject that has been discussed from different perspectives. That is why certain studies focus on analyzing the context in which the work is performed and how the working process is organized, as a way of providing the structural framework of occupational health.[10] However, it should be noted that all these dimensions of labor markets are not given once and for all, but are the result of the historical moment, the bargaining power of the parties, and the geographic particularities they belong to; therefore, one of their distinctive specificities is their inherent dynamics.

Similarly, the definition of health has been changing over time, both in medicine itself (somatic-physiological, mental, health), as well as in social conceptions of ideal health (cultural, economic, and political-legal).[11] Initially health was defined as the absence of disease. In the 1960s, the World Health Organization established the concept of ideal health as "[...] a state of complete physical, mental and social well-being," which acknowledged body-mind integration. However, later on, focus was made on factors related to beliefs, values, standards, and knowledge regarding health and disease. Although the term disease is understood as a health condition that affects a person, it is also a social and cultural construct, which can comprise both a family context and a broader institutional and social environment.[11] In this regard, Menéndez remarks that living and working conditions are the emerging sign of social conditioning factors and not a problem exclusive to the medical field.[12]

Especially in the modern world of work, the self-perceived negative impact that work produces in workers' health is analyzed by other authors not only as "real" or "objective" conditions, but also as related to individual factors. Some of these factors may be youth, physical work endurance and long work hours, as well as cultural factors that may influence workers to minimize or even naturalize labor risks to the point of considering them inherent to the task performance.[13] Workers' perception and tendency to take risks throughout their work life are related to their class background, socio-cultural constructions and also to gender-associated attributes.[14]

On the other hand, from different theoretical positions, attempts have been made to construct a general notion of risk and a specific notion of occupational risk, with a focus on more objective (material conditions), more subjective conceptions (linked to cultural issues, values, and beliefs), or on the integration of both. Thus, from the need to carry out risk control, some perspectives focus on the adverse effects produced by certain unsafe behaviors or practices and the inappropriate working environment conditions. Risk assessment, through the statistical record of the probabilities of incidents occurrence or of negative effects on the health of individuals, is often the basis for the one-way cause-effect analysis.

On the contrary, the perception of risk in terms of context, cultural, and class background appears as opposed to an objectivist, and also, rationalist conception.[15] For Douglas, what individuals assume as risk has more to do with the social conceptions of morality and justice that they themselves define, rather than the probabilistic issues of costs and benefits in the acceptance of risk. The familiarity of the context and the socialization system in which a certain social group is inserted lead to the development of a shared sense of subjective immunity, that is to say, the development of tendencies to minimize negative results against risk.[15] The integration of power relations, psychosocial aspects of relationships and socio-cultural belonging of the subjects are noted as indispensable for integration according to sociology of risk.[16]

Currently, economic activities attached to capital-labor relations have stimulated the incorporation and use of preventive equipment that helps to reduce occupational risks within the framework of social work protection. For this, there has been an improvement regarding formal mechanisms – laws and regulations – and international standards of quality implemented by companies. A

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preventive and safety culture has been developed, one that involves as a whole the values and behaviors of society, collectives and organizations engaged in improved working conditions.[17]

In line with the above mentioned, the working conditions and environment are determined by the working process and the socio-economic context in which the different tasks are carried out in relation to the demands, requirements, and limitations of the job. The negative effect of working conditions and environment can be perceived not only in physical-biological dimensions, but also in psychic, mental, and social factors,[18,13] related to the content and organization of work. In this sense, the adverse conditions of workers' health and the risks to which they are exposed as an effect of negative physical-biological and psychosocial factors provoke suffering, occupational diseases and can even be the cause of accidents.

It is acknowledged that performance of a job and the conditions in which it is performed are directly and continuously linked to the health of individuals. In the different occupations, companies and organizations of the working process establish various forms of relationships with respect to production, generating behaviors, habits, and values that involve, among other things, prevention. Thus, it can be said that the socio-professional identity of a group is built up within a work culture, in which the risk can be considered as an identity resource and that culture also contributes to the construction of the idea of health that workers have.[19]

Therefore, this article seeks to analyze, in the context of forestry production, how the implementation of working conditions between the world of work and the business world is constructed, and the current specific incidence, considering this process mutually conditioned by values, logic, and strategies that strengthen and also hinder the generalization of these practices.

MATERIALS AND METHODS

The data source used for the quantitative analysis is the Survey on Employment, Social Protection and Labor Conditions of Salaried Agricultural Workers, conducted by the Ministry of Labour, Employment and Social Security, along with the National Registry of Agricultural Workers and Employers and the Superintendency of Labor Risk, whose details were published in 2016.[20] This survey was conducted in 10 provinces of Argentina, during 2013 and 2014, in rural households (dispersed and concentrated) and urban households of up to 25,000 inhabitants, with at least one salaried agricultural worker among their family members, during the last 12 months. The design of the households' sample was based on the selection of 80 census segments (rural and urban, of the above-specified size), in accordance with the 2010 National Census of Population and Housing. In each segment, five households with agricultural workers were randomly selected to be surveyed, and 400 surveys were conducted per province. The sections and dimensions of the Survey questionnaire can be observed in Table 2.

