



Mechanisms of inequalities in health and safety : conceptual model and research agenda

*Mécanismes d'inégalités en santé et sécurité : modèle conceptuel et agenda de
recherche*

*Mecanismos de desigualdad en la salud y la seguridad: modelo conceptual y
agenda de investigación*

Stephanie Premji



Electronic version

URL: <http://journals.openedition.org/pistes/3825>

DOI: 10.4000/pistes.3825

ISSN: 1481-9384

Publisher

Les Amis de PISTES

Electronic reference

Stephanie Premji, « Mechanisms of inequalities in health and safety : conceptual model and research agenda », *Perspectives interdisciplinaires sur le travail et la santé* [Online], 16-2 | 2014, Online since 01 March 2014, connection on 01 May 2019. URL : <http://journals.openedition.org/pistes/3825> ; DOI : 10.4000/pistes.3825

This text was automatically generated on 1 May 2019.



Pistes est mis à disposition selon les termes de la licence Creative Commons Attribution - Pas d'Utilisation Commerciale - Pas de Modification 4.0 International.

Mechanisms of inequalities in health and safety : conceptual model and research agenda

Mécanismes d'inégalités en santé et sécurité : modèle conceptuel et agenda de recherche

Mecanismos de desigualdad en la salud y la seguridad: modelo conceptual y agenda de investigación

Stephanie Premji

We thank Karen Messing, Niklas Krause, James Nazroo, Hester Lipscomb, Emily Ahonen, Wayne Lewchuk and Butch de Castro for helpful comments on earlier drafts of this manuscript. However, any mistakes are the sole responsibility of the author.

1. Introduction

- 1 Foreign-born individuals make up an increasingly large share of the Canadian labour market. Immigrants account for 21 % of the labour force and a growing proportion of new entrants on the job market (Citizenship and Immigration Canada, 2012). At the same time, a recent press release by the Canadian Labour Congress reveals that temporary migrants are now filling roughly 75 % of new jobs (2013). Despite their important representation, immigrants and migrants – women in particular – are often found at the bottom of the occupational hierarchy in low paid, low status and high risk jobs. In fact, a growing body of scientific evidence from Canada and other industrialized countries has highlighted their inferior occupational health and safety experiences and outcomes. This work has been met with rising concern by community groups, labour unions and organizations responsible for prevention and/or compensation.
- 2 In spite of the recent surge in interest, occupational health inequalities are not new. For example, in the late 1800s, labourers from China were enlisted to build the Canadian Pacific Railway for a fraction of the salary paid to other workers. They were assigned the

most dangerous tasks, such as clearing the roadbed by blasting tunnels through the rock, and as a result many were killed by landslides and blasts (Li, 1998). Like the Chinese railway workers, the vulnerability of foreign-born workers around the world is reflected in poor working conditions and in disproportionate rates of fatal and non-fatal work-related injuries and illnesses . At times, inequalities are only existent or more marked among women or men (Ahonen et al., 2006 ; Smith and Mustard, 2009), highlighting the highly gendered dynamics that underlie them.

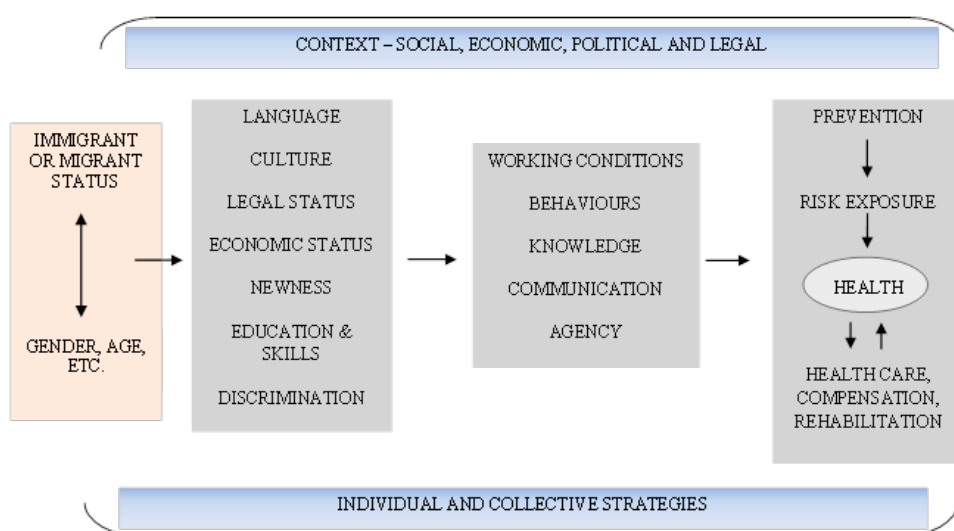
- 3 But while the existence of health and safety inequalities is well-understood, their mechanisms are not. Research in this area has generally been conducted in a theory vacuum, and consequently studies rarely build on each other to produce a substantial understanding of pathways. Recently, Benach and colleagues (2010) aptly noted the need to develop conceptual models to facilitate analysis of causal mechanisms. Previously, Murray (2003), Lipscomb (2006) and Krieger (2010) proposed conceptual models of occupational health inequalities ; they did not however specifically address the mechanisms at play for foreign-born workers. Additionally, they did not explicitly tackle mechanisms within identical job titles and task assignments, even though inequalities at times persist after controlling for job factors (Buchanan et al., 2010). The objective of our paper is therefore two-fold. First, through the development of a conceptual model, we seek to elucidate the mechanisms that create or magnify inequalities in health and safety between foreign-born workers and their native counterparts. Second, we aim to identify gaps in the evidence and propose avenues for research that have the potential to generate meaningful and actionable results.

