

Victims of Occupational Injuries: A Comparison between Migrants and Italians

Results of a survey conducted in Trentino in 2009*

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Riassunto

Questo saggio pone l'attenzione sulle vittime di infortunio sul lavoro e approfondisce le differenze tra italiani e stranieri. Lo studio è stato condotto tramite la realizzazione di una *survey* in Trentino: un questionario è stato somministrato a due campioni, uno di vittime italiane di infortuni sul lavoro (300 rispondenti) e uno di vittime straniere (200 rispondenti). Il lavoro sul campo ha permesso di raggiungere i seguenti obiettivi: verificare se gli stranieri siano meno o più vulnerabili degli Italiani rispetto agli infortuni sul lavoro; stilare un profilo dell'infortunato straniero e di quello italiano e individuare, attraverso l'analisi statistica, quali fattori possono aiutare a spiegare la maggiore vittimizzazione degli stranieri.

Il presente saggio risponderà alle seguenti domande: Chi è la vittima? Con che frequenza è stata vittimizzata? Qual è la gravità degli infortuni subiti? Quale la tendenza alla non denuncia? Quali le caratteristiche personali (età, genere, ecc.) della vittima? E la sua storia professionale? Quali le caratteristiche dell'azienda in cui lavora e il livello di conformità alle norme sulla Salute e Sicurezza nell'azienda stessa?

Infine, sono presentati i fattori che possono aiutare a spiegare la maggiore vittimizzazione degli stranieri nel fenomeno e sono indicate alcune possibili direzioni di azione per contrastare la problematica degli infortuni sul lavoro.

Résumé

Cet article attire l'attention sur les victimes d'accidents du travail et, de manière plus spécifique, sur les différences entre travailleurs italiens et immigrés. Une enquête de terrain a été conduite dans la région du Trentin : un questionnaire a été soumis à deux groupes de victimes d'accidents du travail, l'un composé de travailleurs italiens (300 répondants) et l'autre d'immigrés (200 répondants). Cette étude a permis d'atteindre les objectifs suivants : vérifier si les travailleurs étrangers sont plus vulnérables aux accidents du travail que les italiens ; décrire le profil des victimes d'accidents du travail (aussi bien italiennes qu'immigrantes) ; à travers l'analyse statistique, identifier les facteurs qui peuvent contribuer à expliquer la plus haute proportion de victimes parmi les immigrés.

Ensuite, cet article s'attache à répondre aux questions suivantes : Qui est la victime ? Combien de fois est-elle victime ? Quelle est la gravité des accidents subis ? Qu'en est-il de la propension des victimes à ne pas porter plainte ? Quelles sont les caractéristiques personnelles (âge, genre, etc.) et l'histoire professionnelle de la victime ? Quelles sont les caractéristiques de l'entreprise où la victime travaille ? Quels sont les niveaux de conformité en matière de santé et de sécurité sur le lieu de travail dans cette entreprise ?

Enfin, l'analyse prendra en compte aussi bien les facteurs pouvant contribuer à expliquer le taux le plus élevé de victimisation parmi les immigrants, que les actions possibles pour prévenir les accidents du travail.

Abstract

This essay deals with victims of occupational injuries and delves deeper into the differences between Italians and migrants. The study is based on the carrying out of a survey in Trentino: a questionnaire has been administered to two samples, one of Italian victims (300 respondents) and one of immigrant victims (200 respondents) of work injuries. The work on the field has allowed, then, to gain the following objectives: verifying whether migrants are more vulnerable to occupational injuries than Italians; depicting a profile of the injured migrant and of the injured Italian and finding out, through statistical analysis, the factors that help to explain migrants' over-representation in the phenomenon.

This essay gives the following answers: Who is the victim? How often is he/she victimized? What about the inclination not to report injuries? What are the personal characteristics (age, gender, etc.) of the victim and his/her occupational history? What are the characteristics of companies where he/she works? What is the level of compliance with Health and Safety rules in these companies? How often has he/she been victimized?

Then, some factors that may help to explain the higher victimization of migrants in the phenomenon are presented and some suggestions about possible actions to pursue are indicated.

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1. The survey in Trentino.

According to Inail data (1), the global trend of injuries in Italy has been decreasing by 14.5% since 2001. This data is the combination of the fall of Italian workers injuries (-22.3%) and the important rise of migrants' injuries (+74.6%) in that period. In 2008, the incidence of injuries occurred to migrants amounts to 16.4% of overall injures, with a rise of 12.8% in the last four-year period. This data, even if at least partly linked with the increasing participation of migrants to the world of labor in the last years, needs to be deepened through targeted studies.

