



Family members' perspective regarding safety behaviors and responsibility of Latino construction workers

Michael Merten¹, Joseph Grzywacz², Shannon Montgomery², Thomas Mills³, Elsa Nunez Reyes², Antonio Marin², Hector Nolasco⁴

¹University of Nebraska, USA, ²Lincoln, Florida State University, USA, ³Virginia Polytechnic University, USA, ⁴California State University, Bakersfield, USA

Correspondence: michael.merten@unl.edu

ABSTRACT

Family is a major agent for change, regardless of whether the focus is on disease management, educational success, or safety in the workplace. The current study aims to examine beliefs about worker safety from the perspective of family members of small-scale Latino construction workers and provide insight into issues of promoting safety in the workplace and beliefs about responsibility as it relates to accidents and injuries that occur on the job.

Qualitative semi-structured interviews were conducted with 18 family members of small-scale Latino construction workers in the framing and roofing trades. The 60-90 minute interviews were audio-recorded, transcribed verbatim, and analyzed for dominant themes.

Preliminary data finds that family members are aware of the dangers that the Latino construction workers face. Interviews suggest that family members (largely spouses) acknowledge that family members are to varying degrees familiar with unsafe behaviors exhibited on the worksite. In regards to family members' involvement in encouraging worker safety, family members communicate messaging about safety to workers in both passive ways and methods that involve "thinking about family."

The generalizability of study findings is unknown because the data are from a small, regional sample of contractors and workers in two trades of small-residential construction.

Understanding the perspectives of family members of small-scale Latino construction workers regarding safety behavior and responsibility is a novel approach to creating worker education programs that have the potential to be more effective than traditional worker/contractor only programs.

An opportunity exists for family members to become more actively involved in promoting safety practices of the worker. The inclusion of family members in small-scale residential construction safety programming may significantly reduce serious injury in the workplace.

Keywords: accident, family members, immigrant Latino workers, qualitative research, safety, small-scale residential construction.

INTRODUCTION

Immigrant Latino workers experience substantial injury disparities in the construction industry. Fatality risk is 40-80% higher among Latino workers than non-Latino construction workers (Dong & Platner, 2004); injury risk is 30% higher among Latino construction workers (Dong et al., 2010a). Injury rates among construction workers are likely underestimated, especially among immigrant workers (Dong et al., 2010b; Schoenfisch et al., 2010) who view risk as part of the job (Brunette, 2004; Lipscomb et al., 2005).

Family members of construction workers have historically been overlooked in safety strategies targeting Latino construction workers. Workers' family members (e.g., spouse, parent, aunt/uncle) may play a critical role in encouraging their loved one to be safe. *Familismo* or the strong sense of



responsibility for, and loyalty to, family (Cauce et al., 2000) is a cultural value for Latinos. Family is a major agent for change, regardless of whether the focus is on disease management, educational success, or safety in the workplace. The current study aims to examine beliefs about worker safety from the perspective of family members of small-scale Latino construction workers and provide insight into issues of promoting safety in the workplace and beliefs about responsibility as it relates to accidents and injuries that occur on the job. Small-scale construction is defined in this study as construction crews that consist of 6 or fewer workers.

This study will examine whether families are aware of the dangers faced by their construction worker family member. If family members are aware of the dangers of the work of their loved one, family members could become a strong ally in encouraging safe behavior on the jobsite. Additionally, this study will examine family members' perspectives of whether they currently promote safety of their construction worker family member and whether they feel they have the ability to promote safety of their family member in small-scale construction. Understanding the perspectives of family members of small-scale Latino construction workers regarding safety behavior and responsibility is a novel approach to creating worker education programs that have the potential to be more effective than traditional worker/contractor only programs.

Rauscher (2012) explored the role that the social context of the workplace may have on the safety practices of young construction workers, specifically whether construction firm size and the composition of individuals working in the construction firm (working in a firm owned by a family member or one in which a family member also works). This study yielded findings that indicate family member presence on the worksite may play a protective factor in construction worker safety. The current study builds on this literature to further examine the social ecological influence of family members of Latino construction workers and their subsequent safety behaviors. The social ecological model (Bronfenbrenner, 1977) recognizes the multiple levels of influence that guide the behavior of individuals. Those levels of behavior include public policy, community, organizational, interpersonal, and individual. The current study focuses on the interpersonal level of influence, specifically, the construction worker's family. At the interpersonal level, family members can have regular talks with their construction worker family member about the dangers of construction work, but more specifically communicate effective messages that will allow them to enhance safety behaviors of their construction worker family member.

