

THE CULTURE OF THE TRADITIONAL PRACTICE OF CARPENTRY SHOPS IN PALMEIRA DOS ÍNDIOS AND ITS INFLUENCE ON WORK SAFETY



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ABSTRACT

In several Brazilian cities, the manufacture of wooden furniture is carried out in carpentry shops, which are part of the traditional and popular Brazilian culture. In this activity, the use of various machines and equipment is constant and offers several physical, chemical, biological and ergonomic risks, the main agents being: noise and vibration of the machines, dust from medium density fiberboard (MDF) and sawn wood, paints and resins, repetitive movements and direct injuries. In Brazil, the accident statistics exceed 500,000 accidents per year, which often result in temporary or permanent disability, in addition to social and psychological consequences. In several studies, the results point to a high accident rate in carpentry shops. Based on this understanding, the objective of this research was to verify the possible influence of culture on the current way of working of carpenters in relation to Occupational Safety and Health (OSH) issues, based on interviews with 14 carpenters from the municipality of Palmeira dos Índios - Alagoas, through the application of a semi-structured questionnaire with closed and open questions. It was found that about 71% of the carpenters learned the traditional practice of carpentry under the age of 18, which means that they were still minors. 100% of them learned through more experienced carpenters, that is, they did not participate in professional courses in the area of expertise and 90% learned from carpenters who did not regularly use Personal Protective Equipment (PPE). It was found that 90% of the carpenters did not regularly use PPE, despite 100% knowing the risks and having already suffered some type of accident, and 65% had already participated in lectures or training with the Brazilian Micro and Small Business Support Service (SEBRAE) during their professional life. In this resistance to the use of PPE, there is a strong tendency to have as a cause the culture of influence of the way they learned the profession, since 80% of the carpenters, in their statements, stated that the non-use of

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personal protection, on a regular basis, is due to the fact that they learned from people who did not use PPE. Thus, it is understood that, even participating in training during their profession, and the awareness of the various risks inherent to OSH, the carpenters chose to disregard the risks and not protect themselves. These results reinforce the thesis that culture, specifically the way of learning, directly influenced the decision making of carpenters not to protect themselves in OSH issues, leading to a certain trivialization of risks, which has as consequences a high rate of accidents.

Keywords: Culture. Work Accident. Joiner. Learning. Narratives.

INTRODUCTION

The production of wooden furniture and utensils is carried out in carpentry shops, by carpenters and assistants, a profession considered one of the most traditional in the manufacturing industry. In artisanal professions such as carpenters, man uses manual skills and creative capacity to transform raw materials into products. This creative capacity is not necessarily linked to the degree of study or qualification, but often comes from a historical learning process. In carpentry, it can be observed that, from the cutting work to the finishing of the wooden pieces, hand tools and some electrical equipment are used that give a better aesthetic presentation to the pieces, symmetrical lines. The use of these is due to characteristics such as: practicality, efficiency, speed. Most carpentry shops have some important characteristics, such as: intense use of non-formal empirical training labor, carried out in micro or small companies managed in a family way. Regarding the area of Occupational Safety and Health Engineering (OSH), some studies show that about 88% of carpenters do not use PPE during the entire working day. For , carpenters work exposed to contact with dangerous machines that emit noise and vibrations, emit wood particles into the environment and can cause various injuries. In some searches, they found that between 66% and 78% of the carpenters have already suffered an accident or acquired an occupational disease. According to the study by , about 80% of the carpenters have already suffered or have witnessed accidents with injuries, in which many were temporarily or permanently disabled for the activity, data compatible with the 88% of accidents in carpenters found in the study by . While, in his study, he demonstrated that 44% of the carpenters had Hearing Loss Induced by High Sound Pressure Levels (PAINPSE). Several studies show numbers on the situation of labor exposure of carpenters, but little is known about cultural factors linked to this situation. Based on these results, some recent research demonstrates the need to deepen the causes of this accident in the furniture production chain in Brazil, including: , . Understanding whether the culture of carpenters influences their decisions regarding Occupational Safety and Health (OSH) is fundamental for an etiological analysis of the factors that lead them not to be concerned with the prevention and consequences of accidents. , points out that traditional knowledge is defined as knowledge and know-how, based on empirical knowledge, produced by traditional peoples and communities, passed on from generation to generation. Thus, this research sought to understand, based on the view of carpenters, introducing interdisciplinarity if the culture of carpenters influences the non-use of Personal Protective Equipment (PPE), as well as

performing activities with little or almost no concern for their health and safety. The search for these results becomes of great importance for the field of Occupational Safety and Health Engineering (OSH). (RIUL, 2011) (BARBOSA; BERTOLI, 2012) (BRAINER, 2018) (SILVA; SOUZA; MINETTI, 2002) (SANTOS; ALMEIDA, 2015) (RIUL, 2011) (SILVA; SOUZA; MINETTI, 2002) (ROBINSON et al., 2015) (MATUCHEVSKI BALZAN et al., 2020; MORAES et al., 2020) (CLARA et al., 2018) (JUCÁ, 2018) (DIEGUES, 2019)