For the purposes of this article, the information was collected in the provinces of Misiones, Corrientes and Entre Ríos, being the largest forestry producers. Out of the total agricultural workers who participated in the survey, this research study focused on the salaried workers who stated that they had been engaged in forestry activities in the last 12 months (n = 113 workers).

Moreover, this research study was complemented with the analysis of in-depth interviews with forestry workers (n = 30) and service contractors (n = 8), both employed by companies of different sizes and technological levels, during the period 2010-2014. Several key informants, such as companies and trade union workers, professionals from the National Institute of Agricultural Technology,

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Table 2. Sections and dimensions of the Survey on Employment, Social Protection and Labor Conditions of Salaried Agricultural Workers.

Sections	Dimensions
BASIC HOUSEHOLD INFORMATION	Family members Age Sex Level of schooling
LABOR INFORMATION	Activity condition of > 14 years old Type of job *AGRICULTURAL WORK CYCLE OF SALARIED WORKER (MONTH-TO-MONTH BASED ON THE REFERENCE YEAR)* Occupation Task Period worked Agricultural product involved Type of job (permanent or temporary) Social benefits obtained Type of employment contract Migrants or non-migrants
INFORMATION OF LABOR CONDITIONS OF SALARIED AGRICULTURAL WORKERS	Environmental conditions Exposure to extreme temperatures, loud noises, and vibrations Exposure to chemicals Length of work hours Rest breaks during work hours Number of weekly rest days Personal protective equipment necessary to carry out tasks, personal protective equipment provided by the company and use of equipment Water supply Occupational risk insurance *TRAINING* Activities carried out by company *LABOR ACCIDENTS* Labor accidents and death of coworkers Worker accidents (cause, type of injury, assistance of occupational risk insurance company, presence of a permanent injury or disability) *VIOLENCE AT THE WORKPLACE* Threat, pressure or harassment situations
HEALTH AND OCCUPATION	Perception of health status Work-related ailment or pain Type of ailment Occupational diseases diagnosed by a physician
HOUSING FOR MIGRANT WORKERS	Type of housing Number of people accommodated Toilet facilities provided Water supply available for personal consumption

Source: Own elaboration based on the Survey.[20]

and intermediaries, were interviewed in order to identify and contact workers and contractors. The fieldwork was carried out in forest camps located in the town of Ubajay, San José and in the suburbs of the city of Concordia (Entre Ríos) as well as in the workers' housing accommodations (Eldorado and Mado-Colonia Delicia, province of Misiones). The interviews took approximately two hours. The information was recorded in digital format and Atlas.ti. Software was used to process and analyze the data. The main dimensions used were sociodemographic characteristics, type of worker, work experience,

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migration, task, forms of intermediation, labor conditions, and living conditions. This article cites testimonies of four workers and three contractors, out of the 38 interviews carried out.

This study complies with the ethical criteria established by the National Scientific and Technical Research Council (CONICET) for Social Sciences and Humanities, Resolution number 2857 of the Ministry of Education, Science and Technology. The interviewed workers participated voluntarily, after having been informed about the confidentiality and anonymity, as well as the objectives of the investigation. Personal data was protected by identification with correlative numbers.

RESULTS

Labor characteristics

Temporary employment involved 52% of workers, with an average employment period of 6 months per year. Workers who were employed the whole year (permanent) were mainly older (40 years old) than temporary workers (34 years old), presenting a standard deviation of 11.31. Among temporary workers there were cases of young people under 16.

Temporary employment is one of the main aspects of job precariousness of forestry workers, since they will not have job stability and will encounter periods of unemployment. In addition, informal employment is more common among temporary workers: informal employment represents that workers will lack social benefits (retirement payment, health insurance, holidays, paid sick leave, among others). This issue affected 63% of temporary workers, while 44% of workers who were employed for 12 months were informal workers. As it can be observed, the annual continuation of employment does not necessarily result in the total formalization of the workforce, given that a significant part of them cannot access social rights. Occupational risk insurance companies only covered half of workers, 55% of which were permanent workers.

Similarly, another feature of these subjects is the low level of schooling: more than a half did not complete the minimum level of formal education (7.1% without formal education, 44.2% with incomplete primary school); only 3 out of 10 completed primary school (30.1%) and, among 1 and 2 out of 10, attended secondary school but did not complete it; only 3.6% completed secondary school.

Risks due to the conditions in the physical environment at the workplace

The exposure to adverse natural, technical, and organizational factors at the working environment are also a risk to the health of forestry workers.[21] Unfavorable weather conditions (wind, rain, and extreme temperatures) constitute a risk factor as workers might fall if the ground is muddy, they might get injured by falling branches on windy days, or they might be affected by dehydration while carrying out their job at high temperatures.

The survey shows that the factor considered most adverse by the workers is the high temperatures, which prevail in the area under study. The 90% of the interviewed workers declared to have been exposed to intense heat days.