2. Mechanisms underlying inequalities

- 4 We propose a conceptual model of the principal pathways to work-related health inequalities based on immigrant or migrant status (figure 1). The model was constructed through an iterative process of visual depiction and description based on a critical examination of the scientific and “grey” literature on immigration / migration, work and health known to the author. As such, our model does not attempt to be exhaustive but rather strives to establish groundwork for the generation of hypotheses. It reflects evidence that supports the role of environmental exposures rather than biological or genetic specificities in the differential distribution of diseases across populations (Yen and Syme, 2009). Accordingly, elevated rates of work-related injuries and illnesses are explained by the disproportionate exposure to risks of foreign-born workers across and within occupations . This situation is compounded, on one hand, by lacunae in prevention (Ahonen et al., 2009 ; Gravel et al., 2011) and, on the other, by inferior access to and experiences with care, compensation and rehabilitation (Coté, 2012 ; Dong et al., 2007 ; Gravel et al., 2007 ; Kosny et al., 2011).
- 5 Differences in working conditions play a major role in the generation of these inequalities. Immigrants and migrants are over-represented in high risk jobs, and within identical job titles they may be assigned the most thankless tasks (Preibisch and Bindford, 2008 ; Premji et al., 2010 ; Smith et al., 2009). Making matters worse, these jobs are often those with the least protection. Migrants, for instance, make up a large share of workers in agriculture and domestic work, sectors where regulatory protections are generally weaker than in other sectors (Liebman et al., 2013). Foreign-born workers also find themselves at risk by virtue of their higher likelihood to work in jobs that are non-

unionized (Smith and Mustard, 2010), informal (Hazans, 2011) and non-standard (i.e. day labour, subcontract work, temporary work) (Buchanan, 2004 ; Knox, 2010 ; Thébaud-Mony, 2000). These employment characteristics impact health through pathways that include greater exposure to risks ; incomplete protection and training ; absence of coverage by insured public or private health services ; and lack of compliance with and enforcement of legislation.

FIGURE 1. CONCEPTUAL MODEL OF MECHANISMS OF INEQUALITIES IN HEALTH AND SAFETY BY FOREIGN-BORN STATUS



- 6 Aside from working conditions, inequalities in work-related health are generated by foreign-born workers' limited knowledge about health and safety, impeded communication with employers and service providers, detrimental attitudes and behaviours towards risks and health, and constrained agency. These processes are highly intertwined and operate across and within jobs, so that individuals who are assigned exactly the same task may still be exposed to different risks or have different experiences with prevention, care, compensation and rehabilitation. But why do immigrants and migrants experience poor working conditions and challenges with regards to knowledge, communication, behaviours and agency? In sum, it ensues from their vulnerability, which in turn is due to their language barriers, cultural differences, legal status, economic status, newness in the job and host country, lower education and skill levels, and discrimination experiences. These factors interact with each other in endless variations, shaped by the broader social, economic, political and legal context, ultimately establishing foreign-born individuals as marginalized "others."
- 7 As an illustration of how these factors relegate immigrant and migrant workers to hazardous work, McKay and colleagues (2006) interviewed 200 migrant workers in England and Wales and found that their motivation to earn as much as possible in the shortest amount of time possible led them to accept and remain in risky employment. In France, Puech (2006) interviewed female hotel room cleaners and found that their lack of qualifications - having been full-time wives and mothers in their countries of origin - channeled them into the abusive cleaning industry. Education and experience however, particularly if they are obtained abroad, are not guarantees of a good, safe job. In Toronto, we found that Chinese workers reported hazardous working conditions more

often than whites, yet two-thirds of them had a university education compared to half of whites (Premji and Lewchuk, 2013). Reasons for this are individual and institutional and include discriminatory employer practices, state immigration and integration policies, and restrictive professional accreditation systems.

