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Article

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Psychological factors causing nonadherence to safety regulations in Israel's stone and marble fabrication industry: Unveiling the source of worker noncompliance

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Abstract: *Background*: Silicosis remains a lung disease which may cause severe incapacitation and even be fatal. We examined why stone processors in Israel, though aware that regular occupational unprotected exposure to harmful silica dust might cause silicosis, choose to work without protection, in defiance of legislation and employer instructions. The study seeks to identify and map the psychological factors that non cooperative processors use, to justify ignoring safety guidelines. Understanding the inner logic behind nonadherence in a scientific and nonjudgmental way could enhance efforts to reduce unsafe behavior among stone and marble processors, including ASW (Artificial Stone Workers). *Methods*: This qualitative study included semi-structured in-depth interviews with 25 stone processors. The interview transcripts were processed and analyzed by the authors who identified the leading resistance themes underlying noncompliance. *Results*: The current study found that although interviewees made an initial declarative statement that protection from dust is important due to the perceived and acknowledged danger, as the

ABOUT THE AUTHORS

Moshe Mishali and Daniel Weiler-Ravell, an organizational psychologist and a consultant physician in occupational respiratory medicine, have a collaborative interest in diseases related to exposure to harmful dust; silicosis for example. The prevention of silicosis, a potentially fatal disease is dependent on measures to eliminate the penetration of minute particles of the mineral silica dioxide, into the lungs. Worker compliance with safety measures is notoriously poor and confounds efforts to prevent the disease. These researchers are engaged in the analysis of workers' noncompliance to find ways to enhance their adoption of recommended safety measures and thus prevent silicosis. This entails interviewing patients in the clinic and workers in the field and interpreting the data by content analysis, a research technique used to make replicable and valid inferences by interpreting and coding textual material. By systematically evaluating texts, qualitative data are converted into quantitative data. The method is used frequently in the social sciences but only recently have organizational scholars taken it up.

PUBLIC INTEREST STATEMENT

Our current study was planned to address the fundamental problem of impact to health when workers refuse to comply with safety regulations, particularly in Israel's stone industry. As in other countries, stone workers in Israel are exposed to harmful silica dust that endangers their health and may lead to silicosis, a debilitating and incurable lung disease.

Nonetheless, in spite of almost universal awareness of the risks, most workers prefer to defy the safety measures prescribed by law for their protection. The current study seeks to identify, map and understand the anomaly. The quality study is based on semi-structured in-depth interviews of 25 stone processors who are exposed to harmful dust, from a list of 500 businesses, using random sampling. We processed and analyzed interview transcripts to identify the leading resistance themes underlying noncompliance, the results encapsulate and reveal the personality factors and psychological defense mechanisms underlying worker aversion to compliance with workplace safety instructions.

interview progressed the interviewees displayed increasing reservations, showing that despite their recurrent declarations of understanding the danger of not using protective measures—not all of them do so in practice. Their responses show that the processors have knowledge and awareness of occupational illnesses associated with exposure to silica dust and that they had full access to the relevant protective measures. The responses also reveal the perceptions, personality traits and defense mechanisms around which processors have built a psychological narrative to justify their noncompliant behavior. We found that ASW are well aware of the risks and dangers of their occupation yet they almost completely deny personal responsibility and blame others for the consequences of their behavior (External locus of control). Their predominant emotional reaction was anger. Each worker's response was governed by a "personal and unique narrative" that represents a defense mechanism for nonadherence to safety measures. *Conclusions*: Given the psychological motivators, the main conclusion of the study is that it takes more than just enhancing the awareness of workers to the importance of using protective measures to create a sustainable change in the safety climate at stone processing plants. Therefore, it is necessary that all players execute their roles in full, in order to ensure that nonadherent behavior is not only acknowledged by fabricators as endangering their health but it has also immediate implications related to their employment, freedom to operate and responsibility.

Subjects: Occupational Health and Safety; Preventative Medicine; Quality of Life; Behavioral Medicine; Environmental Health; Health Communication; Health Education and Promotion

Keywords: occupational lung disease; silicosis and natural stone processing; artificial stone processing; synthetic stone processing; silica and silica dust; personal protective equipment; PPE; safety measures; psychological defense mechanisms; health and safety compliance; occupational health; occupational hygiene

1. Introduction

This paper follows the cognitive and decision-making process that leads stone and marble processors including ASW (Artificial Stone Workers) to disobey safety regulations and instructions and place themselves at risk of silicosis, a serious and degenerative and sometimes fatal lung disease.