The survey reveals that 50% of workers were exposed to vibrations, 40% to excess noise levels (20.5% had to speak out loud; 8% could only communicate by screaming; and 11.5% could not communicate), and 49% to chemicals. Hearing loss, back and muscle pains, and the syndrome known as "vibration white finger" are some of the typical occupational diseases that affect chainsaw operators; for this reason, it is essential to use safety equipment, to take breaks during the work hours, to adopt a good posture during tree felling, among others. In addition, respiratory and allergy problems are common among those who must apply chemicals to the plantations:

> *In Entre Ríos, I would work fumigating during the night, because of the wind. But I had to quit because I got sick. The*

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poison made me feel sick, it gave me tachycardia. They gave me a whole set of safety apparel, boots, but it wouldn't protect us entirely. I could not breathe; it was as if I hadn't enough air. Even with the protective equipment, the poison made me feel sick. It suffocates me. I think it should be prohibited to spray poison; it makes me sick all the same. I used to fumigate when I was a child, I was 16-17 years old and we didn't use any kind of protective equipment, nothing at all, we just fumigated bushes with nothing more than a hose! (Worker 1, from the province of Misiones, 32 years old. Interviewed at his home in Mado, Misiones).

Working conditions

The average workday was 9 hours. Concerning recess or breaks at work, 60% of the workers took them according to their own needs, 30% took them as established by the employer, and 9% did not take any break throughout the day. Regarding weekdays off, 10% of the workers did not have any day off available, 36% had only one day off, and 54% had more than one day off.

On the other hand, 44% of the workers were not provided with water while carrying out their duties, and the workers themselves had to take care of collecting their water supply. The distance they had to cover within the plantation, among the different workstations, made access to drinking water notably difficult, especially on hot days, when the workers themselves had to carry the water that they were going to consume during the workday.

Safety: Personal protective equipment

In this survey, workers were asked about which personal protective equipment they considered necessary to perform the forestry activities (including tree uprooting and felling, spraying, and loading). It was differentiated, based on these answers, which pieces of equipment were provided by the employer, and also which ones the employers actually used (Table 3).

In general, around 6 out of 10 of all the personal protective equipment elements re-

Table 3. Percentage of personal protective equipment claimed as necessary by workers, provided by the employer, and actually used by workers (n=113). Provinces of Misiones, Corrientes and Entre Ríos (Argentina), 2014.

Personal Protective Equipment	Necessary	Provided by employer	Actually used
Gloves (cut-resistant or latex for the application of agrochemicals)	65.5	66.2	79.7
Boots/safety shoes	46.8	66.0	86.8
Hard hat	38.9	65.9	72.7
Rubber boots	38.9	63.6	86.4
Goggles (safety eyewear)	33.6	65.8	65.8
Mascarilla (protección de sustancias químicas, polvillo)	30.1	55.9	64.7
Waterproof suit	23.9	63.0	77.8
Back brace	22.1	60.0	76.0

Source: Own elaboration based on the data collected from the Survey on Employment, Social Protection and Labor Conditions of Salaried Agricultural Workers.[20]

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garded as necessary were provided by the employer. Meanwhile, workers used protection in a higher proportion as compared to the proportion supplied by the employer (10 to 20 relative points higher). The surveyed participants did not mention wearing specific work apparel such as cut-resistant pants or brightly colored clothes that enable high visibility.

On the other hand, the in-depth analysis of the interviews revealed that all the required clothes (hard hat, steel toe boots, gloves, hearing protectors, face shield, and cut-resistant pants) were only worn by workers of big forestry companies or by contractors who worked for them and for large lumber mills. Smaller contractors only wore a hard hat frequently if they were covered by an occupational risk insurance company. It should be noted that the testimonies of the contractors, as well as those of the workers, evidenced that the workers were reluctant to follow safety measures. Reluctance to wear personal protective equipment is owed to some feeling of discomfort, so it is of utmost importance that workers be aware of the risks involved in their tasks. Training of workers and contractors on wearing protective equipment is crucial to increase awareness of the potential risks they face; for workers, so that they add safety habits to their routine, and for the contractors, so that they actually provide the equipment. Training on safety standards by the employer, as well as supervision at the workplace, is an integral part that will help workers consolidate the habit of incorporating personal protective equipment and become familiarized with it, by increasing awareness of the specific risks involved in the tasks assigned.

> *The hard hat, for instance, was an element that my staff was not used to wear. We incorporated it, and now everybody wears it. The first thing they do when getting to work is putting on the hard hat. In the past, I had to say twice a day 'please, wear it. You can't work without the hard hat on.' There have even been some arguments with the staff. We've even had to say, 'either you put the hard hat on, or you leave.' And they got used to it. Some days ago, one of them forgot to bring it and he went to the manager and said, 'I can't work because I don't have the hard hat.' They are actually aware, but it takes us a lot of time.* (Contractor 1, from Entre Ríos, 45 years old, 15 years seniority as a forestry contractor. Interviewed at a camp near Ubajay).