THE CARPENTER AND WORK SAFETY

Woodworking is an activity that has several challenges that can interfere with the production process, one of them is the type of machinery that is often old and without the proper regulatory protections that can affect Occupational Safety and Health (OSH). Woodworking is considered durable consumer goods industries, in which Regulatory Standard 4 (NR-4) that deals with the Specialized Service in Occupational Safety and Medicine (SESMT), based on the National Classification of Economic Activities (CNAE) establishes that activities in carpentry have a risk level of 3 on a scale of 1 to 4, demonstrating the high risk of this activity. According to Santos and Almeida (2015), work in carpentry shops exposes workers to chemical and biological risks due to the wood particles generated by the sanding and cutting of the pieces, also due to the use of solvents, paints, varnishes and glues, in these workplaces the lack of natural ventilation increases the risk to the health of these workers. In the activities carried out on a daily basis in carpentry shops, it is necessary to use machines and tools to make furniture and pieces, which can generate several risks of accidents and diseases for the worker, from typical accidents such as cuts, various injuries, inhalation of dust of vegetable origin and noise. Second, the accident is an undesirable, fortuitous event that causes effective damage to the physical and/or mental integrity of people. According to the Ministry of Social Security (MPS), occupational or occupational disease is characterized as a work accident. For Santos and , between 66% and 78% of carpenters have already suffered an accident or occupational disease. In general, among the occupational risks that can cause environmental discomfort are those resulting from the precarious conditions of a work environment, or from an operational process in various professional activities, one of the main environmental risks in carpentry shops is noise. As the use of tools and equipment is constant in carpentry, for the manufacture of furniture and frames, they end up generating several risks of accidents and

diseases for the worker, from typical accidents such as cuts, various injuries, as well as inhalation of dust of vegetable origin and noise. The carpenter's workshop is his second home, where he spends most of his time, about a third of the day, in this environment he performs the execution of his art, in which the arrangement changes according to the characteristics of its owner and the culture in which it is introduced. The work environment carries with it the knowledge and practices of the experience of carpenters, whether in the arrangement of the machines or in the tools used. The layout of each joinery with the distribution of machines and circulation space is very peculiar to each joiner. In addition to the machines, there is a need for spaces for storing tools, as well as for products such as: varnishes, screws and wood sheets, etc. The carpentry shops surveyed are, for the most part, characterized by the lack of planning for the use of spaces, where tools and machinery are mixed with wood veneers and waste, as well as the environments are mostly impregnated with wood dust. The workshops spread throughout Brazil that develop traditional activities, for the most part, are configured as micro or small companies and, in general, are composed of family members, in which the absence of layout organization is noticeable, as well as a lack of management of the waste generated in the production processes. The risks are enhanced, according to , when people do not show concern about the risks of accidents generated in the workplace. Many believe that accidents are fatalities and that they only happen to others, that the issue of safety is a matter of luck, that accidents will happen to those who have no experience. For , the identification of risks and hazards and the necessary measures to control these risks must take into account factors such as: "human behavior, capabilities and other human factors". These can explain what leads the worker, among them the carpenters, to see safety in a way that is sometimes despicable. Also considered as occupational accidents, occupational diseases are consequences of undue exposure to occupational risks. Some diseases called of occupational origin in Brazil are: Hearing Loss Induced by High Sound Pressure Levels (PAINPSE), Malignant Neoplasms, Polyneuropathies, Keratitis and Keratoconjunctivitis, Diseases of the Respiratory System, Work-Related Mental and Behavioral Disorders, Work-Related Infectious and Parasitic Diseases. Uncontrolled risks lead to work accidents and diseases that leave marks on their victims. In some cases they are difficult to be resolved or solved, leading to possible physical, psychological, social and legal complications. (MONTEIRO, 2021) (COSTA; OLIVEIRA; MARIANO, 2018) (DUARTE, 2002) (BRAZIL, 1991) (SANTOS; ALMEIDA, 2015) (VASCONCELOS et al., 2015) (COSTA;

OLIVEIRA; MARIANO, 2018) (ESCHER, 2018) (SCHUSTER, 2013) (SILVA, 2019)
(POSTIGO et al., 2021) (DIAS, 2001) (ROSSI, 2011)

THE TRADITIONAL CULTURE OF CARPENTRY AND INEQUALITIES

The carpentry shops in the municipality of Palmeira dos Índios are characterized, for the most part, by family management, as micro-enterprises and few employees. For , carpentry shops are characterized by having imminently practical training labor without qualification by courses, do not have an adequate division of tasks in production and with a low level of quality control. Woodworking is considered an art of traditional knowledge of Brazilian culture, which according to traditional knowledge is defined as knowledge and know-how, based on empirical knowledge, produced by traditional peoples and communities, passed on from generation to generation. Cabinetmakers in addition to making wooden furniture designed by architectural professionals, many are dedicated to exercising art and creativity by creating decorative pieces of wood, as well as furniture for clients who do not have a project. Popular culture is linked to economically disadvantaged strata, peasants, artisans and workers, they are layers of the population that, for the most part, did not have access to education. For (JUNIOR; ALMEIDA 2014) (DIEGUES, 2019) (SILVA, 2018) (FERREIRA et al., 2020) , an important factor in traditional culture is the empirical knowledge that uses natural resources as a way of working, acquired through lived experiences and produces the traditional knowledge of a social or labor group. Because it is an activity of the traditional Brazilian culture, in which most workers learn empirically through family members or acquaintances, this culture tends to continue, in which new carpenters continue to perform their art without the proper protection and organization of the work environment, in some cases characterizing a precarious work. Figure 1 shows a machine in inadequate conditions that leads to an inequality in the treatment of working conditions characterized by an exploitation of labor interfering in social individualities, with the precariousness of work as a result.

