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Managing active cultural differences in U.S. construction workplaces: Perspectives from non-Hispanic workers

Ahmed Jalil Al-Bayati, [a,*] Osama Abudayyeh, [b] Alex Albert [c]

[a] Department of Construction Management, Western Carolina University, Cullowhee, NC 28723, United States
[b] Civil and Construction Engineering Department, Western Michigan University, Kalamazoo, MI 49008, United States
[c] Dept. of Civil, Construction, and Environmental Engineering, North Carolina State Univ., 2501 Stinson Dr., Raleigh, NC 27607, United States

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ABSTRACT

Introduction: Current census reports indicate a growing shift toward workforce diversity in the U.S. construction industry, which is largely the result of increasing participation from the Hispanic community. The data also suggest that the Hispanic workforce suffers a higher rate of fatal injuries compared to their non-Hispanic counterparts. Therefore, there is a dire need to develop and utilize new management tools and strategies to accommodate the differences in language and culture of this incoming labor force. *Method:* The absence of these tools and strategies poses several challenges including cost overrun, schedule delay, and more importantly, higher workplace injury rates. This study aims to provide a better understanding of the contribution of cultural diversity as a factor that may influence the overall site safety. *Results:* As a result, this study provides further evidence that indicate that the current findings regarding the influence of active cultural differences are reliable, valid, and needs attention. Furthermore, the study provides sub-analysis results of cultural values among Hispanic workers, which suggest that workers from Mexico are less likely to speak up on safety issues when compared to other Hispanic workers. Therefore, this study has both practical and theoretical implications for managing workforce diversity and related safety performance in the U.S. construction industry. The results of the study can be used by employers and managers to adopt responsive strategies and tools to reduce the likelihood of fatal and nonfatal injuries among Hispanic workers.

1. Introduction

Effective communication on construction sites is essential to avoid errors that affect, among other things, quality, team integration, and safety. Communication is especially important when it comes to safety management and injury prevention (Burke, Clarke, & Cooper, 2011; Törner & Pousette, 2009). Therefore, effective strategies to improve communication levels at the work interface are increasingly becoming important for project success – particularly with the increase in diversity among the construction workforce. Diversity is generally defined as differences among people or groups of people where people within a group may perceive themselves to be different from others in the group (Jackson, 1992). The construction workforce in the United States is shifting toward more diversity with an increasing influx of Hispanic workers joining the construction workforce. Current estimates suggest that Hispanic workers account for roughly 30% of the U.S. construction workforce (Dong, Wang, & Goldenhar, 2016).

With the increase in diversity, desirable and undesirable effects have been experienced in construction organizations (Mannix & Neale, 2005). One of the unwanted effects is that communication has become more challenging with differences in cultural and contextual factors that go beyond language (Al-Bayati, Abudayyeh, Fredericks, & Butt, 2017a; Flynn, 2014). For example, evidence suggests that safety information may not freely flow in diverse work groups that include Hispanic and non-Hispanic workers. Accordingly, the data indicate that the fatality rate among Hispanic workers is often higher than other non-Hispanic workers (Al-Bayati et al., 2017a). While evidence also suggests that the non-fatal injury rates among Hispanic workers is higher, there is a growing concern that injury rates among Hispanic workers may be underreported due to financial and legal concerns and the prevalence of temporary work arrangements (Al-Bayati, Abudayyeh, Fredericks, & Butt, 2017b; Flynn, Eggerth, & Jacobson, 2015). Among other reasons, cultural differences have been identified as one of the root causes of higher fatality rates among Hispanic workers, besides other possible causes including low education levels, inadequate skill and experience, language proficiency and literacy issues, and immigration status (Jaselskis, Strong, Aveiga, Canales, & Jahren, 2008; McGlothlin, Hubbard, Aghazadeh, & Hubbard, 2009; Hurley & Lebbon, 2012; Flynn, 2014; Morrison, 2015).

To overcome communication deficiency, the Occupational Safety and Health Administration (OSHA) requires that employers translate training material or hire bilingual personnel to enhance communication

* Corresponding author.
E-mail addresses: ajalbayati@wcu.edu, (A.J. Al-Bayati), osama.abudayyeh@wmich.edu, (O. Abudayyeh), alex_albert@ncsu.edu (A. Albert).

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with all employees. However, OSHA has no requirement explicitly mandating that employers must manage cultural differences by tailoring safety training and interventions based on the cultural needs beyond merely translating the material (O'Connor, Flynn, Weinstock, & Zanoni, 2014). In general terms, culture is a system of shared beliefs, behaviors, and expectations that allows a society to function and maintain itself. Cultures are dynamic and are continually reproduced and revised through social interactions as the group and its members adapt to an evolving geographic, historical, and socio-economic context (Flynn, Castellanos, & Flores-Andrade, 2018). Because culture is influenced by one's social position within society there are often sub-cultures and identities that interact with one another at the organizational, group and individual level. Therefore, it is crucial to understand how social factors related to the distribution of power – such as race, ethnicity, gender, class, and immigration status – influence culture, which can impact how workers from different backgrounds approach their work and interactions with co-workers, supervisors, and their subordinates. (NIOSH and ASSE, 2015; Ailon, 2008). To begin addressing this issue, Al-Bayati et al. (2017a, 2017b) conducted an empirical study using survey instruments and focus group sessions to examine the nature and influence of cultural differences on U.S. construction sites. The findings revealed three active cultural differences that directly impact safety on diverse workplaces: high power distance, collectivism, and uncertainty avoidance. These active cultural difference (ACD) has been shown to substantially affect how safety is practiced and valued at workplaces (Al-Bayati et al., 2017b). However, more research must be conducted to ensure that the findings regarding active cultural differences are generalizable and broadly applicable across the construction industry in the United States. If such evidence is obtained, techniques to manage active cultural differences and responsive accident prevention techniques should be designed and adopted at construction workplaces.