- 8 It is important not to under-estimate the influence of discriminatory or exploitative employer practices on the over-representation of immigrant and migrant workers in hazardous work. Employers at times display favoritism in the allocation of work (de Castro et al., 2006), a behaviour which may be based on assumptions about workers' physical and/or psychological skills or inclinations. For example, in the agricultural sector in Ontario, growers have been shown to assign groups of workers to particular tasks on the basis of stereotypes : "Mexicans...They don't like to dig evergreen, but give them a hoe and they will outwork the Jamaicans every time" . Employers may also purposely exploit the vulnerability of foreign-born workers to fill jobs with the worst conditions. For example, in the United States, employers enlisted Hispanic illegal day labourers to clean up debris after the 9/11 attacks and the 2005 Gulf Coast hurricanes, exposing them to dermatologic, respiratory and mental health risks for very low pay and without protective equipment (Aguilar and Podolsky, 2006 ; Malievskaia et al., 2002).
- 9 Language, culture, legal status, economic status, newness, education and discrimination influence not only the labour market distribution of immigrant and migrant workers, but also their knowledge, communication, behaviour and agency. Their newness in the host country often means that they lack knowledge about health and safety rights and resources (Agudelo-Suarez et al., 2009 ; McKay et al., 2006), a situation worsened by the scarcity of information aimed at this population (Kosny and Lifshen, 2012). Their newness in their jobs – either because they have been deskilled following resettlement or because as women they have entered paid work for the first time in the host country – can lead to them lacking the knowledge that they need to safely perform their jobs . Language barriers and cultural differences can also limit job-specific knowledge by affecting workers' ability to understand verbal or written information (O'Connor et al., 2005 ; Trajkovski and Loosemore, 2006), difficulties that are amplified in the absence of systematic training or proactive health and safety programs (Premji et al., 2008).
- 10 Foreign-born workers' lack of knowledge on how or with whom to raise concerns may affect their ability to act (Burger et al., 2004 ; Kosny et al., 2011 ; McKay et al., 2006), but other factors also play a role. Language barriers can lead to difficulties in communicating concerns to employers, seeking and communicating with care providers, and navigating the compensation system, which includes filling out forms, communicating with adjudicators, complying with procedures and self-advocating (Burger et al., 2004 ; Gravel et al., 2010). Some have suggested a possible role for culture in constraining agency. For example, it has been proposed that Chinese workers fail to challenge hazardous working conditions because of cultural emphasis on hierarchical relationships and harmony and attitudes of fatalism and resignation (Gong et al., 2009 ; Liu et al., 2008). However, other evidence points to the primary role of reduced bargaining power, such as that associated with legal vulnerability and economic precariousness in foreign-born workers' reluctance to take action (Madan et al., 2008 ; Menzet and Gutierrez, 2010).
- 11 Workers' fears of termination, retaliation, loss of status, or deportation are often warranted as employers have been known to prey on workers' vulnerability in order to discourage reporting . For example, in our study of Las Vegas hotel room cleaners (, we found that employers punished or directed disincentives at immigrant and English-as-

second-language workers for reporting such things as drug testing. Agency may also be limited by foreign-born workers' lower levels of coverage by workers' compensation regimes (and public or private health insurance , which may be due in part to exclusions based on legal status . Lack of understanding about or prejudice towards foreign-born workers on the part of health care providers and compensation adjudicators represent additional structural barriers (Côté, 2012 ; Meershoek et al., 2011 ; Premji, 2012).

- 12 Finally, studies have noted that immigrants and migrants may exhibit detrimental behaviour with regards to risks and health. There are documented instances of immigrants and migrants displaying attitudes and behaviours that place them at increased risk of occupational injury or illness ; but while some have emphasized the role of culture, others have argued for the primary role of socioeconomic vulnerability. For example, Menzel and Gutierrez (2010) and Walter and colleagues (2004) have proposed that machismo among Latinos encourages hard work and discourages the use of safety equipment. However, others have found that workers' lack of power and contextual conditions – such as lack of information or equipment – explain such risk-taking behaviour (Alexopoulos et al., 2009 ; Roelofs et al., 2011). The role of culture in influencing health behaviour is somewhat clearer : it may guide perceptions of illness or injury, attitudes about pain (Coté, 2012), styles of coping (Hoppe, 2011), treatment preferences (Arcury et al., 2006), and attitudes toward doctors.

3. Research agenda

- 13 As our conceptual model shows, we generally know what the pathways to inequalities are. However, we do not understand them at a level necessary for prevention or intervention. Specifically, we lack in-depth information on pathways and how they differ by gender and ethnicity and are shaped by broader social, economic, political and legal structures. We also lack information on strategies to reduce inequalities. We discuss these limitations below and propose avenues for research.