METHOD & MATERIALS

Study Design

This research is part of *iPonte Listo!*, a study of occupational safety among immigrant Latino workers in the small-scale segment of the residential construction industry being carried out in Tulsa County, OK. *iPonte Listo!* uses a sequential mixed-method design with two primary components. The first component is formative in nature and involved the collection of qualitative data through in-depth personal interviews with family members (primarily spouses) of Latino construction workers. The second component is forthcoming and will involve testing of a randomized-controlled trial of intervention materials developed based on knowledge gained from the first component. The data for this analysis are from the qualitative component of the project.

Recruitment and Sample

We recruited one family member of 18 Latino construction workers. Inclusion criteria for participants in this study included: (1) being a first-degree relative (i.e., spouse, sibling, parent) of an immigrant Latino construction worker; (2) the construction worker labors primarily in residential construction as a framer, general laborer, or roofer; and (3) the construction worker has labored for at least 6 months



in the past 2 years in residential construction. The vast majority of family member interviews were with a spouse (17 of the 18 interviews). The research team has a 50-year collective history of working with the immigrant Latino population, and a 25-year presence in the local community. Recruitment was therefore facilitated by a large network of relationships with organizations and agencies serving the immigrant Latino community. All potential participants were referred to study staff by individuals in this network of community contacts. Study participants were recruited by trained bi-lingual study staff.

Data Collection

Data were collected from December 2019 through July 2020, by two trained interviewers. Interviewers met participants at locations of the participants' choosing, usually their homes, explained the project, and obtained signed informed consent. Data collection did span the COVID-19 pandemic, resulting in 10 interviews that we conducted in an in-person, face-to-face environment, and the remaining 8 interviews were conducted through Zoom. Participants received a \$25 incentive at the end of the interview. All procedures were approved by an Institutional Review Board. Digitally recorded interviews ranged in length from about one to three hours.

Interview Content

The goal of the qualitative component was to build an understanding of the knowledge and beliefs surrounding occupational safety and injury held by family members of Latino construction workers. Interviews began with basic information about the participant. Then the interview moved into questions to probe basic beliefs about job hazards (something that has the potential to cause harm), risks (likelihood of harm taking place, based on exposure to a particular hazard) confronted by workers, and the perceived causes of common injuries experienced by construction workers including falls from heights, strains, and injuries from equipment.

Analyses

All interviews were digitally recorded. The 18 family member interviews were transcribed verbatim in Spanish, and then translated into English by a professional transcription service. All investigators reviewed each of these transcripts and determined that theoretical saturation had been reached. All the translated transcripts and case summaries were uploaded into NVivo 12 (Version 12 QSR International Pty Ltd. NVIVO qualitative data analyses software, 2018) for data management, coding, and to facilitate analysis. A coding dictionary was constructed based on a-priori content underlying the construction of the interview guide (e.g., controllability of injury, beliefs about safety) as well as new ideas that emerged from immersion into the data. Two team members independently coded each transcript and case summary. The vast majority of codes had excellent inter-rater reliability (Kappa ranged from 0.8 to 1.0). Some of the codes had poorer inter-rater reliability, but coding agreement was achieved through consensus.

RESULTS

Participant Characteristics

The current study included 18 family members of immigrant Latino construction workers. All participants were female and all, but one participant was married. The average age of study participants was 35.83. In addition, the average number of years study participants have lived in the United States was 17.11 years. Table 1 shows complete demographic information for the study sample.



Table 1. Demographic information for study sample.