Figure 1 – Precariousness in the carpentry shop / machine without protection



Source: Author (2021)

For (MOTA, 2013), precariousness at work is a sociocultural condition that characterizes living labor and labor power as a commodity. The precariousness of work leads to the loss of basic human rights. Article 230 of the Universal Declaration of Human Rights makes it clear that: "Everyone has the right to work, to free choice of work, to equitable and satisfactory working conditions". Due to labor relations that focus on production, on small traditional activities, the need for gain for survival makes the focus on producing to have a return to the detriment of legal formalities that guarantee benefits. For , the findings on informality characterize a basic structural problem in Brazilian society, in which traditional activities considered domestic or family, such as carpenters, usually have a precarious technological level and the absence of legal social security and labor coverage. For , the informal market is characteristic in the Brazilian economy, in which in addition to low pay, workers are deprived of the benefits of the Ministry of Social Security (MPS), with no guarantee of financial support in cases of illness and accidents and without paid retirement. Informal work leads to uncertainties, lack of control of work both in the individual and collective dimensions; Poor working conditions, without labor rights and social security benefits, high discrimination, high turnover, exploitation and segregation and finally low wages, little possibility of functional advancement. One of the characteristics of the precariousness of work due to the imposed inequalities is the absence of a labor relationship, a fact linked to the loss of labor and social security rights. (COSTA; OLIVEIRA; MIRANDA, 2010) (TAKAHASHI et al., 2012) (GIONGO; MARTIN; SOBROSA, 2017)

THE PROBLEM OF PRECARIOUSNESS, ACCESS TO INFORMATION AND PUBLIC AGENCIES

The action of public agencies through OSH policies can bring important information and actions on exposure risks, ways to prevent them, adaptation to NRs. In Brazil, some public agencies are essential in OSH issues, they are:

- MTE - Ministry of Labor and Employment; Regulates labor relations in terms of occupational safety and health, and is also responsible for the inspection of working conditions;
- MPS - Ministry of Social Security; It has the function of ensuring its beneficiaries indispensable means of maintenance, due to incapacity, involuntary unemployment, advanced age, length of service, family burdens and imprisonment or death of those on whom they depended economically;
- CEREST - Reference Center for Workers' Health; Provide technical support for the SUS, in the actions of prevention, promotion, diagnosis, treatment, rehabilitation and health surveillance of urban and rural workers;
- JT – Labor Court; responsible for mediation to repair damages arising from labor relations;
- MS - Ministry of Health; Management of the National System for Notification of Occupational Diseases.

One of the mechanisms to reduce inequality at work and precariousness is prevention through inspections and guidance from public agencies related to OSH. In Brazil, the legislation related to OSH is prepared and inspected by the MTE through the CGSST and the SRTb/AL, with the functions, among others, of: planning, supervising, guiding, coordinating and controlling the execution of labor inspection activities in the area of safety and health, through the inspection of environments and working conditions, and there are CERESTs in some municipalities that must develop actions that include the structuring of protocols, of lines of care, the training of network professionals, the registration, analysis and dissemination of information and other instruments that favor the integrality of workers' health actions and social control. The less informed a sector is, the more unequal the treatment in legal issues of Occupational Safety and Health (OSH) and can result in the precariousness of work. The little knowledge about the main Regulatory Standards (NRs) published by the MTE and their applications in working life, leaves workers vulnerable to any treatment and exposure to risks, without even knowing their

rights. This condition can lead to a precarious working condition, which may result in accidents or illnesses. Information has an important function in human daily life, it is part of the range of rights that constitute human rights, internationally recognized by the Universal Declaration of 1984. The receipt and transmission of news/information is extremely important, especially for the most vulnerable. Second, the lack of an efficient information process can compromise basic conditions that sustain democracy, being one of the causes of the lack of knowledge of the judicial system on the part of Brazilian workers, including carpentry workers. It is common for them to be unaware not only of the functioning, but also of the roles and functions of each of the agents of justice. The promotion of access to information through the plurality of sources is evidenced in Article 20 of Law 11652, of April 7, 2008, as well as the need to produce content for educational, cultural, social and informative purposes, reducing misinformation and the distance between the most vulnerable and their rights. (PESSOA, 2020) (SADEK, 2010) (BRAZIL, 2008)

MATERIAL AND METHODS

The methodology of this research was a qualitative, explanatory field research, through the observation of the researcher and 14 interviews with carpenters, excluding carpentry assistants who work in 12 of the 17 small carpentry shops in the municipality of Palmeira dos Índios-Alagoas. The bibliographic research phase was based on articles that dealt with OSH in carpentry, as well as themes related to traditional activities. Searches, readings, diagnoses and interpretations of references related to the theme and available in specialized journals, websites, newspapers, theses and dissertations were carried out to compose the theoretical foundation. The exploratory phase was based on initial visits to the carpentry shops, for personal interactions and to become familiar with the facts and phenomena related to the way of working in the carpentry shops and, consequently, to seek subsidies to verify the relationship between the current work model and its connection with the learning history. The field research was carried out in interviews with the carpenters to collect data that could answer the problems related to OSH in this work group, with the objective of understanding the aspects of the reality experienced in the carpentry shops, using other areas of science, in addition to occupational safety engineering. The field research phase was carried out in interviews with the carpenters to collect data that could answer the problems related to OSH in this work group, with the objective of understanding the aspects of the reality experienced in the carpentry shops, using other areas of science,

in addition to occupational safety engineering. The municipality has 17 carpentry shops that manufacture furniture, which represents about 35% of the total number of carpentry shops registered in the Local Productive Arrangement (APL) of the agreste Alagoano region, according to data from . Carpentry shops that work with wooden frames were disregarded from this study, as the machines and the work method differ from those of furniture factories. From the initial visits, the objects of the study were explained, in which 12 of the 17 owners agreed to participate. The total number of carpenters working in these carpentry shops during the research period was 19, and 14 agreed to participate in the interviews, which represents 73% of the sample. (SEPLAND, 2019)

The inclusion criteria were: carpentry professionals aged 18 years or older who work in the manufacture of furniture and decorative wooden pieces in the municipality of Palmeira dos Índios-Alagoas. Carpentry assistants were excluded, who are not exposed to the same risks as carpenters, as they do not operate machines, in addition to high turnover. The data collection mechanism was based on the application of a semi-structured individual questionnaire partly in closed questions and partly open (recorded). The closed questions were elaborated based on the reading of the literature on the carpentry profession and issues related to Occupational Safety and Health (OSH) with the intention of having an overview. The project was ethically guided by the provisions of Resolution 466 and 510 of the National Health Council with the appropriate individual Informed Consent Form (ICF) to carry out the interviews.