> *One sometimes says 'I'm not wearing the hard hat…' but we are crazy! If you are not a formal worker, they don't give you a thing. No hard hat, boots, protection, nothing. If you have an accident, who will pay you? If a piece of wood kills you, how will your family survive? If you are a formal worker, then your family will have money to survive. Most accidents occur in this kind of job.* (Worker 2, from Paraguay, 29 years old. Interviewed at his home in Mado).

> *We wear steel toe boots, and if you get hit with an axe, you just stagger. In the past, we used to wear sneakers because they're fresher and we would always end up hurt. It's been like six years since we started wearing these shoes.* (Worker 3 from Misiones, Bernardo de Irigoyen, 35 years old. Interviewed at a camp near the city of Concordia).

Training of the workforce

Learning while performing the job is typical for this workforce, which also shows a low education level. This situation is evidenced when observing that only 31% of the workers declared having received a training course at the companies where they worked. Workers declared that 24% of the training was on Safety and Health standards; 20% on specific job technical training; 17% on first aids; 16% on fire management; 10% on how to use machinery and tools; and the remaining 13% on other subjects.

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A matter that arises from the interviews carried out to workers is the positive feedback about learning the job among family members and peers from an early age, and also to have been socialized in a geographical environment where forestry prevails. The notion of aptitude to perform jobs involving heavy weight, knowledge about the activity, and the high productivity performance are deeply internalized among the interviewed workers. Therefore, they underestimate the necessity of receiving training courses.

Other risk factors

The risks to which forestry workers are exposed are not limited to the working environment or the lack of safety measures for personal protection, but also to psychosocial matters of the working environment related to the content and the organization process of the job. These risks impact the cognitive and psychic aspects of the worker. The suffering caused by the risks involved may impact on the health of workers, produce somatization, and increase the possibility of suffering injuries, accidents, or diseases owed to stress.[13]

From the information collected in the Survey, it is deducted that the predominant pressures that forestry workers suffer are caused by employers: 12% of workers stated that they have been demeaned at a personal and professional level, and also suffered verbal abuse; 12% had to put up with pressure or abuse by their employers; 10% was threatened with dismissal; and 9% received restrictions to communicate with their peers.

Occupational accidents

During the last year, 17% of the surveyed workers reported having had an accident while performing their job. These incidents were mainly caused by the manipulation of sharp or cutting elements (53%), falling of objects (branches, tools, or other materials, 26%), falls in the workplace (21%), or effort caused by manual manipulation of heavy loads (16%). These causes of accidents were also presented as the most frequent by other studies carried out in Argentina and other countries.[22,23]

Additionally, 25% of the workers reported that some of their peers had had an accident during task performance (over the last 12 months), with 4% resulting in death:

> *Most of the accidents happen because the worker's not paying attention, or for having their mind somewhere else, such as their family, or maybe another problem. Accidents may happen for several reasons, because many of us actually do the job… we're not all the same. I, on the contrary, when my shift starts, focus on the job, I leave problems behind. I must be focused on the job to not get injured. I must take care of myself because our job is very dangerous. Everybody knows it's dangerous, but as I said, our minds are all different. Many have family problems, several problems, and so they think about that and, all of a sudden, they get injured. It can happen. Or you may have a job you have to finish, and you have to do it… that can lead to accidents. We work long hours, really long hours. Because there are some places where you need to work long hours to make a difference in the money, isn't that right?* (Worker 4, from Misiones, 55 years old. Interviewed at his home, in a neighbourhood from Eldorado).

Work accidents are associated with the use of some specific tools. The most used were chainsaw (40%), bush machete (32%), axe (13%), backpack sprayer (12%), handsaw (6%), and tractor (12%). The chainsaw is the most dangerous of all the tools used at the workplace, and in addition, a chainsaw operator is the one most exposed to an occupational disease. As a preventive measure, it is recommended to take care of the appropriate maintenance of the tools and always use the personal protective equipment. Some of the procedures required to follow in order to avoid risks are: verifying that the chain is in

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good condition (greased, tensed, and sharpened properly), using the personal protective equipment that is essential for such activity, as well as performing the practice correctly (keeping both hands on the chainsaw while cutting, move with the engine turned off, among others).[23]

> *There's been some accidents, yes. Generally, wounds by the chainsaw on the legs, due to the recoil of the machinery. This is owing to the lack of training of the operators or excess of confidence. Here we have two things: employers are repeatedly demanded to do things, but workers are not willing to comply with their obligations, so a manager has to be always reminding them of how to go about it.* (Contractor 2, from Uruguay, 33 years old, with 6 years of seniority as a forestry contractor in the Northeast region of Entre Ríos and South East of Corrientes. Interviewed on a forestry field near Colonia Berduc, Entre Ríos).

Based on the bibliography consulted, we can see how important it is to apply the appropriate methods for tree cutting, which is the most dangerous forestry activity, to reduce the incident rate. The directed felling consists in directing the fell of the tree to open areas, considering the characteristics of the tree, the topography, and the wind direction. Once the tree is cut, the branches or pieces of trees that remain hanging on other plants are the cause of the most dangerous accidents and the highest number of deaths.