Family members of Immigrant Latino construction workers

Interview #	Age	Years in the United States	Gender	Marital Status	Years of Education
1	28	2	F	Single	Universidad
2	24	8	F	Married	10th grade
3	50	23	F	Married	8th grade
4	34	--	F	Married	9th grade
5	61	30	F	Married	--
6	32	32	F	Married	High School
7	30	11	F	Married	7th grade
8	21	4	F	Married	9th grade
9	31	13	F	Married	High School
10	31	30	F	Married	10th grade
11	29	12	F	Married	11th grade
12	38	8	F	Married	Universidad
13	28	7	F	Married	Universidad
14	33	24	F	Married	GED
15	44	30	F	Married	11th grade
16	46	22	F	Married	High school
17	44	21	F	Married	GED
18	41	14	F	Married	9th grade

The current study aims to examine beliefs about worker safety from the perspective of family members of small-scale Latino construction workers and provide insight into issues of promoting safety in the workplace. Analyses of interviews of family members of immigrant Latino small-scale construction workers yielded two primary themes. The first theme that emerged was the perceived risk of the dangers of construction work by family members. Within this larger theme, a sub-theme emerged that provided specifics related to family members' knowledge of unsafe behavior of workers. The second theme that emerged in the study findings focused on family members' actions to promote the safety of their construction worker family member.

Theme 1: Perceived risk of the dangers of construction work by family members

In general, many family members of small-scale immigrant Latino construction workers believe the work their family member engages in is a dangerous and risky occupation. Family members largely form this opinion based on things their construction worker family member have told them about their job. One family member commented:

I think, it's (construction job) also dangerous because several accidents have happened. My husband told me the other day that somebody's machine turned over while it was being operated. I got very worried because he works there.



In addition, a few family members perceive the construction occupation as dangerous because they have been to their family member's worksite. One spouse stated,

Well, I've been to his worksite, and he's told me about it. I know it's a job full of risks. It's dangerous.

Yet another spouse who indicated that they work with their husband on the construction crew commented:

I work with him - taking him water and all the supplies he might need. When the house is very steep, for example, a 12 or a 16, his job is dangerous. On those houses, they have to wear a harness. They also have to wear a harness when they work on a two-story house.

While family members overwhelmingly felt the construction occupation was dangerous, we were interested to further examine the degree to which family members had knowledge of specific dangers or hazards on the jobsite and/or unsafe behaviors by their family member or other workers in the crew.

Sub-theme A: Family members' knowledge of unsafe behavior of workers and the workplace

Results indicated that many family members are familiar with the unsafe behaviors or workers and the work environment. As one family member of a construction worker commented:

The scaffolding is not well-made. Due to the scaffolding not being right, he had the accident I mentioned to you earlier. It wasn't set up right on the ground. He also says the electric cords are broken, sometimes, and they can be electrocuted by them, or the nail guns can put a nail in your hands or legs. I mean, he's always at risk.

Another family member admitted that they were aware of the unsafe behaviors that are exhibited on the work site by their family member employed in construction:

The workplace is unsafe. They don't wear helmets. At least, I know my nephew doesn't wear a helmet. They don't use a harness. They don't wear goggles to protect their eyes.

Some family members expressed a greater understanding of the array of dangers present to workers on the job site. For most respondents, they indicated the lack of PPE use among many of their family members as well as the great heights that workers must work from frequently. As one family member commented:

There are a lot of things they're exposed to at work. Not only the weather, but to other things, such as, picking up the trash, or having a roof tile bundle fall down and hit them on the ground. Or they can step on a nail and get injured. There are some materials they put on the roof corners that are very sharp. And if they don't wear gloves, they can cut their hands. But, more than anything, it's the heights because, sometimes, they don't wear any kind of protective equipment.

Theme 2: Family members' actions to promote the safety of their construction worker family member

The analyses of interviews yielded differing views relative to the responsibility and/or the actions of family members that may promote the safety of their construction worker family member. The interviews with family members yielded four distinct findings.



Sub-theme A: Family members do not perceive themselves as the primary change agents for promoting safety behavior among workers

Some participants spoke about the lack of impact they have on influencing the safety behaviors of their family member. One family member commented,

Well, I don't think family members can help. The only thing they can do is to tell them to be careful because they're not at the worksite. So, I repeat, the only person who can do something is the crew leader. I, as a family member, can tell my husband to be careful.

The family member in this case is making the point that in order for someone to be impactful with promoting the safety behavior of a worker, the person must be present on the job site to do so. In fact, the family member goes on to mention that the crew leader is the only person that can make sure workers are working safe on the job. Another family member reiterated the importance of the “boss” in ensuring worker safety:

We have to tell them (workers) to stop pressuring themselves so much. We have to tell them that they should work hard, but they shouldn't do everything to please the boss.