The data collection mechanism was based on the application of a semi-structured individual questionnaire, partly in closed questions and partly open. The closed questions were elaborated based on the reading of the literature on the carpentry profession and issues related to Occupational Safety and Health (OSH) with the intention of having an overview. After a file, the closed questionnaire (Appendix A) was proposed with 7 questions detailed below:

- (1) Do you feel any auditory symptoms? If so, do you use the ear protector assiduously?
- (2) Do you regularly use the Personal Protective Equipment necessary for carpentry?
- (3) Do you know the work-related diseases related to the carpentry profession?
- (4) Do you know where to appeal for your rights in cases of a work accident?
- (5) Are you aware of the legal advantages of contributing to Social Security?

(6) Do you know the work of the Labor Courts?

(7) have you ever received any visit or guidance from the Ministry of Labor and Employment (MTE) or the Reference Centers for Workers' Health (CEREST)?

The open questionnaire was carried out individually through projective interviews with the use of audiovisual resources with identification of the interviewees. After the initial conversations with the carpenters, 3 basic themes were highlighted:

- The strong cultural and emotional connection between the joiner and the teacher was commented on by 90% of the joiners;
- the various risks and dangers of the profession and the protection of the body were commented on by 100% of the carpenters;
- Accidents and mutilations were commented by 100% of the carpenters;

Based on the basic themes, a script with open questions was elaborated consisting of 5 basic questions to guide the interviews: 1- How did the traditional practice of carpentry learn, what age did you learn the profession, with whom did you learn, do you have family members in the profession? 2- How do you consider the risks of the carpentry profession, mainly due to the constant use of machinery and equipment? 3- How do you see the issue of accidents and occupational diseases in carpentry shops? Have you ever had an incident/accident or illness related to work? 4- What is your view on the use of Individual and Collective Protective Equipment? Did the person who taught you frequently use PPE? 5- What is your satisfaction in this profession? Do you want your children to continue in the art of carpentry?

As the small carpenters are part of a specific social group, in order to understand the reality of how they organized and defined their work activities, their daily practices, their behavior in relation to collective and individual protection at work, the interview methodology proposed by , which proposes to give voice to the interviewees, instead of treating them as objects, whose behavior was observed for analysis. The interviews lasted between 30 and 50 minutes and were carried out in places chosen by the carpenters themselves, at times defined by them, without interfering with work activities and in accordance with the availability of day and time. The period of closed interviews was from November to December 2021 and the projective interviews were from March to June 2022. At first, the receptivity in the joineries was mostly very calm, but some about 30%, were a little apprehensive, although curious, because all that was not familiar to them. However, As the conversations unfolded, showing them the objective of the research, there was a

good acceptance, especially when the issue of family historical connection was discussed. During the interviews, some interferences emerged, such as: interruption by clients or family members, as well as changes in the subject that were soon adjusted. (BAUER; GASKELL, 2002)

RESULTS AND DISCUSSION

As for the closed questions, the results will be shown in sequence: The first question aimed to know if the professionals used in their activities to recognize risks other areas of science besides the technical knowledge of the Regulatory Standards (NRs). The result showed that approximately 65% of the professionals used only NRs and technical and academic knowledge in their interventions on risks in the work environment, not seeking concepts from other areas to improve the intervention process from a more comprehensive perspective.

In a second question to occupational safety professionals, an understanding of the fundamentals of interdisciplinarity was sought, the result showed that 54% of the professionals did not know the fundamentals of interdisciplinarity for their area of training. According to the understanding of , engineering and its related areas focus their actions only on solving the problem with the application of normative and technical principles, urgently needing studies that lead to the involvement of other areas to improve the solution of OSH measures. (GOUVEIA, 2017)

The third question asked to occupational safety professionals was about the search for interdisciplinarity in other sciences, in which the result was that 57% did not seek this understanding in other areas. To seek this interaction between technicism and traditional knowledge from the point of view of carpenters, it is necessary to introduce the concept of interdisciplinarity. According to , introducing interdisciplinarity in the construction of knowledge makes historical materialism be taken into account, allowing a better analysis of the relationship between the parts and the whole. Interdisciplinarity can be understood as a multiplicity of meanings towards a single objective, going in opposition to the fragmentation of knowledge. (THIESEN, 2008) (CARNEIRO et al., 2018)

The fourth question asked in the questionnaire aimed to know if the workers' view is taken into account in the activities of proposing proactive measures in the work environment. The result showed that approximately 45% of safety professionals did not take into account the workers' vision. For , respect for speech, for the individualism of the other,

not coercing, not restricting, leaving aside one's desires and starting to value what the other says, is part of a skill that we must have as a researcher. (SENNETT, 2015)