3.1 In-depth information is lacking on pathways to inequalities

- 14 It is fair to say, by way of example, that we understand relatively well how language barriers lead to inferior health and safety outcomes ; we have a poorer grasp however of the role of cultural differences. Even when it comes to language barriers, we lack information on pathways that are perhaps less obvious. That is, we understand language as a method of communication but not so much as a mechanism of power – how it may influence attitudes and perceptions and create or magnify unequal power relations. At issue is the fact that our understanding of the role of language barriers in the production of inequalities – like that of other factors associated with immigrant or migrant status – is primarily based on quantitative and qualitative studies that have examined language as one of a myriad of mechanisms that influence health and safety for immigrant or migrant workers rather than as the object of research. As a result, mechanisms are usually discussed in hypothetical terms or proposed as lists with few in-depth descriptions of underlying pathways.
- 15 Much like job titles are not ideal indicators of occupational exposure, population groupings such as “immigrants” may be too broad to provide a meaningful understanding of the experiences of workers and tangible opportunities for action. As an alternative, we

propose that the mechanisms of inequalities in health and safety, namely language, culture, legal status, economic status, newness, education and discrimination, all be reframed as determinants. We recognize however that there remain issues with the operationalization of each of these variables and that the untangling of broad population groupings may not always be feasible, for example when using existing survey or administrative data.

3.2 The ways in which pathways vary by gender and ethnicity are not well understood

- 16 Not only do we lack information on pathways, but we also lack information on how pathways differ between women and men. The epidemiological studies that have found differences by gender generally fail to discuss the differences altogether (Ahonen and Benavides, 2006) or provide, as explanations, hypotheses that require further examination (Smith and Mustard, 2009). Qualitative studies that have included a mixed sample or have focused on one sex or the other similarly provide little, if any, discussion of gender. Immigrants and migrants are also diverse groups in terms of ethnicity and age, to name but a few characteristics, yet this variability is rarely taken into account as foreign-born workers are by and large considered as a homogeneous group.
- 17 We propose that occupational health studies, whenever possible, take into account the intersectionality of foreign-born status, gender, ethnicity and other characteristics. This entails more than ensuring diversity in study samples. It requires analyzing data separately, presenting results separately, and including a discussion of sub-group differences. At the same time, it is important to take care not to fall into the essentialism trap, whereby group members are assigned particular attributes or circumstances. All in all, this approach will help ensure that the specific issues of the less powerful or visible groups are given proper attention.

3.3 The mechanisms underlying inequalities are rarely considered at the structural level

- 18 The broader context of social, economic and labour policies, programs and legislation that states institute is rarely contemplated. For example, the large majority of the health and safety studies that have looked at the role of language have focused on individual-level factors such as lack of information and communication difficulties. Few studies, whether qualitative or quantitative, have explored the contributory role of structural factors such as the availability of information or translation services, or the lack of sufficient means for integrating newcomers (e.g. language classes). As a result, mechanisms are conceptualized in terms of human capital differences, and are seen as intrinsic. The problem with this approach is that it can lead to victim-blaming and help perpetuate stereotypes or deterministic notions.
- 19 Accordingly, research on health and safety inequalities should highlight the context-specific nature of the relationships examined. For instance, the influence of a precarious legal status on workers' health should be explored in the context of policies and legislation on migration and immigration that create insecurity, employer dependence and illegality, and should incorporate a consideration of gaps by legal status in labor regulations and public services. Even quantitative analyses can adopt such a structural

approach, as illustrated by work from Berdahl on the effect of having health insurance on medical care utilization for work-related health problems (2001). This approach will help prevent inequalities in work-related health from being erroneously attributed to differences in biology, genetics or ability while ensuring that both micro and macro level factors can be targeted for prevention and intervention.

- 20 In the same vein, there is a need for research on how various actors within the system – physicians, compensation and rehabilitation staff, supervisors – act towards foreign-born workers. This research is important because occupational health disparities arise in part from practices and attitudes at the front-lines of compensation and care systems and in every day workplace interactions. Meershoek (2011) provides an interesting example of this approach. Her qualitative study examined, through participant observation, physicians' attitudes toward migrant workers who are suffering from an occupational injury or illness. Her analysis revealed that physicians interpret migrants' behaviours in cultural terms and in doing so lessen their ability to meet their needs. As a result, diagnosis and treatment was compromised and migrants remained work-incapacitated for longer periods.

3.4 There is little information on strategies to reduce inequalities

- 21 More and more research is being conducted on ways to reduce health and safety risks among foreign-born workers. Not surprisingly, much of this literature has focused on initiatives for conveying information to workers on specific topics (e.g. pesticides) in light of linguistic or cultural barriers and with the goal of influencing knowledge, attitudes or behaviour. Several innovative approaches have been used, including social marketing programs (Menzel and Shrestha, 2012) and community-based participatory interventions . For instance, Arcury and colleagues (2009) documented the use of a lay health advisor intervention whereby volunteer *promotoras* delivered a pesticide safety curriculum to farmworker women in the United States. However the authors noted that behavioural modification programs are limited and concluded that a more structural program, paired with policy changes that target employers, is needed to address pesticide exposure. Researchers should therefore continue to document best practices with regards to strategies to reduce inequalities while exploring ways to promote a culture of safety in work environments employing foreign-born workers (Arcury et al., 2010).