In the industrial processing of silica-containing materials respirable silica dust is released (Greenberg, Waksman, & Curtis, 2007).

Occupational exposure to respirable crystalline silica without appropriate protective measures might lead to the development of silicosis whereas studies on silicosis repeatedly stress that the use of protective measures at work will prevent the disease (Leung, Yu, & Chen, 2012; Mason et al., 2010; Thomas & Kelley, 2010). Chronic silicosis has a long latency period of between at least 10–15 and up to 40 plus 5 years (Yang, Yang, Zhang, & Chen, 2006). Thus the threat of disease is not immediately discernible to workers and compliance with safety regulations is a well-known problem (Holden, 2009).

The first standards for limiting exposure to silica were developed in the 1930's, and in most countries they are largely still intact (ACGIH, 2016). Although the measures to reduce exposure have led to a significant reduction in silicosis morbidity around the world, hundreds of new silicosis cases are still reported in developed countries every year (Yang et al., 2006). Possible exogenous explanations for the persistence of silicosis are among others, increased exposure to harmful dust due to an

increase in the volume of construction and increased use of stone due to more luxurious living standards (Construction in Israel, 2014; Gross Domestic Capital Formation 1995–2015, 2016; Pérez-Alonso et al., 2014).

As in other countries, Israel's stone processing industry is composed mainly of small plants characterized by flawed implementation of safety and hygiene measures by stone and marble processors, in spite of being aware of the risks involved (Maiman, 2014; Pardo, Umanski, & Dekel, 2014). However, neither the "environmental and extraneous" explanations for the continuing presence of silicosis, nor the evident disdain of safety measures, illuminate the inner mental process underlying hazardous occupational behavior. To explore this aspect, we conducted a preliminary survey among stone processors in Israel, which soon revealed that despite awareness of the risks of unprotected working and despite having full access to protective measures, many processors consistently ignored safety regulations. The current study attempts to map the thought processes at the basis of this illogical and hazardous occupational behavior as a key to devising new strategies to enhance compliance with safety measures.

2. Methods

2.1. Sampling method

A purposeful, typical case sampling method was used to recruit a sample of 25 representative stone processors (Patton, 2014). This approach was selected as it is particularly suitable when the intention is to conduct a thorough exploration of participants' attitudes without generalizing the research findings (Lambert, 2013; Neumann, 1994).

2.2. The sample

Twenty-five workers were interviewed for the study. All were male. The average age of participants was 47 years. Over half the participants had been in the industry for 20 years or more and only 4 for less than 5 years.

2.3. Interviews

Following approval of the study by the Ethics Committee of the School of Public Health at the University of Haifa prior consent of participants to participate in the study was obtained after they were given an explanation of the objectives of the research and its methods and promised confidentiality.

Semi-structured interviews were conducted in order to detect factors related to risk awareness and how participants deal with the dangers inherent in stone processing, as well as to attain sample (positive and negative) statements on these topics. The interview had a uniform algorithm—the interviewer first created a state of bonding; a personal relationship encouraging interviewer–interviewee discourse. The interviews were conducted during a normal work day and each lasted one hour or more. Interviews were designed to minimize disruption and inconvenience to participants and were recorded in writing.

The interviewers in this study received clear and uniform training and directions for conducting the interviews in which participants were asked to describe their risk perception, the severity of the danger, and how they cope with it.

2.4. Data processing

The information processing of the findings was developed specifically for the purposes of the current study, according to the strict criteria for qualitative research formulated by Hill and Lambert in 2003 (Neumann, 1994). The initial interview questions were composed by three occupational lung health and safety experts (a physician, an academic organizational psychologist, and an organizational consultant), based on the reasons for resisting treatment described by Daley and Zuckoff in 1999 (Table 1).

Table 1. Examples of initial questions included in the semi-structured interview

	Type of question	Examples of questions
1	Perceived risk	Do you think your job is hazardous?
		Can you characterize the risks?
		Which factors increase risk?
		Which factors reduce risk?
2	Perceived degree of danger of the occupation	How hazardous is your job?
		How does the illness caused by breathing dust while you work compare to other illnesses?
		Can you quantify the degree of dangerousness on a scale?
3	Perceived advantage of working in a protected environment	What are the benefits of observing safety measures in the short and long term in your opinion?
4	Suitability of safety measures	What do you use to reduce risk?
		What is easy to use and what is less easy to use?
		Do you feel competent in using these measures?
		Are they comfortable to use?
5	Exposure to a tempting stimulus	When is it not tempting to use safety measures?
		What inner dialog do you have before using or not using safety measures?
6	Cover questions	What haven't we asked you about risks?
		What haven't we asked about risk awareness?
		What haven't we asked you about the severity of your illness?
		What haven't we asked you about coping strategies?
7	Open question	Tell us something that you think can sum up our conversation today and that is related to the issues discussed