Question 5 of the closed questionnaire on knowledge of the legal advantages of contributing to the MPS showed as a result that 60% of the carpenters did not know such advantages and work informally, while question 6 on the level of knowledge that the small carpenters object of the study had about the performance of the Labor Courts, 65% answered that they knew the roles. This means that they did not know that, in case of leave due to illness or work accident, they would have the legal benefits for him and his dependents, but they know that there is a judicial body that deals with these issues. Failure to contribute to social security goes beyond the personal, physical and psychological damage due to the accident or illness at work, it also carries social damage by leaving the family without the due financial support. Among the consequences of informality at work, the absence of social security and labor rights, in which the worker does not guarantee financial stability in the event of a leave, widens the precarious dimensions experienced by female workers. (NOGUEIRA; CARVALHO, 2021)

The results of question 7 regarding the action of the public agencies MTE and CEREST with the carpenters obtained the following situation: Of the 12 carpentry shops object of the research, 11 never received any type of visit or communication from the MTE and the 12 never had any contact or communication from CEREST. One of the mechanisms to reduce inequality at work and precariousness is prevention through inspections and guidance from public agencies related to OSH. In Brazil, the legislation related to OSH is prepared and inspected by the MTE through the CGSST and the SRTb/AL, with the functions, among others, of: planning, supervising, guiding, coordinating and controlling the execution of labor inspection activities in the area of safety and health, through the inspection of environments and working conditions, and there are CERESTs in some municipalities that must develop actions that include the structuring of protocols, of lines of care, the training of network professionals, the registration, analysis and dissemination of information and other instruments that favor the integrality of workers' health actions and social control. The less informed a sector is, the more unequal the treatment in legal issues of Occupational Safety and Health (OSH) and can result in the precariousness of work.

As for the videotaped interviews, in which questions were asked about the experience of carpenters, the way they learn, and the relationship with work safety, the results are presented below. The 14 interviews were conducted in the workshops

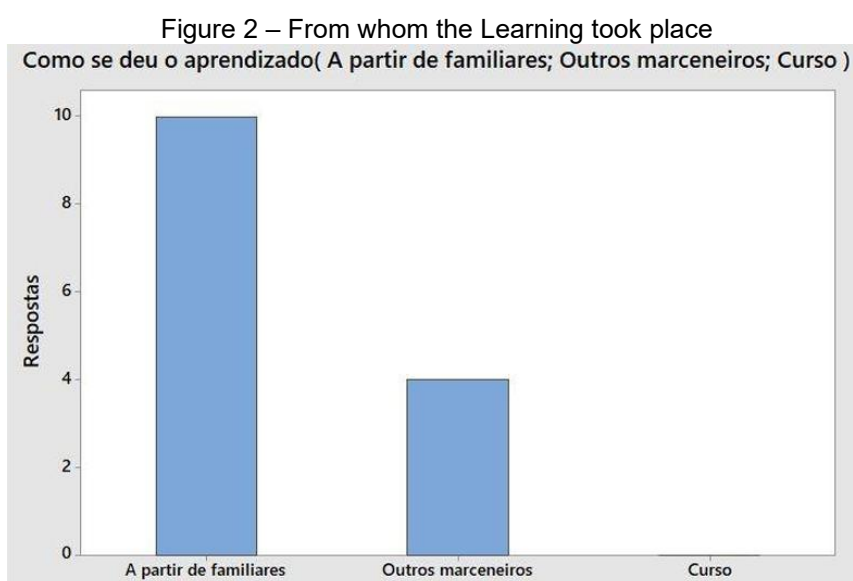
themselves on working days with a time chosen by the carpenters. After visits and several conversations with the carpenters, we compiled what else they said and arrived at the next grouping of thematic axes for the interview.

- How the way of learning the traditional practice took place was commented by 90% of the carpenters;
- Recognition of the risks of the carpentry profession and the use of PPE was commented by 100% of the carpenters;
- Accidents in the carpentry shop was commented by 100% of the carpenters.

HOW THE WAY OF LEARNING THE TRADITIONAL PRACTICE OF CARPENTRY TOOK PLACE

As for learning, the age groups that the carpenters started in learning carpentry were verified, about 57% learned the art of carpentry at the age of 15 and 14% learned at the age of 15 and 18. The results showed, therefore, that approximately 71% of the carpenters participating in the study learned at the age of less than 18 years, an age that in Brazil is considered to be the lowest.

A (Figure 2) presents the graph with the result of how the learning took place. Approximately 70% of the carpenters reported that the acquisition of knowledge took place from family members and the rest from other carpenters. None learned from a professional course.



Source: Author (2022)

According to Dias (2021), the form of learning is an important value in the decision to continue in the profession, in which values such as family and tradition impact this decision. Despite the availability of professional courses, all carpenters sought in the real day-to-day experiences of a carpentry shop to learn the profession, and some because they did not have family members, learned from acquaintances who had carpentry shops. The speech of the carpenter Lucas demonstrates this strong family connection in the art of carpentry where he says:

"I learned when I was 15 years old watching my father work, I have 50 years as a carpenter, "I was born inside a carpentry shop"! I have brothers and nephews who are carpenters. I love the carpentry and it's very rewarding".