4. Conclusions

- 22 There is ample evidence of inequalities in occupational health and safety between foreign-born workers and their native counterparts, but research in this area has been conducted in a theory vacuum. Since analysis of empirical evidence requires theoretical clarity about the underlying causes of inequalities, we proposed a conceptual model for the mechanisms at play. We described how language, culture, legal status, education / skills, newness, economic status and discrimination, alone or combined, generate vulnerabilities that are embodied as inequalities in working conditions, knowledge, communication, behaviours, and agency. In turn, these inequalities result in unequal risk exposure, prevention, care, compensation and rehabilitation. These mechanisms explain inequalities that have been observed across the labour market but also within individual tasks. That is, they explain why foreign-born workers who perform the same tasks as

their native counterparts may still experience disproportionate rates of occupational injuries and illnesses. However there is a need to reframe mechanisms as determinants while recognizing the influence of structural-level processes and multiple systems of social stratification. In other words, meaningful and actionable results can only be obtained by shifting our focus from the social determinants to the social production of occupational health inequalities.

BIBLIOGRAPHY

- Agudelo-Suarez, A., Gil-Gonzalez, D., Ronda-Perez, E., Porthé, V., Paramio-Perez, G., García, A.M., Gari, A. (2009). Discrimination, work and health in immigrant populations in Spain. *Soc Sci Med*, 68, 1866-1874.
- Aguilar, T., Podolsky, L. (2006). Risk amid recovery : occupational health and safety of Latino immigrant workers in the aftermath of the Gulf Coast hurricanes Los Angeles : UCLA Labor Occupational Safety and Health Program and the National Day Laborer Organizing Network.
- Ahonen, E.Q., Benavides, F.G. (2006). Risk of fatal and non-fatal occupational injury in foreign workers in Spain. *J Epidemiol Community Health*, 60, 424-426.
- Ahonen, E.Q., Porthé, V., Vazquez, M.L., García, A.M., Lopez-Jacob, M.J., Ruiz-Frutos, C., Ronda-Perez, E., Benach, J., Benavides, F.G. (2009). A qualitative study about immigrant workers' perceptions of their working conditions in Spain. *J Epidemiol Community Health*, 63, 936-942.
- al-Arrayed, A., Hamza, A. (1995). Occupational injuries in Bahrain. *Occup Med (Lond)*, 45, 231-233.
- Alexopoulos, E.C., Kavadi, Z., Bakoyannis, G., Papantonopoulos, S. (2009). Subjective risk assessment and perception in the Greek and English bakery industries. *Journal of environmental and public health*, 891754.
- Arcury, T., Vallejos, Q., Feldman, S., Quandt, S. (2006). Treating Skin Disease. Self-management behaviors of Latino farmworkers. *Journal of Agromedicine*, 11, 27-35.
- Arcury, T.A., Estrada, J.M., Quandt, S.A. (2010). Overcoming language and literacy barriers in safety and health training of agricultural workers. *Journal of Agromedicine*, 15, 236-248.
- Arcury, T.A., Marín, A., Snively, B.M., Hernández-Pelletier, M., Quandt, S.A. (2009). Reducing farmworker residential pesticide exposure : evaluation of a lay health advisor intervention. *Health promotion practice*, 10, 447-455.
- Benach, J., Muntaner, C., Chung, H., Benavides, F.G. (2010). Immigration, employment relations, and health : Developing a research agenda. *Am J Ind Med*, 53, 338-343.
- Berdahl, T.A. (2010). Medical care utilization for work-related injuries in the United States 2002-2006. *Med Care*, 48, 645-651.
- Buchanan, S. (2004). Day labor and occupational health : time to take a closer look. *New Solut* 14 : 253-260.