During the in-depth interviews carried out to the contractors, some of the testimonies express the necessity of developing good planning and organization for felling, with the aim of avoiding risks. Both workers and contractors mentioned some accidents that occurred due to the presence of branches and plants that were left hanging on others, and then fell and caused accidents to the workers.

One of the contractors highlighted the need of establishing a separation gap between the operation area of two chainsaws, delimited by 3 or 4 *luchas* (assigned lines of trees). The felling process also affects the people who are working around the area, such as the assistant, who is in charge of uprooting, accommodating the logs and barking (in the case of Eucalyptus). The assistant is exposed to falling branches, as well as crush injuries and the possibility of suffering spine disorders, caused by the physical effort involved in lugging and piling of the timber.

Health, occupational diseases, and pathologies

Most of the workers perceived their health status as good (57%), whereas 29% perceived it as regular, 12% as very good, and less than 2% as bad. Out of the total of workers that participated in the survey, nearly 10% declared having had an occupational disease diagnosed by a physician during the last 12 months.

Nevertheless, when investigating if they had had any pathologies while performing the job, the percentage highly increased: 60% reported experiencing fatigue and lack of energy, 46% headache, and around 15% sleep and eye disorders, and dizziness (Table 4).

Table 4. Pathologies or symptoms of diseases suffered during the job by forestry workers (n=113). Provinces of Misiones, Corrientes and Entre Ríos, (Argentina), 2014.

Pathology or symptoms	%
Fatigue or lack of energy	60.2
Headache	46.0
Sleep disorders	15.0
Eye disorders	15.9
Dizziness	15.0
Swelling in feet, legs, hands	10.6
Bone disease (arthrosis, arthritis, and so on)	10.6
Irritability and stress	10.6
Hearing loss	9.7
Hypertension	8.8
Cardiological disorders	8.0
Attention difficulties	8.0
Respiratory diseases (asthma, bronchospasms, allergies)	7.1
Skin disorders (hives, itching, irritation, among others)	7.1

Source: Authors' own elaboration based on the data collected from the Survey on Employment, Social Protection and Labor Conditions of Salaried Agricultural Workers.[20]

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DISCUSSION

These findings reveal the similarities with the extensive bibliography on the conditions in which forestry workers perform their job and the risks they face. Given the characteristics and demands of this job (physical demand, high work productivity, and living on isolated camp sites, among others), this workforce is mostly composed of young workers, with low level of schooling, employment difficulties and job insecurity.[24,25,26]

Similarly to the concepts described by other authors about the USA, where Latin American labor force arriving from Mexico and other Central American countries is called upon,[27,28,29] the workforce under analysis presents high territorial mobility. For instance, the ones from Misiones usually work on different plantations in the interior of the province, and they migrate temporally to the wilderness of Corrientes and Entre Ríos.[30] Informal employment and job insecurity of forestry are common features shared all over the world.[5,23,31,32]

Moreover, the results obtained and the issues under analysis in other studies on this subject are much alike, which involve high rates of injuries, occupational diseases and death of the workforce in production regions of Northeast and Southeast of USA.[33,34] The occupational accident rate (17%) is similar to the rate observed in other research papers (16.3%).[35] Both in the Survey and in the interviews, workers declared having cuts and wounds caused by the manipulation of chainsaws, axes, and other tools during the last year. Such as other authors exposed the situation of workers in Brazil, this workforce seems subjected to great physical demand in an effort to achieve higher productivity (piecerate pay), and to psychological pressure in regards to the instability of this kind of job and the high job turnover of the hired staff.[36]

Apart from being a dangerous occupation, forestry activity demands strong physical effort, with exposure to adverse environmental conditions, such as excess noise and vibration. Over the years of hard work, workers experienced physical deterioration caused by the intensity of the duties performed.[37,38] The research work yielded relevant results, including the presence of occupational diseases such as hearing loss owing to noise exposure, muscle pain, and spinal injuries.

Low level of schooling was found to be an adverse indicator for the development of job training activities, especially for the operation of machines. The know-how, obtained basically from experience on the job, and the lack of training and information about the risks result in the repetition of improper practices, which produce a harmful effect on workers' health and their quality of life. Similarly, when workers underestimate the risks, it can be interpreted as a necessity for mitigating the negative experiences, as a defence mechanism and/or as an overestimation of their own ability to manage the risks involved in the working process. The assimilation of risks involved is generally owed to the fact that the workforce perceives the risks as another natural demand of the job. This perception is built on the basis of practices in the workplace that combine the personal experiences and the experiences shared with other work colleagues.[39]

In forestry – as well as in mining and construction – given the fact that it is a job exclusively performed by men, there exists the need to highlight certain features associated with masculinity, such as courage, bravery, absence of fear, and strength to resist adverse circumstances.[40] Therefore, it is necessary to carry out a more thorough analysis that can look into the extent of risk-related issues so that awareness of safe behaviours may be increased in forestry crews.[34] A recurrent topic across studies about working conditions is the incorporation of safety habits and practices on trainings that make workers more aware of the possible risks they face:

> *We get so confident after earning experience on the job that we are not careful. When you are learning the job, you are likely to have less accidents, or maybe more risks, but with more precaution I believe. And then, while you get better*

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> *at the job, just getting more confidence may lead you to an accident.* (Contractor 3, from Entre Ríos, 58 years old, with 35 years of seniority as a forest contractor. Interviewed at a camp near the city of Concordia).