After exploring the excerpts from the narratives, the main recurring statements in the narratives about how the carpentry was learned were:

- "The search for learning: In the statements, it is perceived that most learned carpentry in search of an occupation, an income, some were put by their parents to work and help with the family income and the stage of life as a child and adolescent was taken by work obligations to have an income and help with family maintenance. Some interrupted their studies in childhood. Lines like *"my father let me go to school at one time and the other we had to help at work"*, *"at that time there was no such thing as a child not working! I had to help"* and *"since I was 10 years old I work"*, demonstrate the confrontation between being a child and enjoying studies and childhood and having the obligation to work to help with the family income.
- The Family Connection: Although most of them sought the profession due to an income need, the choice was to learn the basis of family sustenance which was carpentry. The ease of access can be seen as one of the causes, as well as the pride of following the art that his father developed. In many statements they mention that it is a family inheritance and through observation and curiosity in the activities developed by parents, grandparents, older siblings, they learned, but some feel that their children are not interested in continuing the family activity; the lines *"I was born inside a carpentry shop! I have brothers and nephews who are carpenters"*, *"My family has been in the art of carpentry since my great-grandfather and today I am passing it on to my son"* and *"Everything I built, my children's studies, everything came out of carpentry"*, in which the relationship of

familiarity and work is evidenced, as well as a certain pride in the continuation of the family activity. The disappointment that her son did not continue in the carpentry activity was also evidenced in some statements such as: "I tried to teach my son, but he doesn't get along with dust", "I have two grandchildren who don't step here, the younger people don't want to learn because it's hard work".

- Lack of public support: The absence of public support in matters of funding, guidance, training is demonstrated as a problem by woodworkers. According to the statements, facilities without sanitary conditions can be improved with public incentives, as well as the acquisition of machines that emit less noise, less dust can be acquired; Some statements draw attention *"We have no public support, we could receive financial support to grow the carpentry shop and employ other people"*, *"Due to lack of public support I will be going to São Paulo this week looking for a better income, because my carpentry needs improvement now I can't afford it"* demonstrate the disappointment of the carpenters who with public support could not only improve the working conditions and structure of the environments, but also employ more people.

As for the way of working, some confirmations can be drawn that meet the objective of the research, About 70% learned from family members and 30% from other carpenters, none of them participated in a professional course to start their profession. Thus, they did not obtain initial training for work safety, with observation and curiosity being the main way to acquire initial knowledge of the way of working. Chapter 4. The narratives of the carpenters 102 The learning took place for 71% still at an age considered to be under 18 years old, a fact that led most of them not to continue their studies. This family connection demonstrates that, on the one hand, they had a profession to follow, which is a positive fact, but most of them, in addition to not continuing their studies, did not obtain training for models of organization and safety at work. An important piece of data extracted in the narratives was that SEBRAE, which is a private Brazilian non-profit social service entity, is the one that had the greatest interaction with part of the carpenters, in which 65% informed that they participated in events with the entity. The issue of lack of public support mentioned in the narratives is consistent with the result verified in subsection 3.2.2, in which basic and specific bodies that deal with Occupational Safety and Health (OSH) issues have very low interaction with small carpentry shops. 11 of the small carpentry shops have never received any type of visit or communication from the Ministry of Labor and Employment (MTE) and

the 12 have never had any contact or communication from the Reference Centers for Workers' Health (CEREST). However, they had interaction with SEBRAE, which is a Brazilian private social service entity in the realization of courses.

8 RECOGNITION OF THE RISKS OF THE CARPENTRY PROFESSION AND THE USE OF PERSONAL PROTECTIVE EQUIPMENT (PPE)

A very expressive fact was that about 90% of the carpenters reported that the people who taught them did not use PPE regularly, a figure compatible with the 90% who do not use the protection regularly. It is worth highlighting some statements that reported sometimes using protection, this means sporadic or partial use that is not effective. A total of 80% of the carpenters, as shown in the graph (Figure 36), reported that the non-use of PPE was due to the way they learned, demonstrating a strong connection between the way of working of those who taught and the apprentice. Approximately 7% do not use PPE due to lack of habit, 7% due to self-confidence and about 6% due to discomfort. The verification of the carpenters' perception of risks was important to compare with the reason for not using PPE.

Making a comparison between the narratives of the carpenters, the graph shown in (Figure 3) shows that approximately 90% did not regularly use Personal Protective Equipment (PPE), the same percentage of carpenters who learned from professionals who also did not use it regularly, while 80% mentioned that they did not use PPE due to the way they learned.

Figure 3 – Not using PPE due to the way of learning



Source: Author (2022)

The speech of the carpenter Atelmo summarizes the situation of exposure to risks, in which he mentioned having a weight on his conscience for not using Personal Protective Equipment (PPE) and emphasizes the concern after so many years of undue exposure to occupational risks. "I learned like this! I took a course at SEBRAE, but I didn't put it into practice, we work with machinery that can hurt us, but we get used to it, we learned this way. I have a heavy conscience due to not using the respirator and being exposed to dust that is dangerous to health".

After exploring the excerpts of the narratives, the main recurrent statements in the narratives about Recognition of the Risks of the carpentry profession and the use of Personal Protective Equipment (PPE) were:

- Risks in machinery and equipment:

The evolution of machines also brought a greater risk of accidents, in the statements *"Machines are faster and more dangerous, my father worked everything by hand, slower, less risky", and "We work with machinery that can hurt us"*, demonstrate that they are aware of the risks. The perception of risk in the use of machines is demonstrated in the statement *"our service is very dangerous, with this machinery we need attention, an oversight you have a slight accident"*, where the carpenter knows that an oversight and an accident can occur. In addition to accidents, the work-related diseases that can occur are evidenced in the statements *"My biggest concern is with the ear because of the noise and with the dust because of the breathing."*,

- Failure to use PPE:

PPE is undoubtedly one of the main preventive methods regarding the risks of accidents and occupational diseases, especially in an activity such as carpentry that uses various machines and electrical and manual equipment. It is evident in the speeches of the carpenters that the resistance to use protection despite knowing the risks to which they were exposed and the lack of concern for the body were found in the statements. One of the answers given in the statements points to the form of learning, in which the way the carpenter who taught dealt with protection issues, the apprentice brought to his professional life and feels good working in this way.