Only questions on which all the experts agreed were included in the initial interview. As the series of interviews progressed, questions were added, based on the reasons for noncompliance expressed by previous interviewees. The transcripts were analyzed using the Constant Comparative Method (Strauss, 1987). Decisions regarding the different categories of compliance were reached by consensus (Sabar Ben-Yehoshua, 2001). The described procedure for analyzing transcripts and adding questions to the interviews was performed in an iterative fashion, until no additional factors regarding coping and risk awareness were identified in additional interviews. This methodology was important for credibility and validity and served to eliminate researcher influence on the findings. It is also useful for the purpose of future reconstruction of the process (Calandinin & Connelly, 2000; Glaser & Strauss, 1967; Sabar Ben-Yehoshua, 1990; Zeichner & Noffke, 2001).

3. Results

The statements extracted from the detailed interview transcripts relate to the ASW perceptions of the occupational disease and to personality factors and psychological defense mechanisms explaining individual attitudes to issues of compliance with safety instructions at work. We identified the following themes underlying the cognitive perception of the workers regarding the hazards of their occupation. (Tables 2–5). Dangerousness of the job, awareness of the danger/illness, the source of this knowledge, locus of control (control over preventing emergence of the illness or dependence on external factors over which they had no control), and finally emotional factors.

In tables 6 and 7, we present central themes that concern personality factors and defense mechanisms. We present statements that contradict workers' declarations that they use protective measures—reading between the lines, such use does not happen in practice (Table 6). The current study

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Table 2. Worker statements about the perceived risk of their job

Dangerousness of the job	Number of statements (*n* = 25)	Examples of statements given in response to the question: "Does your job involve risks or illnesses and to what degree are these illnesses dangerous in your opinion?"
Very dangerous lung disease	23	(A) "Everyone who works in this industry contracts something in his lungs, pulmonary cancer or illnesses that cause suffocation" (B) Everyone knows that people contract that illness… with the long name… pulmonary cancer" (C) "I know lots of people who contracted silicosis and are dependent on respirators or on line for lung transplants"
Similar to the dangers of any other job	2	(A) "Everyone in this job is affected by something; there are lots of absences due to injuries from tools, cuts from marble edges, and others" (B) "I don't think that working with marble is more dangerous than working in construction or as a crane operator or working in a factory. Every place is dangerous, this is no more or less dangerous than other places"

Table 3. Worker statements on their sources of knowledge about the illness

Sources of knowledge about the illness	Number of statements (*n* = 25)	Examples of statements given in answer to the question: "Where did you hear about the illnesses associated with your job and their hazard level?"
Personal experience	2	(A) "I worked with stone for 30 years. I have silicosis from the dust of the stone slabs. I underwent tests at the hospital and the pulmonologist told me that it is because of those slabs"
A friend or colleague	9	(A) "I have a friend who had a lung transplantation. Every worker here knows someone who has a lung disease or who is waiting for transplantation"
Knowledge from a superior	3	(A) "We took a safety monitors course and we learned that cutting stone causes grave lung diseases"
Media sources	11	(A) "I saw a television program that referred to it"

Table 4. Worker statements about the locus of control over the illness

Locus of control	Number of statements (*n* = 25)	Examples of statements given in response to the question: "In your estimate, who is responsible for correct handling of dust damages in your job?"
Internal	1	(A) "Clearly, I too have to make sure to wear a mask, clean my clothes, and operate the suction machines. I can't blame everyone but myself"
External	24	(A) "Before synthetic stone slabs were manufactured there were no such grave illnesses" (B) "The manufacturer is clearly to blame" (C) "Today they manufacture dangerous stone to which poisonous glue is added"

Table 5. Worker statements that reflect emotional responses concerning the locus of responsibility