The effective compliance of the safety standards and measures to prevent injuries and accidents is subjected to the will and commitment of the companies regarding management and training of human resources, as well as to the control they have over the contractors in charge of providing workers with the safety items required (personal protective equipment, supervision of the correct use of the equipment at the workplace, supply of drinking water, decent housing, registration of workers, among others). Nevertheless, the role of the State is critical in the definition of public policies destined to regulate forestry work and as a controlling agent of the compliance of the standards required to create decent employment.[31]

CONCLUSION

The combination of a quanti-qualitative methodology based on the Survey on Employment, Social Protection and Labor Conditions of Salaried Agricultural Workers and in-depth interviews, enables a more complex analysis, and enriches the evaluation of the working conditions in the forestry industry. This approach is intended to deal with different aspects of the phenomenon under analysis, by complementing the statistical information with the perspective of the workers themselves.

This study shows the scope of the working process and environmental conditions and psychosocial factors in the forestry sector, and the high impact produced on workers' health, in the development of occupational diseases and occurrence of labor accidents. This is also observed in features which are not work-related but act as a conditioning factor, especially the socioeconomic and cultural differences in a more diverse social stratification.

It is critical to consider some issues related to socialization at an early age in life and working in the forestry industry, as seen in a wide segment of the workforce in Misiones and the culture of forestry workers in general. Both conditions create a specific identity which, many times, may lead to minimize the risks involved or to perform repeated everyday practices with excessive confidence that increase risk exposure.[13,19] In turn, male-related features play an important part to bear in mind in the behaviour of forestry workers and the perception they have of risk.[14,40]

One may think of a certain amount of subjective immunity[15] in the sense that such confidence leads workers to underestimate the risks they face in their daily duties – from the least to the most dangerous – such as leaving branches hanging from other trees while felling. On the other hand, these situations tend to put the blame on the subjects who suffer accidents, both by employers, and surprisingly, by their work colleagues as well.

We observed that the implementation of the standards on safety conditions in the workplace takes time, and the parties in due time compromise to incorporate them. The evident precariousness of hiring conditions, the high turnover in the sector, and the remuneration methods being stuck in piece-rate pay result in a system that hinders the effective access to better working conditions. On the other hand, promoting outsourcing and job turnover among different contractors delay the benefits of the adoption of safety standards by workers. Sometimes, contractors, by decision of the company, are in charge of providing the protective equipment but without telling workers its advantages, which is not beneficial for workers. Another element that should be highlighted is the difficulty that working in an unfavorable environment (high temperatures) represents, which results in the reluctance to incorporate clothing that will probably increase the high temperatures in which the duties are being performed.

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Informal employment, know-how based on experience, and low incidence of training instances represent elements of greater vulnerability and risks against best practices at the workplace.

Although the information provided by the workers regarding safety and prevention does not guarantee the effectiveness of perception of risk, the testimonies of contractors and workers show that once they adapt to the use of protective equipment for some time, they overcome the discomfort they experienced at first. They incorporate the habit, and then the worker himself is the one who demands and requests the provision of the equipment.

Even though the salaried workers declare that there have been improvements in the working conditions during the last years, there still exists a high rate of accidents. Despite the fact that there is increased awareness of the need to use personal protective equipment, it is not massive yet. The provision of the equipment by the employer is lower than the actual use of the equipment by workers. At the same time, long work hours in performing a task which demands full attention tends to favor accident occurrence.

Lastly, it is important that the departments in charge of creating standards which favor proper working conditions can combine the technical developments with how the workforce is organized and structured within a specific industry and working process (working practices and workers' life context). It should be mentioned that some situations of greater exposure to risks respond more to the organizational process of the job (working hours, intensity, repetition of tasks, and so on) than to the lack of preventive measures and the use of personal protective equipment, which does not mean underestimating the risks involved.

In summary, the features that define the concepts of health, risk and diseases are determined by the social and cultural conditions in which they occur. Social environment, inequality in social stratification, and the differences in power, all implicitly included in the process, interact with the construction of the idea of health and occupational risk. On the one hand, the business sector conceives such welfare according to the job position, and on the other hand, workers are subject to social disadvantages (due to migration, poor access to education and health, low salaries, among others) and perceive their employability condition as an opportunity to access a job, at the expense of "naturalizing" the working conditions in which they are expected to operate.

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REFERENCES

1. Organización Internacional del Trabajo. Cuando el trabajo lesiona: rayos X a la seguridad laboral. Trabajo [Internet]. 1997;(21) [cited 1 Aug 2017]. Available from: https://tinyurl.com/d6kxy7e.