Although past studies have identified a number of interventions to improve safety performance such as establishing a safety committee, conducting accident investigations, performing safety audits and housekeeping efforts, past research has not highlighted the importance of managing cultural diversity in the U.S. construction industry. The adoption of such techniques could improve safety performance and the efficiency of traditional safety interventions. The current study seeks to understand the prevalence and nature of ACDs to advance knowledge that can be fundamental to designing new interventions that target cultural challenges.

2. Active cultural differences in U.S. construction sites

Cultural differences result in different beliefs, behaviors, and expectations between individuals and groups of individuals (Hofstede, Hofstede, & Minkov, 2010; Hudelson, 2004). These differences can lead to unshared assumptions regarding work, safety, and workplace behavior. If such differences remain unrecognized and unmanaged, they can result in miscommunication among workers and their supervisors – which can adversely affect safety performance. Therefore, it is important for construction supervisors to understand the effect of differences in workplace culture on workplace behavior and safety (Flynn et al., 2018; Ling, Dulaimi, & Chua, 2013; Phua, Loosemore, Teo, & Dunn, 2011). To assess the nature of cultural differences and their possible effects, a theory-based framework is necessary. Most of Hispanic construction workers in the United States come from Mexico (Bucknor, 2016; CPWR, 2013). Therefore, the most intuitive approach to assessing cultural differences would be to compare differences between workers from Mexico and the United States. Although the GLOBE project and the study by Hofstede examined cultural values, Hofstede theory focused on the effect of national values, whereas the GLOBE project focused on the effect of organizational values (Wildman, 2015). Hofstede's dimensions are particularly beneficial in illustrating the basic differences between Hispanic workers and supervisors of other geographical and cultural decent (Canales et al., 2009). Therefore, this study will use Hofstede theory as departure point to assess the potential cultural differences among Hispanic workers and construction supervisors.

According to Hofstede et al. (2010), out of the six national cultural dimensions, there are only three considerable differences between individuals representing Mexico and the United States as shown in Fig. 1. Using the Hofstede's model of culture, Al-Bayati et al. (2017b) found that these cultural values (high power distance, collectivism, and uncertainty avoidance) were higher among Hispanic workers than non-Hispanic workers in construction workplaces. Furthermore, the findings of Al-Bayati et al. (2017a) suggest that these cultural differences could impact the safety behavior and site-level safety performance. The following are potential effects that can arise from the lack of awareness of active cultural differences (ACDs):

- High Power Distance: Workers in a high-power distance culture may not communicate safety issues with their supervisors. For example, Hispanic workers may not express their feeling and concern. Furthermore, they may be willing to accept risk-taking behavior while executing planned tasks.
- Collectivism: The main undesirable effect of the collectivistic culture is the non-trusting environment among the workers from one group against workers from another group. On the other hand, this cultural value may help in enforcing site safety, if managed well, since Hispanic workers may tend to take care of each other.
- Uncertainty Avoidance: Workers from a high uncertainty avoidance culture will strive to get detailed instructions from their supervisors. Construction supervisors are not providing comprehensive enough instructions to Hispanic workers as per the findings of Al-Bayati et al. (2017a).

Construction, by its nature, is a process that requires effective communication between all parties for successful project completion. Therefore, effective communication channels and positive interactions are fundamental to success. Negative interactions also called interpersonal conflicts at work (ICW) may lead to adverse effects including work stress and undesirable behavior (De Raeve, Jansen, van den Brandt, Vasse, & Kant, 2009; Meier, Semmer, & Gross, 2014; Bruk-Lee & Spector, 2006). Nixon, Mazzola, Bauer, Krueger, and Spector (2011) suggested that ICWs can result from a wide range of causes such as work disagreements and disrespectful actions. The lack of attention to active cultural differences by construction supervisors and workers can lead to culturally based assumptions, misinterpretations, and interpersonal conflicts at U.S. construction sites. For example, Chen, McCabe, and Hyatt (2017) found that interpersonal conflicts can adversely affect safety performance resulting in more injuries, stress, and losses. Therefore, more research examining active cultural differences and recommending national remedies are crucial to improving performance in U.S. construction workplaces. Fig. 1 illustrates the possible positive effects of increasing awareness of active cultural differences based on the findings of Chen et al. (2017) and Al-Bayati et al. (2017b) (Fig. 2).

3. Research goal and design

Since the concept of active cultural differences (ACDs) in relatively new, more empirical research on its existence and its influence is necessary. In addition, recent studies that investigated ACDs have used non-probability samples while collecting data that is extremely common in construction research (Abowitz & Toole, 2010). While non-probability techniques provide valuable insights, the generalization of findings to larger populations is questionable (Fellows & Liu, 2008). To overcome this, Abowitz and Toole (2010) recommend gathering evidence from multiple replication studies that examine the same of similar constructs. Based on this advice, the main objective of the research reported in this

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