Emotional response	Number of statements (*n* = 25)	Examples of statements given in response to the questions: "What are your feelings about the work procedures?" "What do you feel about the illnesses related to your job?"
Anger	13	(A) "They can't hide something like that… They should have found out what the slabs were made of and warned us. I will never forgive them"
Shame	3	(A) "I can't believe that I was so stupid and that I didn't look out for myself" (B) "Every child knows that at work you wear a mask and that dust is not healthy. Regular dust is not healthy either"
Guilt	2	(A) "Sometimes I feel bad and angry at myself for not wearing a mask or boots" (B) "Everyone here is to blame. We don't take care of our health and one day we will pay for it"
Blame	7	(A) "Those accountable should be found and punished. I don't care who it is—the government, my boss, the manufacturer—but they must pay" (B) "I am a simple laborer. I don't know what is dangerous and what isn't, they should look out for me"

Table 6. Statements that contradict the main message of taking safety precautions and following the procedures (personality factors)

Number of statements (*n* = 25)	Examples of statements that contradict the main message of taking safety precautions and following the procedures
23	"I think it is important to use a mask but I can't use both a mask and earphones against noise, so when I put on earphones I make do without the mask"
	"Dust is obviously a dangerous and hazardous material, but for a half hour's job or a small polish I won't put on a mask"
	"No one will tell you that a mask is not important, but do you see anyone putting on a mask in this heat?"
	"Who has time for periodical tests? I don't believe in doctors"
	"We have all kinds of ways of protecting ourselves from the dangerous dust even without a mask" (a wet scarf, keeping the floor wet, airing out the hall, drinking lots of water)"
	"It is true that a mask is important and cleaning your clothes from the dust is important, but if I work with water I don't really think you need that"
	"Sometimes the boss comes in and everyone puts on a mask. I put one on too although I don't believe that the mask is capable of protecting me"

Table 7. Summary of themes justifying noncompliance with safety instructions (defense mechanisms)

Theme	Explanation of the theme	No. of statements (*n* = 25)	Examples
Image of the worker as a professional	The worker's behavior and self-image are not compatible with following safety instructions	17	"Only nerds wear a mask"
			"Listen, men and professionals know how to take care of themselves"
			"What is it with you—do you think I'll put on a mask every time I have to cut stone for countertops?"
Fatalism and ascribing responsibility to God or to fate	Minimizing and denying the danger	18	"I'll die when my time comes"
			"I can't worry about everything—people die in accidents but no one stops travelling"
Rebelliousness	The worker is concerned that his freedom will be reduced or his actions restricted	9	"My manager has never even touched a saw. He can't tell me what to do"
			"I know best how to protect myself. I don't need someone in a suit teaching me my job"
Distrust of the procedure or the safety tool	The worker feels that the procedure or the protective means provided are inefficient	9	"Do you think I haven't known people who wore masks and were careful but still died young?!"
			"These masks don't help. They are useless"
A burden	The worker feels that the protective means restrict his ability to work	17	"Listen, the mask makes it harder for me to work"
			"If I were to put on a mask when I work and do everything the manager asks me to, I'd be here every day until 11 pm"
			"On a hot day you don't wear a mask. Period"
Minimization	Minimizing the danger	8	"I don't believe that people really die from a little dust"
	Minimizing the relevance of the danger for the respondent		"Forget about it, it only happens to those who are not careful"
Intellectualization and rationalization	Providing a seemingly logical or scientific explanation to justify pathological behavior	5	"If I put on a mask I work longer with the dust so I'd rather have less time with no mask because then I can get much more done at a faster pace"
Procrastination	Accepting the risk but putting off compliance with the regulation for one reason or another	5	"I think you're right, but I have a big urgent project to complete now and then I'll start making more of an effort"
			"I keep on saying that I'll begin tomorrow but then when the workload gets heavy I forget"
Anger and aggressiveness	The worker takes "revenge" on his employer by not complying	2	"First he should pay me on time and then I'll start wearing a mask"

found that although interviewees made an initial declarative statement that protection from dust is important due to the perceived danger, as the interview progressed the interviewees displayed increasing reservations, showing that despite their recurrent declarations of understanding the danger and of using protective measures—they do not do so in practice.

In the interviews, we therefore explored how the participants self-justify their noncompliance with safety instructions and procedures (Table 7). The discrepancy between worker declarations of awareness juxtaposed against their irresponsible behavior in practice was indicative of the importance of analyzing the defense mechanisms that allow the two behaviors to amicably exist side by side.