- Buchanan, S., Vossen, P., Krause, N., Moriarty, J., Frumin, E., Shimek, J.A., Mirer, F., Orris, P., Punnett, L. (2010). Occupational injury disparities in the US hotel industry. *Am J Ind Med*, 53, 116-125.
- Burgel, B.J., Lashuay, N., Israel, L., Harrison, R. (2004). Garment workers in California : health outcomes of the Asian Immigrant Women Workers Clinic. *AAOHN J*, 52, 465-475.
- Canadian Labour Congress (2013). Migrant workers account for most new jobs.
- Citizenship and Immigration Canada (2012). The Canadian labour market : setting the context.
- Côté, D. (2012). Intercultural communication in health care : challenges and solutions in work rehabilitation practices and training : a comprehensive review. *Disabil Rehabil*.
- de Castro, A.B., Fujishiro, K., Sweitzer, E., Oliva, J. (2006). How immigrant workers experience workplace problems. A qualitative study. *Archives of Environmental and Occupational Health*, 61, 249-258.
- De Souza, R.A., Hecker, S., de Castro, A., Stern, H., Hernandez, A., Seixas, N. (2012). Novel Approaches to Development, Delivery and Evaluation of a peer-led occupational safety training for Latino day laborers. *New solutions : a journal of environmental and occupational health policy*, 22, 387-405.
- Dong, X., Ringen, K., Men, Y., Fujimoto, A. (2007). Medical costs and sources of payment for work-related injuries among Hispanic construction workers. *J Occup Environ Med*, 49, 1367.
- Gong, F., Baron, S., Ayala, L. (2009). Formative research in occupational health and safety intervention for diverse, underserved worker populations : a homecare worker intervention project. *Public Health Rep*, 124, Suppl 1, 84-89.
- Gravel, S., Brodeur, J.M., Vissandjée, B., Champagne, F., Lippel, K. (2007). Incompréhension des travailleurs immigrants victimes de lésions professionnelles de leurs difficultés d'accéder à l'indemnisation. *Migration et Santé*, 131, 1-42.
- Gravel, S., Rhéaume, J., Legendre, G. (2011). Strategies to develop and maintain occupational health and safety measures in small businesses employing immigrant workers in metropolitan Montreal. *International Journal of Workplace Health Management*, 4, 164-178.
- Gravel, S., Vissandjée, B., Lippel, K., Brodeur, J.M., Patry, L., Champagne, F. (2010). Ethics and the compensation of immigrant workers for work-related injuries and illnesses. *Journal of Immigrant and Minority Health*, 12, 707-714.
- Hazans, M. (2011). Informal workers across Europe : evidence from 30 countries. Discussion Paper Series Bonn : Institute for the Study of Labor (IZA).
- Hoppe, A. (2011). Psychosocial working conditions and well-being among immigrant and German low-wage workers. *J Occup Health Psychol*, 16, 187-201.
- Knox, A. (2010). 'Lost in translation' : an analysis of temporary work agency employment in hotels. *Work, Employment & Society*, 24, 449-467.
- Kosny, A., Lifshen, M. (2012). A national scan of employment standards, occupational health and safety and workers' compensation resources for new immigrants to Canada. *Canadian Journal of Public Health*, 103, 53-58.
- Kosny, A., MacEachen, E., Lifshen, M., Smith, P., Jafri, G.J., Neilson, C., Pugliese, D., Shields, J. (2011). Delicate dances : immigrant workers' experiences of injury reporting and claim filing. *Ethn Health*.

Krieger, N. (2010). Workers are people too : societal aspects of occupational health disparities--an ecosocial perspective. *Am J Ind Med*, 53, 104-115.

Lashuay, N., Harrison, R. (2006). Barriers to occupational health services for low-wage workers in California. A report to the Commission on Health and Safety and Workers' Compensation, California Department of Industrial Relations San Francisco : University of California, San Francisco, 128p.

Lee, H., Chae, D., Lee, K., Lee, M. (2012). Application of community-based participatory research principles : preventing work-related musculoskeletal disorders among female korean-chinese migrant workers in Korea. *Workplace health & safety*, 60, 313.

Li, P.S. (1998). *The Chinese in Canada*. Oxford University Press Toronto.

Liebman, A.K., Wiggins, M.F., Fraser, C., Levin, J., Sidebottom, J., Arcury, T.A. (2013). Occupational Health Policy and Immigrant Workers in the Agriculture, Forestry, and Fishing Sector. *Am J Ind Med*, 56, 8, 975-84

Lipscomb, H.J., Loomis, D., McDonald, M.A., Argue, R.A., Wing, S. (2006). A conceptual model of work and health disparities in the United States. *Int J Health Serv*, 36, 25-50.

Liu, C., Nauta, M., Spector, P., Li, C. (2008). Direct and indirect conflicts at work in China and the US : A cross-cultural comparison. *Work & Stress*, 22, 295-313.

Loh, K., Richardson, S. (2004). Foreign-born workers : trends in fatal occupational injuries, 1996-2001. *Mon Labor Rev June*, 42-53.

Madan, I., Reading, I., Palmer, K.T., Coggon, D. (2008). Cultural differences in musculoskeletal symptoms and disability. *Int J Epidemiol*, 37, 1181-1189.

Malievskaya, E., Rosenberg, N., Markowitz, S. (2002). Assessing the health of immigrant workers near ground zero : preliminary results of the World Trade Center Day Laborer Medical Monitoring Project. *Am J Ind Med*, 42, 548-549.