Family members were also asked about substance use on the job and again the emphasis by one family member was on the crew leader as the person responsible for promoting safety on the job site:

Well, the only thing family members could do is tell them not to drink on the job. The only person who can do something about it is the crew leader. He's the one who has to say, "I don't want you drinking on the job."

Sub-theme B: Passive approach related to promoting worker safety

In many instances throughout the interviews with family members, there was a strong sense of passiveness in their approach to promoting safety behaviors to their construction worker family member. A few family members reported that they never talk to their construction worker family member about their job, while many other family members in regards to safety messaging, simply convey passive messages. One family member commented:

I just tell him to be alert and to take care of himself. And he responds, "I'll do that."

Another family member relays a similar type of message to their construction worker spouse on a daily basis:

I tell him to be careful at work. There are a lot of things they're exposed to at work.

Yet another family member comment provides another illustration of a message being conveyed to a worker that focuses on “being safe”, but not providing any specific information to the worker in which how to do so:

Well, we're in a world where we don't know what is going to happen. So, I try to tell him to take care of himself because something might happen at any moment. We never know what might happen.

Sub-theme C: Action approach related to promoting worker safety



Several family members who were interviewed were more active in their pursuits to ensure that their construction worker family members were being safe at work. One family relative commented:

I tell him every day, to be careful and not spend too much time on the phone, and that he needs to be careful about what he's doing. Because you know that young people get distracted by the phone.

In this instance, the family member provided more specific direction to the worker in the form of being specific about what they should or should not do (spend too much time on phone) and provided a justification as to the harm in being on a phone too much during work. Family members in other instances talked about ways that they promote safety among their construction worker family members, which include both actions done by family members that indirectly can lead to greater worker safety without the need to be on the worksite.

I tell him he should go to bed early. If I see it's 11 p.m., and he's awake, I tell him to go to sleep because he has to go to work the next day. But my duty is to tell him to go to bed and rest. In the morning, I get up early to make him breakfast so he can go to work well fed. I don't want him to fall because he didn't eat.

Throughout the interviews, few family members reported that they were aggressive in making sure their construction worker relative was planning to use or was prepared to use proper PPE while at work. However, one spouse shared her experience related to her actions in promoting safety practices:

I always make sure my husband puts his harness, and helmet in his truck. Before he goes to work, I always ask him, "Are you taking all your tools and safety equipment?"

Sub-theme D: "Think about your Family"

In regards to the communication that takes place between family members and their construction worker relative, family members frequently direct their worker family member to "imagine" what would happen if they were to get injured or die on the job. Specifically, the emphasis is to **think about** other family members that would be impacted by their injury/death as a result of not working safely.

I tell him, since I don't work, "Imagine what could happen to us if we didn't have you. If you don't support us, how are we going to be able to survive? How are we going to pay for the house?" And not only us, but my mother and his mother are in Honduras. It's going to hurt them if something happens to him.

Another family member said the following:

Well, what I do is make him think about his family. I tell him about what would happen to us if something happened to him. I'd find a job, but, as you know, women are paid less than men. So, I let him know he needs to take precautions on the job because it's very dangerous.

In addition to the focus on family members instructing workers to think about their family when engaging in their work, one spouse mentioned the following as a method of promoting safety behaviors:

I'd make his children talk to him because his children are the reason he gets up every morning to go to work.



DISCUSSION

The current study examined the broader issue of Latino construction worker safety by focusing on an extremely understudied population (family members of construction workers), in order to understand perspectives of construction worker safety and ultimately gauge the potential of family members as critical agents to promote greater safety behaviors through effective messaging and communication with their family member.

An opportunity exists for family members to become more actively involved in promoting safety practices of the worker. The inclusion of family members in small-scale residential construction safety programming may significantly reduce serious injury in the workplace. The results of this study provide information related to family members' knowledge of construction worker safety and safety practices on the worksite. Specifically, results of this study show that most family members perceive their family member's construction job as dangerous and/risky. In addition, most family members are aware of the unsafe behaviors that are exhibited on the worksite by their construction worker family members and/or crewmates. The awareness of the unsafe behaviors on the worksite are predominately as a result of information they have received from their construction worker family member related to their prior injuries suffered on the job or stories they have heard about other construction workers being injured on the job. To a lesser degree, family members views of unsafe behaviors on the worksite is a result of having any prior experience with being physically present on the worksite. Data further suggests that family members (largely spouses) acknowledge that workers do not take the necessary safety precautions such as wearing hard hats, safety glasses, or harnesses.