4. Discussion

Health promotion literature explains why people resist safety instructions at work, despite their awareness of the dangers involved in disregarding them (Clark & Gong, 2000; DeJoy, 1985; DeJoy, 1994). The literature rarely addressed the psychological process behind workers' nonadherence. Researchers in the behavioral sciences have also attempted to characterize the issue of "resistance to recommended health activity" in an attempt to provide a response to the problem. Rollnick and Miller described two main causes of resistance and tried to understand the underlying personality-based sources: on the one hand, refusal to recognize the problem, characterized by minimization of the problem and its significance, and on the other, ambivalence toward the need to perform change (obey safety instructions, use protective means, avoid exposure to dust, etc.) (Miller & Rollnick, 2002; Rollnick & Miller, 1995). Other explanations include associations with factors not overtly expressed by the worker (typically arising from the inner mental sphere), such as strong opinions against authority, a fear of being stigmatized, or the impact on relations with colleagues, and more. Resistance may also infer a wish to maintain the status quo—refusal to relinquish the habit of noncompliance, which they enjoy, along with its secondary benefits such as sick leave, saving face—perpetuating a tough male image of being unfazed by risk, etc. (Carey, 1967). There is also ambivalence about change and whether it offers any advantage. No-one wants to be branded as a "softie" by their peers, or give up their sense of independence and control over their daily routine. In the mindset of many noncompliant workers, safety lies in labeling the work as nonhazardous rather than becoming dependent on safety measures (Clark & Gong, 2000).

We find that each worker in the stone industry holds a complex discourse with himself, addressing seven basic beliefs (Weinreich, 2010). first, that he is at risk and that the consequences will be severe; second, that the proposed behavior will lower his risk or prevent the problem; third, that the advantages of performing the behavior (benefits) outweigh the disadvantages (costs); fourth, that he possesses the skills to perform the behavior; fifth, that he is capable of performing the behavior (self-efficacy); sixth, that performance of the behavior is consistent with his self-image, and finally; that there is greater social pressure to perform the behavior than not to perform it (social norms).

The interview analyses we conducted in light of these beliefs are taken from current theories of health behavior change (Carey, 1967). Our results show that consistent with the first belief, workers in the industry see themselves as being vulnerable to the illness and even recognize the illness as dangerous. Consistent with the second belief, they demonstrate a perception that supports the use of protective means. (Table 2) Analysis of the third belief shows that their decisional balance sheet has more arguments against, than arguments for, the use of protective means against harmful dust. (Table 3). They feel that they have the knowledge and the tools for using these protective means (fourth and fifth belief), but the large majority do not believe that such use reflects their real self-image (sixth belief) and, finally, it was evident that even if formally there are clear safety instructions regarding the use of protective means, the social pressures and lack of enforcement do not support use of these means (seventh belief) (Table 7).

Workers chose to stress the topics listed below as those that govern their actions when they arrive at a decision point and must decide whether or not to protect themselves from harmful dust.

4.1. Perceived risk and knowledge sources (Tables 2 & 3)

The majority of the interviewees refer to lung disease as the factor most hazardous to their health. This is unexpected, since in silicosis, a disease with a very long latency period, from the processors' perspective there is no sense of immediate threat. Usually workers emphasize afflictions and risks whose results are evident in the short term (Heinrich, 1959). In our study, workers attributed their above response to information obtained from steps taken by the manufacturer and the regulator to alert industry workers to the dangers inherent in processing stone without protection, as well as recent information from the media that had further increased their awareness of the job's hazards. We found no association between the fact that workers refer to lung diseases as the factor most hazardous to their health, and any real action on their part to protect themselves from illness.

4.2. Locus of control (Table 4)

Workers tend to attribute the cause of the illness to external factors in an attempt to explain to themselves why harmful events, accidents, and illnesses occur in their work environment (Clark & Gong, 2000; DeJoy, 1985). Our study shows that workers almost universally deny "personal responsibility" unequivocally (Table 4), and the consensus is that lung disease is caused by external factors. The most conspicuous finding is that 24 of the 25 interviewees were of the opinion that the manufacturer of the processed material, is solely responsible. Only one worker was willing to say: "I can't blame anyone but myself." Studies on safety culture indicate that workers tend to ascribe responsibility to a distant, inaccessible factor, considered strong and invulnerable, rather than to a close factor that has a direct and immediate effect on the worker's life, such as the employer (DeJoy, 1994; Rollnick & Miller, 1995).

4.3. Emotional responses (Table 5)

We find that negative emotions alone—and anger in particular—guide the worker's perception of causes of the illness (Weiner, 1985). This anger is directed against the manufacturer, who is perceived by workers as directly responsible for causing the occupational illness.

4.4. Personality factors and defense mechanisms (Tables 6 & 7)

The statements in Table 6 shows that the processors do not implement protective measures which are at their possession and do not obey safety instructions, although in most of the interviews they report the opposite. To explain this behavior we shall make use of concepts from Eric Berne's iconic book, "Games People Play" (Berne, 1966).