Since the Seventies researchers (mainly from USA and UK) have attempted to demonstrate whether non-natives are more vulnerable than natives to occupational injuries and to explain the reasons for this alleged over-representation: most studies, notwithstanding the presence of many limits related both to the content and to the methodology, have confirmed a higher vulnerability of migrants in respect to natives (2).

In order to study the issue of the gap of vulnerability between natives and non natives in Italy, a survey has been carried out in the first semester of 2009 (3) in Trentino. Trentino, in fact, is characterised by high levels of work injuries. In 2008, the occupational injury rate in the Province of Trento is 53.7 versus a mean value of 37.4 in Italy. Such high levels of recorded work injuries are presumably linked both to the widespread presence of activities such as Agriculture and Construction and to a general good level of legality and, consequently, a lower level of not reported injuries. In addition to this, work injuries reported by immigrants in 2008 have represented

the 21.9% of global reported injuries in the area (mean value for Italy: 16.4%).

The survey has been conducted through face-to-face administration of a questionnaire to two samples (4), one of 300 Italians, the second of 200 migrants who have experienced at least one work injury in their actual company or in the company where they were last employed (in case of unemployed workers). Questionnaires were administered inside Inail Headquarters in Trento, at Cinformi (Informative Centre for Immigrants) premises, in the main trade unions local offices (Cgil, Cisl, Uil) and -in a small number of cases- with the help and the assistance of mediators belonging to associations. The questionnaire includes both questions on factual aspects and on respondents' opinions. On the one hand, subjects have been questioned about occupational injuries experienced (in whole life and in current company), their impact and the past reporting behavior, their employment history, the characteristics of the actual company of employment and the job characteristics and Health and Safety rules compliance. On the other hand, the last part of the questionnaire opens a window on the respondents' opinion regarding the supposed causes for occupational injuries and non-reporting attitudes.

This piece of work focuses on work injuries victims: it aims firstly to provide information about the number of experienced injuries, their impact and the attitude to reporting them or not; secondly to depict a profile of the migrant and of the Italian victim of work injuries outlying similarities and differences between groups; thirdly, to identify explaining factors of injury frequency in the two samples and, finally, to

suggest some priorities that may need intervention.

2. Occupational Injuries: The higher vulnerability of migrants.

The data collected through the survey has highlighted information about the number of experienced injuries, their impact and the attitude to reporting them or not in the two samples, that of migrants and of Italians. Injuries occurred in both whole occupational life and in current company have been analyzed for the purposes of the administered survey.

Data on past reporting behavior has been included as a relevant source of information about injuries that remain hidden. In fact, the real size of the injury phenomenon is given by the number of reported injuries (the ones that are registered in official statistics), together with the number of not-reported ones. There might be several reasons for deciding not to report an injury: a personal preference, a request from the employer, even if in a situation of legal work, a situation of illegal work (that for migrants may also depend on the lack of a valid permit of permanence on the Italian territory). Irregularity and injury concurrency are thought to be interrelated: companies that tend not to pay regular contributes for their employees are also often less prone to invest money on Health and Safety, and this increases the risk of injuries. The foresaid interrelation is not easy to be studied, since it concerns two “dark figures” (hidden phenomena): On the one hand, it is difficult to figure out which and how many the situations of illegal work are (there are only approximate estimates on it); on the other hand, the number of injuries occurring in these situations is unknown

itself, because they are hardly ever reported. The survey, due to its ability to gather information directly from the subjects, rather than from the official statistics, is likely to give a first indication on the diffusion of the phenomenon and on the reasons for not reporting, and could also be an useful tool in order to find out how and why the two samples may differ.

- *Occupational injuries: more frequent among immigrants-* It is slightly more frequent for migrant workers to have experienced only one (55% versus 47.3% of the Italians) or two (30.5% vs. 28%) occupational injuries during their whole employment history. Even though occupational injuries are rare events themselves, it is quite common for the victim to incur in more than one event: more than half of the interviewees, in fact, experienced at least two injuries during their occupational life. In order to better understand the real extent of the phenomenon, injury frequency, instead of the absolute number of victimizations has been used in this study: in fact, experiencing the same number of injuries during a long occupational life does not have the same relevance as experiencing them during a short span of time. So, the absolute data needs weighting by the number of years on the labor market. If only taking into account the ratio between the number of injuries and the number of years of presence on the labor market, the resultant data is that nearly a half of the immigrants (47%) with respect to the Italians (85.6%) has experienced less than one occupational injury on a five year-time; again, 42.5% of immigrants versus 12.1% of Italians has experienced from 1 injury in a 5 year-time to 1 in a two year-time; finally, 10.5% of migrants versus

2.3% of Italians incurred in more than 1 injury in a two year-time.