This study also provides valuable information related to family members' approach in promoting safety behaviors among their construction worker family members. It provided information as to whether or not, to what degree, and what method family members of construction workers promote safety practices. Many family members provide messaging to their construction worker family member in the form of "passive" messaging, which largely includes statements such as, "be careful" or "stay safe". These messages do not provide specific actions. These types of messages may not carry the same impact as other messages in promoting and encouraging safer practices on the job. Some family member participants do report using messaging that encourages their family member worker to "think about" their family members, specifically their children when they are working. This approach challenges the worker to think about the long-term consequences of their potential unsafe working practices. Family members of construction workers have historically been overlooked in safety strategies targeting Latino construction workers. Results of this study lend support to the notion that workers' family members (e.g., spouse, parent, aunt/uncle) may play a critical role in encouraging their loved one to be safe and the importance of *Familismo* or the strong sense of responsibility for, and loyalty to, family (Cauce et al., 2000) in influencing the safety behaviors of Latino construction workers.

The interpersonal level of the social ecological theory as it relates to promoting worker safety among Latino construction workers consists of family members, friends, and co-workers. The current study focused specifically on family members' as possible influencers of safety behavior by construction workers. Results indicate that most family members of Latino construction workers provide some level of safety messaging to the worker, whether passive ("Be careful") or strategies asking the worker to "think" or "imagine" what life would be like if they were severely injured or died on the job, thus providing support for the importance of the interpersonal (family) dimension of the social ecological framework and the potential for producing change in the safety behaviors of small-scale Latino construction workers.



Results from this study come from interviews from 18 family members of Latino construction workers. Specifically, this data was collected from family members whose family member worked in small-scale construction (crews that consist of 6 or fewer workers), thus we caution that the results from this study may not be generalizable to family members of Latino construction workers who are part of larger working crews.

Future directions for this work include providing interpersonal strategies/training to family members of Latino small-scale construction crews so they can engage in conversations with their spouse/family member that will allow them to provide more specific safety messaging to their family member. Instead of simply telling them “to be careful”, it may be more effective for family members to provide more specific and direct messaging such as, “be sure that you will drink lots of water today and not get on ladders that are not tied off.” Those are specific behaviors that may allow the worker to think conscientiously about during their work day.

Conflict of interest statement

None of the authors have any financial or personal relationships with other people or organisations that could inappropriately influence (bias) their work.

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REFERENCES

- Brofenbrenner U. (1977). Toward an experimental ecology of human development. *Am Psychologist* 1977, 32: 513-531.
- Brunette MJ. Construction safety research in the United States: Targeting the Hispanic workforce. *Inj Prev.* 2004, 10: 244-8.
- Cauce AM, Domenech-Rodriguez M. Latino families: Myths and realities. In Contreras JM, Kerns KA, Neal-Barnett AM (eds) *Latino children and families in the United States: Current and future directions* (pp.1-25). Praeger, Westport, CT, 2000.
- Dong X, Platner JW. Occupational fatalities of Hispanic construction workers from 1992 to 2000. *Am J Ind Med.* 2004, 45: 45-54.
- Dong XS, Men Y, Ringen K. Work-related injuries among Hispanic construction workers-evidence from the medical expenditure panel survey. *Am J Ind Med.* 2010a, 53: 561-9.
- Dong XS, Wang X, Daw C, CPWR Data Center. Fatal and nonfatal injuries among Hispanic construction workers. CPWR Data Brief. 2010b, 2(2): 1-19. Available online http://www.cpw.com/pdfs/Hispanic_Data_Brief3.pdf.
- Lipscomb HJ, Argue R, McDonald MA, Dement JM, Epling CA, James T, Wing S, Loomis D. Exploration of Work and Health Disparities among Black Women Employed in Poultry Processing in the Rural South. *Environ Health Perspect.* 2005, 113: 1833-1840.
- Rauscher, K. J. (2012). Young worker safety in construction: Do family ties and workgroup size affect hazard exposures and safety practices? *Work*, 42 (4), 549–558.
- Schoenfisch AL, Lipscomb HJ, Shishlov K, Myers DJ. Nonfatal construction industry-related injuries treated in hospital emergency departments in the United States, 1998-2005. *Am J Ind Med.* 2010, 53: 570-80.