We found that those workers ostensibly adopted a "Parent level" (obeying the rules) regarding their responsibility for protecting themselves but in actuality behaved in what Berne called the "Child level" (reckless childish behavior) abrogating protective behavior.

From the current interview transcripts, it appears that, on the declarative level, workers mostly utilize "parent discourse," i.e. they understand the significance of obeying the procedures and even understand the risks and illness severity associated with not obeying them. They had been exposed, whether directly or indirectly, to information on people who were harmed because they did not obey safety procedures, but as the interview discourse evolves it becomes apparent that the speakers gradually adopt the "adult discourse," i.e. a discourse that takes account of the difficulties stemming from strict compliance with the procedures. In fact, the interview is replete with arguments explaining the predicaments involved in obeying procedures and the justifications for disobedience. Close inspection of the texts shows that the negative statements (arguments against complying with the safety procedures and arguments that may provide a "seemingly sober" rationale of this noncompliance, as presented in Table 6) shows that, in practice, the worker does not behave as he reports. In fact, if the worker had been candid, with no attempt at appeasement, he would have utilized the "child discourse," but in order to maintain the appearance of a parent, an adult, he chooses to camouflage this discourse as a "parent text" that is replete with contradictory statements, thus undermining the declared concept.

This finding is consistent with the premise that public dissemination of the occupational risks of harmful dust does enhance worker awareness of the danger of unprotected stone processing. However, it did not have the desired outcome inasmuch as workers do not use protective means. Instead the worker projects the locus of responsibility "outwards" so as not to remain indifferent to the considerable body of information acquired about the risk of harmful dust. Ultimately, the discourse he holds with the world is not a clear-cut "parent discourse" or "adult discourse" such as "not using protective means is dangerous"—but a child-like behavior as in "I can't utilize protective means because…"

Analysis of the transcripts also shows broad variance in the themes chosen by respondents to justify their behavior when it deviated from the external demand made of them. Analysis of the themes shows that each worker explains his noncompliance through a "personal and unique narrative" that is essentially different from the collective explanations that fit almost all interviewees (degree of control over the causes of illness, the negative emotions they arouse, and the external locus of control underlying the attribution). Most of the respondents (Clark & Gong, 2000) brought to the interviews more than one theme as an explanation of their noncompliance with the safety instructions. Each worker may be said to construct his own "narrative fingerprint," comprised of different defense mechanisms enabling him to continue his hazardous behavior despite declarations of awareness of the danger. Correspondingly, the extreme statements expressed in interview on the inherent dangers, the severity of the illness, and the urgent need to maintain one's health, "peacefully exist" alongside statements that safety measures cannot be utilized—they cause discomfort, they are an encumbrance, and give a negative image of those who do so.

The current study shows that the workers interviewed have a wide range of opinions. On the one hand, a variety of psychological reasons shapes the worker's "personal narrative" and sets up the inner rationale that helps him function at work and remain impervious to its risks and dangers. On the other, we see how workers adopt the conception whereby "if it's bad, really bad, it's not my fault and there's nothing I can do about it" (Lacroix & Dejoy, 1989).

The psychological process of attributing a reason to events such as illnesses and work accidents is a complex process that directly affects the views, feelings, and behavior of the attributor. The way in which workers, managers, and decision-makers explain to themselves why an accident, illness or other negative event occurred will have a direct effect on how they feel about its causes and what adjustments—if any—they will make to avoid them (Clark & Gong, 2000; DeJoy, 1985).

5. Conclusions

We found from in-depth interviews with 25 stone processors selected at random that there is a disturbing gap between their declarative behavior and what actually transpires on the job site.

This study explored the inner narrative of noncompliant workers who ostensibly understand the dangers inherent in their occupation but nonetheless ignore safety measures and endanger themselves. They "favor the dust and scorn the mask" by intensively exercising psychological mechanisms (denial, minimization, fatalism, etc.) declaring adherence and responsibility but practicing the opposite; allowing the two behaviors to amicably exist side by side.

Given the psychological motivators, the main conclusion of the study is that it takes more than just enhancing the awareness of workers to the importance of using protective measures to create a sustainable change in the safety climate at stone processing plants. Therefore, it is necessary that all players execute their roles in full, in order to ensure that nonadherent behavior is not only acknowledged by fabricators as endangering their health but it has also immediate implications related to their employment, freedom to operate, and responsibility.

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