2. Ministerio de Agricultura, Ganadería y Pesca, Unidad para el Cambio Rural, Presidencia de la Nación. Argentina: Plantaciones Forestales y Gestión Sostenible, 2014 [cited 26 Dec 2016]. Available from: https://tinyurl.com/ycwk39wf.

3. Subsecretaría de Agricultura, Dirección de Producción Forestal. Sector forestal: año 2012 [Internet]. Buenos Aires: Ministerio de Agricultura, Ganadería y Pesca; 2013 [cited 26 Dec 2016]. Available from: https://tinyurl.com/y7cylsj3.

4. Pinto Leite A. Análise da terceirização na colheita florestal no Brasil. [Teses de Doutorado]. Minas Gerais: Universidade Federal de Viçosa; 2002.

5. Mann G. The state, race and "wage slavery" in the forest sector of the Pacific Northwest United States. The Journal of Peasant Studies. 2001;29(1):61-88.

6. Pucci F, Nión S, Ciapessoni F. Condiciones de trabajo y gestión del riesgo en las empresas forestales uruguayas [Internet]. Montevideo: Universidad de la República Uruguay; 2012 [cited 24 Jul 2017]. Available from: https://tinyurl.com/ycjfxew7.

7. Alberto M, Iñiguez MJI, Marensi P. Prediagnóstico sobre las condiciones y medio ambiente del trabajo en la actividad de la forestación en la Mesopotamia [Internet]. Buenos Aires: Ministerio de Trabajo, Empleo y Seguridad Social; Superintendencia de Riesgos del Trabajo; 2007 [cited 24 Dec 2016]. Available from: https://tinyurl.com/y8syrza7.

8. Bardomás S, Díaz D. Trabajadores migrantes temporarios en la actividad forestal de la provincia de Entre Ríos. In: Benencia R, Pedreño Cánovas A, Quaranta G, (comps.). Mercados de trabajo, instituciones y trayectorias en distintos escenarios migratorios. Buenos Aires: Ciccus; 2014. p. 139-162.

9. Poshen P. Industria forestal [Internet]. In: Poshen P, (dir.). Enciclopedia de Salud y Seguridad del Trabajo. No. 68. Ginebra: Organización Internacional del Trabajo; 1998 [cited 9 Jan 2016]. Available from: https://tinyurl.com/ycrmrx74.

10. Badía Montalvo R. Salud ocupacional y riesgos laborales. Boletín de la Oficina Sanitaria Panamericana. 1985;98(1):20-33.

11. Kornblit AL, Mendes Diz AM. La salud y la enfermedad: aspectos biológicos y sociales. Buenos Aires: Aique; 2000.

12. Menéndez E. El modelo médico y la salud de los trabajadores. Salud Colectiva. 2005;1(1):9-32.

13. Neffa JC. Los riesgos psicosociales en el trabajo: contribución a su estudio. Buenos Aires: CEIL-CONICET, Universidad Nacional del Nordeste, Universidad Nacional de La Plata, Universidad Nacional de Moreno, Universidad Metropolitana para la Educación y el Trabajo, Centro de Innovación para los Trabajadores; 2016.

14. Del Águila A. "El que no se la banca, mejor que se dedique a otra cosa": riesgo, masculinidad y clase social entre trabajadores paraguayos en la industria de la construcción del AMBA. Runa. 2015;36(1):51-72.

15. Douglas M. La aceptabilidad del riesgo según las ciencias sociales. Barcelona: Paidós; 1996.

16. Urteaga E, Eizagirre A. La construcción social del riesgo. EMPIRIA-Revista de Metodología de las Ciencias Sociales. 2013;25:147-170.

17. Cobos Sanchiz D, Pérez Pérez I, Reyes Costales E. La visión sobre los riesgos laborales y la cultura preventiva de los estudiantes universitarios: un estudio exploratorio en la Universidad Pablo de Olavide. Bordón. 2011;63(3):75-90.

18. Neffa JC. ¿Qué son las condiciones y medio ambiente de trabajo?: Propuesta de una nueva perspectiva. Buenos Aires: Área de Estudio e Investigación en Ciencias Sociales del Trabajo, Centro de Estudios e Investigaciones Laborales, CREDAL-CNRS, Humanitas; 1989.

19. Martínez Guirao J. Riesgos laborales en la construcción: un análisis sociocultural. Universitas, Revista de Ciencias Sociales y Humanas de la Universidad Politécnica Salesiana del Ecuador. 2015;(23):65-86.

20. Ministerio de Trabajo, Empleo y Seguridad Social de la Nación; Registro Nacional de Trabajadores y Empleadores Agrarios; Superintendencia de Riesgos del Trabajo. Encuesta sobre Empleo, Protección Social y Condiciones de Trabajo de los Asalariados Agrarios. Buenos Aires: MTEySS, Renatre, SRT; 2016.