Lines that demonstrate a certain lack of concern with life such as "We are stubborn, my mask hangs, I don't use it! My father doesn't use PPE", "I learned this way and I don't use it either and I never used it, I don't think I ever saw my father using any protection, I learned it this way", "We never got to establish this protection business, my father and grandfather didn't use it and we don't use PPE either". They also demonstrate the connection between the way of those who taught and the way of working of those who learned, which leads to a certain self-confidence. A very strong statement in relation to the awareness of the importance of using protection "In an accident I had when I broke a tooth, the face shield would have protected me", but this awareness is not transformed into practice.

- The MDF material:

Statements that draw attention to MDF demonstrate that the carpenters understood the risks of using this material: *"This MDF is sad, a terrible dust because of the glue"*, "MDF is very chemical, I know we can get into some trouble, *"this MDF powder is a "poison", it even makes the hair fall out"*.

WORK ACCIDENTS IN CARPENTRY SHOPS

Occupational accidents are the last stage of a series of non-conforming events regarding the protection of the worker's body and health, where it can lead to irreversible damage. The carpenter Edvânio suffered an accident that still has marks today. "I broke a tooth in a turning machine, but I didn't stop working! To this day I have a prosthesis. Another time a piece of wood hit my chin."

After exploring the excerpts of the narratives, the main recurring statements about Work Accidents in Carpentry were:

- Trivialization of the accident: The statements about work accidents demonstrate a certain trivialization of the accident, making it something common inherent to the profession. Injuries for most are mere consequences of something already expected. Cuts, amputations of part of limbs, hearing loss are some of the consequences of accidents cited by them. All the carpenters object of the study suffered some type of accident, incident or illness. Statements that express a certain trivialization draw attention such as: I suffered small accidents, yes, I have a little piece of finger missing, from time to time in the planer machine I

"skinned" a finger, but nothing much!", "I know my neighbor who is a carpenter and lost a finger, I've already cut my fingers "little", I always have some scratches", "The accident occurs there's no way! I have suffered minor incidents and I know those who have had more serious and serious accidents", "I had injuries on my finger, this is normal", "If I say that I have never had an accident, I would be lying. I've had accidents that I should stop, but I didn't stop the service." Others say demonstrate the seriousness of accidents due to electric machines: "I broke both fingers, they were pressed on the lathe. I didn't wear gloves at the time", "I've had accidents in my hand, I even have this most recent one that got 7 stitches and left me away for a long time", "I had small accidents yes, I have a little piece of finger missing", "I have a cut finger, this finger has a warped chassis", "I broke a tooth on a turning machine, but I didn't stop working! To this day I have a prosthesis. Another time a piece of wood hit my chin."

- Possible work-related diseases: Statements that mention some health problems that they do not have a diagnosis that are work-related, in which it is found that they do not know the possible work-related diseases. You talk about diseases "My father is a carpenter and has a hearing problem", "I have an allergy problem, I don't know if it's as a result of work", "I have a hearing problem", "I have a little difficulty hearing". The statements about work accidents demonstrate a situation of conformism and trivialization of accidents and occupational diseases. Treating accidents with injuries as "normal", "there is no way", "it is inevitable" is to treat as normal the worst condition within the scale of precariousness at work. It is known that an accident can lead to permanent or temporary disability or even death.

The narratives present a surprising result, in which 100% of the interviewees have already suffered an accident regardless of the degree of injury, the same percentage that answered that they knew the risks of the profession. Approximately 60% have symptoms of hearing problems and 15% have breathing problems. This accidentality related to the percentage of carpenters who do not use personal protection leads to an understanding that there is a direct relationship between these facts and their source, which is the way they learned the profession.

DISCUSSION OF THE RESULTS

Approximately 70% of the carpenters reported that the acquisition of knowledge of the profession took place from family carpenters and the rest from non-family carpenters. This result is in line with the analysis of , in which he concluded that workers in traditional professions such as carpentry tend to transmit their techniques to their families. As for the age of learning, it was found that about 71% learned the art of carpentry under the age of 18, that is, still younger, many leaving school to start working. For 60% of the carpenters, the government should provide support to improve their establishments. The characterization of the sample showed that there is a male predominance in the profession with 100% of male presence, about 35% are between 40 and 50 years old and this same percentage for those who consider themselves brown or black. Regarding the use of PPE, an important fact is that approximately 90% of the carpenters reported that the person who taught them did not regularly use personal protection, data compatible with Chapter 2, which resulted in 90% who do not use protection regularly. 80% of the carpenters reported that they do not use protection because of the way they learned, although 100% recognized the high risk of the activity. 65% reported that they have already participated in events on safety and health at work with SEBRAE. This culture of not using PPE as a result of the way they learned the profession is compatible with Diegues' (2019) idea, that the transmission of traditional knowledge can be defined as the know-how acquired by the demonstration of other subjects. Regarding occupational accidents, the percentage of carpenters who reported having already suffered an occupational accident regardless of the degree of injury was 100%, a result that may be related to the precariousness of the activity demonstrated in Chapter 3. This result is in line with the understanding of Costa et al. (2018), in which it demonstrates that the intense use of machines and tools offers several risks to carpenters. Regarding diseases, about 65% of the woodworkers interviewed informed in the closed answers that they feel some auditory symptom that may be directly related to the activity and 15% reported feeling allergies. The results of this chapter demonstrate the high rate of carpenters who do not use PPE because they learned the profession from someone who did not use protection. Proven accidents were high, covering all workers, from minor accidents to serious accidents with loss of limbs, as well as the prevalence of a high rate of symptoms of hearing diseases. The results give the understanding that there is a strong relationship between the way carpenters treat occupational safety in their activities and the way they learned mainly from family members.