If the number of injuries experienced in the current company is put in relation to the years of seniority in the company itself, once again immigrant workers incur more frequently into occupational accidents: in fact, only 14.5% of

immigrants experienced less than one injury in a period of five years versus a half of the Italians (50.6%); 31.5% vs. 23.7% from one injury in a five year-time to one in a two year-time, and 54% (versus 25.7%) more than one injury in a two year-time.

Tab. 1: Italian and immigrant victims of work injuries in whole occupational life and in current company.

Work injuries experienced in whole occupational life	Italians (%)	Immigrants (%)
Less than 1 injury in 5 years (0.01-0.19)	85.6	47.0
From 1 injury in a 5 year-time to 1 injury in a 2 year-time (0.21-0.5)	12.1	42.5
More than 1 injury in a 2 year-time (0.51-2)	2.3	10.5
<i>Total</i>	<i>100 (N=300)</i>	<i>100 (N=200)</i>
Work injuries in current company		
Less than 1 injury in a five year-time (0.01-0.19)	50.6	14.5
From 1 injury in a 5 year-time to 1 injury in a 2 year-time (0.21-0.5)	23.7	31.5
More than 1 injury in a 2 year-time (0.51-2)	25.7	54.0
<i>Total</i>	<i>100 (N=300)</i>	<i>100 (N=200)</i>

- *Injuries causing the loss of more than three months of work involve a higher percentage of migrant workers-* It is possible to estimate the impact of occupational injuries considering the average number of working-days lost: this data acts as a proxy variable for the severity of the event. The gathered data show that the average number of working days lost due to injury in the whole occupational life is less than 30 days for a half of the sample (50.8 % of migrants, 51.6 % of Italians). In consequence of occupational injuries, migrant workers are more likely than Italian workers to lose work for an average of 3 months or more (18.7% versus 13.5%). Percentages do not vary sensibly if injuries in current company only are taken into account.

As for the aftermaths of occupational injuries, the survey have not pointed out substantial differences in the two samples: 29% of the Italian injured workers (versus 24.9% of the migrant

injured workers) have asserted suffering from permanent damages, but it is important to note that 6% of migrant injured workers do not know if they suffer from permanent damages or not. The same as for disability: 76.3% of Italians and 77% of migrants have declared not to have any disabilities due to occupational injuries, while 10.3% of the Italians have declared to have a disability, and 5.5% of the immigrants have not been able to answer this question. Immigrants settle more often than Italians with a degree of invalidity under 10 (44.4% vs. 33.3%) or over 30 points (16.7% of the immigrants vs. 12.1% of the Italians).

The fact that immigrants are more exposed than Italians to injuries causing the loss of over 3 months of work, suggests a major severity of these injuries, so that a higher percentage of immigrant workers with permanent damages or disabilities would reasonably be expected. Even

though this thesis has not been confirmed yet by the data on permanent damages and disability, the fact that a relatively high percentage of migrant workers is unable to state if suffering or not from

long-term damages suggests that immigrants experience more difficulties when trying to have their damages or disabilities recognized.

Tab. 2: *Italians and immigrants by average number of working days lost due to injury in whole occupational life and in current company.*

Average number of working days lost in whole occupational life	Italians (%)	Immigrants (%)
Up to 1 month	51.6	50.8
From 1 to 3 months (31-90 days)	34.9	30.5
From 3 to 6 months (91-180)	7.4	11.3
Over 6 months (> 180)	6.1	7.4
<i>Total</i>	<i>100 (N=298)</i>	<i>100 (N=172)</i>
Average number of working days lost in current company		
Up to 1 month	52.0	52.3
From 1 to 3 months (31-90 days)	34.6	29.1
From 3 to 6 months (91-180)	7.4	11.0
Over 6 months (> 180)	6.0	7.6
<i>Total</i>	<i>100 (N=298)</i>	<i>100 (N=172)</i>