McCollister, K.E., Arheart, K.L., Lee, D.J., Fleming, L.E., Davila, E.P., LeBlanc, W.G., Christ, S.L., Caban Martinez, A.J., West, J.P., Clark III, J.E. (2010). Declining health insurance access among US Hispanic workers : not all jobs are created equal. *Am J Ind Med*, 53, 163-170.

McKay, S., Craw, M., Chopra, D. (2006). Migrant workers in England and Wales : an assessment of migrant worker health and safety risks. London, Health and Safety Executive, 274p.

Meershoek, A., Krumeich, A., Vos, R. (2011). The construction of ethnic differences in work incapacity risks : Analysing ordering practices of physicians in the Netherlands. *Soc Sci Med*, 72, (15-22).

Menzel, N.N., Gutierrez, A.P. (2010). Latino worker perceptions of construction risks. *Am J Ind Med*, 53, 179-187.

Menzel, N.N., Shrestha, P.P. (2012). Social marketing to plan a fall prevention program for latino construction workers. *Am J Ind Med*, 55, 729-735.

Murray, L.R. (2003). Sick and tired of being sick and tired : scientific evidence, methods, and research implications for racial and ethnic disparities in occupational health. *Am J Public Health*, 93, 221-226.

Nicholson, V.J., Bunn, T.L., Costich, J.F. (2008). Disparities in work related injuries associated with worker compensation coverage status. *Am J Ind Med*, 51, 393-398.

O'Connor, T., Loomis, D., Runyan, C., Abboud dal Santo, J., Schulman, M. (2005). Adequacy of health and safety training among young Latino construction workers. *Journal of occupational*

- and environmental medicine / American College of Occupational and Environmental Medicine, 47, 272-277.
- Preibisch, K., Binford, L. (2008). Interrogating racialized global labour supply : an exploration of the racial/national replacement of foreign agricultural workers in Canada. *Canadian Review of Sociology*, 44, 5-36.
- Premji, S., Lewchuk W. (2013). Racialized and gendered disparities in occupational exposures among Chinese and white workers in Toronto. *Ethnicity & Health*.
- Premji, S., Smith, P. (2013). Education-to-job mismatch and the risk of work injury. *Inj Prev*, 19, 106-111.
- Premji, S. (2012). Work reintegration of linguistic minorities in Ontario : an analysis of case law narratives from appeal decisions. Conference of the Canadian Association for Research on Work and Health Vancouver.
- Premji, S., Duguay, P., Messing, K., Lippel, K. (2010). Are immigrants, ethnic and linguistic minorities over-represented in jobs with a high level of compensated risk ? Results from a Montreal, Canada study using census and workers' compensation data. *Am J Ind Med* 53, 875-885.
- Premji, S., Krause, N. (2010). Disparities by ethnicity, language, and immigrant status in occupational health experiences among Las Vegas hotel room cleaners. *Am J Ind Med*, 53, 960-975.
- Premji, S., Messing, K., Lippel, K. (2008). Broken English, broken bones ? Mechanisms linking language proficiency and occupational health in a Montreal garment factory. *Int J Health Serv*, 38, 1-19.
- Puech, I. (2006). Femmes et immigrées : corvéables à merci. *Travail, genre et sociétés*, 16.
- Quinn, M.M., Sembajwe, G., Stoddard, A.M., Kriebel, D., Krieger, N., Sorensen, G., Hartman, C., Naishadham, D., Barbeau, E.M. (2007). Social disparities in the burden of occupational exposures : Results of a cross-sectional study. *Am J Ind Med*, 50, 861-875.
- Roelofs, C., Sprague-Martinez, L., Brunette, M., Azaroff, L. (2011). A qualitative investigation of Hispanic construction worker perspectives on factors impacting worksite safety and risk. *Environmental Health*, 10, 84.
- Sikka, A., Lippel, K., Hanley, J. (2011). Access to health care and workers' compensation for precarious migrants in Quebec, Ontario and New Brunswick. *McGill Journal of Law & Health* 5.
- Smith, P.M., Chen, C., Mustard, C. (2009). Differential risk of employment in more physically demanding jobs among a recent cohort of immigrants to Canada. *Injury prevention : journal of the International Society for Child and Adolescent Injury Prevention*, 15, 252-258.
- Smith, P.M., Mustard, C. (2009). Comparing the risk of work-related injuries between immigrants to Canada and Canadian-born labour market participants. *Occup Environ Med*, 66, 361.
- Smith, P.M., Mustard, C.A. (2009). Comparing the risk of work-related injuries between immigrants to Canada and Canadian-born labour market participants. *Occup Environ Med*, 66, 361-367.
- Smith, P.M., Mustard, C.A. (2010). The unequal distribution of occupational health and safety risks among immigrants to Canada compared to Canadian-born labour market participants : 1993-2005. *Safety Science*, 48, 1296-1303.
- Thébaud-Mony, A. (2000). *Industrie nucléaire, sous-traitance et servitude*. Paris, INSERM.