21. Belanová K, Vlcková M, Olajec I. Working place conditions impact on work injury occurrence in the timber harvesting process. Human Resources Management & Ergonomics. 2010;4(2):1-12.

SALUD COLECTIVA. 2018;14(4):695-711. doi: 10.18294/sc.2018.1564

22. Superintendencia de Riesgos del Trabajo. Accidentabilidad laboral en sectores específicos de la economía, año 2012 [Internet]. Buenos Aires: Unidad de Estudios Estadísticos, GPIEyCG, Superintendencia de Riesgos del Trabajo; 2014 [cited 26 Jul 2017]. Available from: https://tinyurl.com/yau8zrw6.

23. Ciudad-Valls I. Prevención de riesgos laborales en trabajos forestales. Seguridad y Salud en el Trabajo. 2013;(71):12-19.

24. Peirano C, Bustos Hinostroza M, Nahirñac P. Recursos humanos en el sector forestal: un análisis cuantitativo y cualitativo a partir del programa de certificación de competencias laborales [Internet]. In: XIII Congreso Forestal Mundial; Buenos Aires; 2009 [cited 26 Jul 2017]. Available from: https://tinyurl.com/y7efwm72.

25. Bardomás S. Calidad de vida y condiciones laborales en la actividad forestal en la Argentina. In: Tolón Becerra A, Lastra Bravo X, (eds.). Actas del I Seminario Internacional de Cooperación y Desarrollo en Espacios Rurales Iberoamericanos: sostenibilidad e indicadores. Almería: Universidad de Almería; 2007. p. 461-473.

26. Carámbula Pareja M. Indicadores de sostenibilidad social en los territorios forestales: aportes para la construcción de indicadores de precariedad laboral. In: Tolón Becerra A, Lastra Bravo X, editores. Actas del I Seminario Internacional de Cooperación y Desarrollo en Espacios Rurales Iberoamericanos: sostenibilidad e indicadores. Almería: Universidad de Almería; 2007. p. 475-478.

27. McDaniel J, Casanova V. Pines in lines: tree planting, HsB guest workers, and rural poverty in Alabama. Southern Rural Sociology. 2003;19(1):73-96.

28. Casanova V, McDaniel J. "No sobra y no falta": recruitment networks and guest workers in southeastern U. S. forest industries. Urban Anthropology. 2005;34(1):45-84.

29. Sarathy B, Casanova V. Guest workers or unauthorized immigrants?: the case of forest workers in the United States. Policy Sciences. 2008;41:95-114.

30. Bardomás SM. Trabajadores de aquí y de allá: la migración a dos mercados de trabajo agrícola de la Argentina. Estudios del Trabajo-ASET. 2009;(37-38):55-84.

31. Pignati WA, Machado JMH, Mesquita, J. Riscos e agravos a vida dos trabalhadores das indústrias madeireiras de Mato Grosso. Ciencia & Saúde Coletiva. 2005;10(4):961-973.

32. Estruch E, Rapone C, FAO. La promoción del empleo decente en el sector forestal para mejorar la nutrición y la seguridad alimentaria; documento de antecedentes para la conferencia internacional sobre los bosques para la seguridad alimentaria y nutricional [Internet]. Roma: FAO; 2013 [cited 25 Jul 2017]. Available from: https://tinyurl.com/yamlql8n.

33. Wilmsen C, Bush D, Barton-Antonio D. Working in the shadows: safety and health in forestry services in Southern Oregon. Journal of Forestry. 2015;113(3):315-324.

34. Conway SH, Pompeii LA, Casanova V, Douphrate DI. A qualitative assessment of safe work practices in logging in the Southern United States. American Journal of Industrial Medicine. 2017;60(1):58-68.

35. Canto Lorensi Do J, Machado Cardoso C, Souza De P, Garlet A, Carvalho Armond R, Noce R. Avaliação das condições de segurança do trabalho na colheita e transporte florestal em propiedades rurais fomentadas no Estado do Espírito Santo. Revista Árvore. 2007;31(3):513-520.

36. Pinto Leite A, Soares T, Saraiva Nogueira G, Vignote Peña S. Perfile qualidade de vida de trabalhadores de colheita florestal. Revista Árvore. 2012;36(1):161-168.

37. Blombäck P, Poschen P. ¿Es digno el trabajo del sector forestal?: mejora del trabajo forestal y de los medios de subsistencia que dependen de los bosques. Quebec: XII World Forestry Congress; 2003.

38. Riella A, Mascheroni P. Explorando la calidad del empleo en la forestación. Montevideo: Universidad de la República Uruguay; 2009.

39. Camarena Ojinaga L; Von Glascoe C, Martínez Valdés C, Arellano García E. Riesgos del trabajo y salud: percepción de mujeres indígenas jornaleras en el noroeste de México. Salud Colectiva. 2013; 9(2):247-256.

40. Alberti AV. La fuerza masculina y la fuerza animal: construcciones identitarias en torno a la migración laboral de trabajadores forestales en Argentina. Revista Chilena de Antropología. 2013;(28):29-51.

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