Statements that demonstrate self-confidence in working without protection just because they learned this way "My father doesn't use PPE" at all, "I learned like this and I don't use it either and I never used it, I don't think I ever saw my father using any protection, I learned it this way". The analysis of the narratives demonstrates several statements that lead to the trivialization of risks, phrases such as "the accident is inevitable" or "I have suffered small accidents, yes, I have a little piece of finger missing". As well as statements that present the severity of the activity "I've had accidents in my hand, I even have this most recent one that got 7 stitches and left me away for a long time". (MACHADO; COLVERO, 2017)

GENERAL CONCLUSION

This research had as its central points the way in which carpenters who are part of a traditional Brazilian activity deal with Occupational Safety and Health (OSH) in their processes of manufacturing furniture and wood sculptures, their identity, the transfer of knowledge and traditions. To verify, based on the traditional knowledge and practices of the small carpenters, the possible influence of the culture of learning with the way of working in relation to work safety issues. The intention is to demonstrate from these results the need to introduce interdisciplinary concepts in interventions in work environments of traditional activities such as carpentry. The technician approach of occupational safety engineering can be added to other sciences from interdisciplinarity with a view to socio-political and cultural aspects with the objective of contributing to future interventions in occupational safety and health. The research problem was to analyze whether the culture of passing on knowledge from the practice of carpentry negatively influences the decision-making regarding the use of individual and collective protection to protect the health of carpenters. The hypothesis of this work is whether culture negatively influences the current way of working of carpenters in relation to Occupational Safety and Health (OSH). The main machines and equipment found in use in the joinery were the sander and the bench saw are present in all the joinery shops, while the router and the planer are present in 50% of the joinery shops. The research demonstrated the main consequences of undue exposure to occupational risks in carpentry shops, which can lead to permanent or temporary disability, from typical accidents with injuries, amputations, shocks, loss of vision, to various occupational diseases such as: permanent and irreversible Noise-Induced Hearing Loss (NIHL), changes in blood pressure, stress, gastric disorders, vision disorders, attention disorders, memory disorders, sleep disorders and mood disorders, occupational respiratory diseases, occupational asthma,

neoplasia, tumors, allergies, diseases that impact blood vessels, bone system, joints of the hands and arms, peripheral neuropathies, muscle weakness and eventual atrophy, Repetitive Strain Injury (RSI) and Work-Related Musculoskeletal Disorders (WMSD); Approximately 80% of the carpenters do not know the main occupational diseases resulting from the carpentry profession, but 65% feel some symptom of hearing problems and 15% feel respiratory problems. About 70% of the carpenters have incomplete elementary education or no level of education. The initial characterization shows that there is a male predominance in the profession with 100% of male presence, about 35% are between 40 and 50 years old and this same percentage for those who consider themselves brown or black. The performance of occupational safety engineering as an imminently technical area shows us that in Alagoas 65% of professionals use only NRs and technical knowledge in their interventions on risks in the work environment, and do not seek concepts from other areas to improve the intervention process from a more comprehensive perspective. Regarding inequalities and work in traditional activities, it is verified that traditional activities, specifically small carpentry shops, suffer from the distancing of public policies aimed at work safety, causing an inequality in the treatment of these workers in relation to the safe work mode. Only 1 of the carpentry shops has already had any interaction between the public agencies MTE and CEREST. This lack of communication and interaction with the traditional activity of small carpenters may be one of the reasons for the precariousness of work in carpentry shops. Because it is an activity that predominates family management, with little access to information and little or no public support, it is verified that about 65% of carpenters do not know where to turn for their rights in cases of accidents or occupational diseases, as well as 60% of carpenters do not know the advantages of contributing to the Ministry of Social Security (MPS). For 60% of the carpenters, the government should provide support to improve their establishments. As for learning, it was verified from the narratives that about 60% learned the art of carpentry under 15 years old, that is, even younger, many of them not going to school to start working. It was found that about 90% do not regularly use personal protection, and that 90% mentioned that the person who taught them did not use PPE regularly. Nearly 70% of the carpenters reported that the acquisition of knowledge came from family members and the rest from other carpenters. None learned from a professional course. Based on the data that the acquisition of knowledge took place from the transfer of knowledge from more experienced carpenters, none from a professional course, it was verified in the narratives that the non-use of individual protection for 80% is

due to the fact that they learned the way of working without taking into account individual and collective protection for the risks of carpentry. A very important fact is that 100% of the carpenters reported that they have already suffered some type of accident, from minor severity to limb amputation, the same percentage that reported knowing the safety risks of the activity. However, despite this, 90% do not use protection regularly, despite the fact that 65% have participated in training, course or qualification as SEBRAE during their profession.

In this way, it is understood that even participating in courses by SEBRAE and that they are aware of the various risks inherent to the health and safety of their activities, the carpenters who develop their activity in small carpentry shops in the municipality of Palmeira dos Índios do not use individual or collective protection methods. Taking into account that all carpenters learned the profession from practical teaching passed on by other carpenters and not through qualification courses, as well as the statements showed that the main reason for not using individual protection was due to the way they learned, the hypothesis of this research is confirmed, as the culture directly influenced the decision making of carpenters not to protect themselves in matters of work safety. This confirmation is compatible with the trivialization of risks proven in the narratives, which may be the main cause of the high rate of proven accidents.

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