Trajkovski, S., Loosemore, M. (2006). Safety implications of low-English proficiency among migrant construction site operatives. *International Journal of Project Management*, 24, 446-452.

Walter, N., Bourgois, P., Loinaz, H.M. (2004). Masculinity and undocumented labor migration : injured latino day laborers in San Francisco. *Soc Sci Med*, 59, 1159-1168.

Yen, I.H., Syme, S.L. (1999). The social environment and health : a discussion of the epidemiologic literature. *Annu Rev Public Health*, 20, 287-308.

ABSTRACTS

A growing number of studies from industrialized countries have documented elevated rates of occupational injuries and illnesses for foreign-born workers relative to their native counterparts. However, the mechanisms at play remain poorly understood. We propose a conceptual model of the mechanisms that underlie the observed inequalities. We describe how language barriers, cultural differences, vulnerable legal status, precarious economic status, newness in the host country and job, lower education and skill levels, and discrimination all generate vulnerabilities that are embodied as poor working conditions, limited knowledge of health and safety, impeded communication with employers and service providers, detrimental behaviours towards risks or health, and constrained agency. These processes, in turn, engender inequalities in exposures as well as in prevention, care, compensation and rehabilitation, which impact health. We note that in-depth information is lacking on pathways to inequalities, on how they differ by gender and ethnicity, and on how they are shaped by broader social, economic, political and legal structures. We also note the lack of information on strategies to reduce inequalities. We propose avenues for research that have the potential to lead to meaningful and actionable results.

Un nombre croissant d'études provenant de pays industrialisés ont documenté des taux élevés d'accidents et de maladies professionnelles pour les travailleurs nés à l'étranger. Par contre, les mécanismes en jeu sont mal compris. Nous proposons un modèle conceptuel des mécanismes qui sous-tendent les inégalités. Nous décrivons comment les barrières linguistiques, les différences culturelles, la vulnérabilité liée au statut légal, la précarité économique, la nouveauté dans le pays hôte et/ou dans l'emploi, le niveau inférieur d'éducation ou d'expérience et la discrimination génèrent des vulnérabilités qui se reflètent dans des conditions de travail difficiles, des connaissances inférieures sur la santé et la sécurité, des problèmes de communication, des comportements préjudiciables vis-à-vis des risques ou de la santé, et des limites par rapport à la capacité d'agir. Ces processus, en retour, engendrent des inégalités en matière d'expositions ainsi qu'en ce qui a trait à la prévention, aux soins, à l'indemnisation et à la réhabilitation. Nous notons le manque d'information détaillée sur les chemins menant aux inégalités, et sur la façon dont ils diffèrent selon le genre et l'ethnicité et sont façonnés par les structures sociales, économiques et politiques. Nous notons également le manque d'information sur les stratégies pour réduire les inégalités. Nous proposons des avenues de recherche qui ont le potentiel de mener à des résultats significatifs et actionnables.

Un número creciente de estudios proveniente de países industrializados han documentado tasas elevadas de accidentes y enfermedades profesionales dentro de los trabajadores nacidos en el extranjero en relación con sus contrapartes nativas. Sin embargo, los mecanismos en juego siguen siendo poco conocidos. Proponemos un modelo conceptual de los mecanismos que subyacen a las desigualdades observadas. Se describe cómo las barreras lingüísticas, las diferencias culturales, la vulnerabilidad relacionada con el estatus legal, la situación económica precaria, la llegada reciente al país de acogida y al trabajo así como la discriminación y un menor

nivel de educación y de experiencia, todos generan vulnerabilidades: condiciones de trabajo difíciles, limitado conocimiento de la SST, problemas de comunicación con empleadores y proveedores de servicios, comportamiento prejudiciales en relación a los riesgos de SST y una capacidad de acción limitada. Estos procesos, a su vez, generan desigualdades en la exposición así como en la prevención, la atención, la indemnización y la rehabilitación, lo que trae consigo una afectación a la salud. Notamos una falta de información profunda sobre los mecanismos que conducen a las desigualdades observadas y como estas se diferencian por género y etnia y como están determinadas por las estructuras sociales, económicas y políticas. Notamos también la falta de información sobre las estrategias para reducir las desigualdades. Proponemos rutas de investigación que tienen el potencial de dar lugar a resultados significativos y acciones concretas.

INDEX

Palabras claves: desigualdades en salud y seguridad, mecanismos, modelo conceptual, inmigrantes y migrantes, género

Keywords: health and safety inequalities, mechanisms, conceptual model, immigrants and migrants, gender

Mots-clés: inégalités en santé et sécurité, mécanismes, modèle conceptuel, immigrants et migrants, genre

AUTHOR

STEPHANIE PREMJI

Assistant Professor, School of Labour Studies & Department of Health, Aging and Society,
McMaster University