- *Immigrant workers more vulnerable to injuries than Italian ones* - When it comes to studying injuries, it is important to go beyond the mere concept of occurrence and take into account some further information on the severity of the injury itself. Then, it has deemed appropriate to introduce an index of vulnerability as the product of the frequency of injuries (how often events have occurred) for their impact (average number of working days lost). Vulnerability, due to the way it has been calculated and therefore to mathematical properties, also corresponds to the annual average number of working days lost (5). The distribution of Italian and migrant workers with regard to their vulnerability to occupational injuries has then been studied. When considering their whole employment history, most of the Italians (89.2%) settle on a low level of vulnerability, that is, they have lost an average number of 10 or less working days per year as a consequence of occupational

injuries. Only 65% of migrant workers settle on the same level of vulnerability, whilst they settle on high levels of vulnerability five times more than Italians (15.3% vs. 3.4%), with an annual average number of working days lost of more than 0. If only data regarding current or last employment are taken into account, migrants are once again on higher vulnerability levels: workers settling on a high level of vulnerability (>30 working days lost/year) are migrants (a double with respect to Italians: 28.5% vs. 13.6%). In conclusion, vulnerability to injuries is higher for migrants than for Italians, both considering the whole occupational history and the current/last employment.

Tab. 3: *Italians and immigrants by vulnerability in whole occupational life and in current company.*

Vulnerability in whole occupational life	Italians (%)	Immigrants (%)
Low (0-10)	89.2	65.0
Medium (11-30)	7.4	19.7
High (>30)	3.4	15.3
<i>Total</i>	<i>100 (N=297)</i>	<i>100 (N=177)</i>
Vulnerability in current company		
Low (0-10)	61.7	43.0
Medium (11-30)	24.7	28.5
High (>30)	13.6	28.5
<i>Total</i>	<i>100 (N=298)</i>	<i>100 (N=172)</i>

• *Immigrant victims less inclined to report occupational injuries-* 63.5% of the migrant workers' sample versus 79.6% of Italian workers sample affirmed to have always reported any occurred injury; 25% (migrants) vs. 19.7% (Italians) admitted reporting from time to time, while 11.5% of the immigrants (versus a 0.7% of Italians) have never reported occurred injuries. The same quota of both Italians and migrants (76%) affirmed not having reported one single injury during their whole occupational life, while it is interesting to point out that a quarter of the respondents admitted not having reported more than once.

Respondents who admitted non-reporting behaviors have been asked the main reason for non-reporting the last not reported injury: 73.7%

of the Italian workers explained this behavior as a personal preference (for using holidays or sick leave or for considering the injury of a too much modest extent to be reported), while 17.5% of them admitted being pushed to that from their employer. As for migrant workers, only 36.2% decided not to report for a personal preference, whereas 27.7% received a request from their company, 13.9% did not report to the relevant offices because illegally employed; 11.1% ignored the procedures for reporting occupational injuries; the same quota didn't report because they feared losing their job.

Tab. 4: *Italians and immigrants by report behavior and number of non-reported injuries.*

Report behavior	Italians (%)	Immigrants (%)
Never reported injuries	0.7	11.5
Occasionally reported injuries	19.7	25.0
Always reported injuries	79.6	63.5
<i>Total</i>	<i>100 (N=300)</i>	<i>100 (N=200)</i>
Number of non-reported injuries		
1	76.2	76.0
More than 1	23.8	24.0
<i>Total</i>	<i>100 (N=21)</i>	<i>100 (N=50)</i>

Later in the questionnaire, a number of statements focusing on the motivations for not-reporting injuries most frequently quoted

in literature has been brought to the attention of the respondents: through the analysis of the given answers, the survey attempted to understand

respondents' opinion and to bring out any possible differences between the two samples. In general, choosing not to report an injury may be related to some practical aspects (such as the minority of the injury itself, the need of time, the language barriers or the inability to fill out the necessary forms), but also to the fear of spoiling the relationship with the employer and the workmates, with the possible consequence of losing the job or having a bad name given or become victim of retaliations. All these reasons are often mentioned in literature.

On reasons for non-reporting, Italians' and migrants' opinions strongly differ. Immigrants are of the opinion that the minority of the injury (61.3%) and the fear of losing the job/wages (57%) and of being told off (55.5%) are the main reasons for not reporting an occurred injury. Over a half of the sample agree or totally agree with these reasons. The fear of being blamed (33.5%) and the will of the employer (26.5%) are also relevant reasons for deciding not to report an injury. In fact, a third of the sample agrees with the relative statements. Practical aspects are thought to be only secondary causes for non-reporting attitudes, and include: need of time (14.0%), difficulties encountered with the language and the filling out of forms (24.0%). To sum up, migrant workers mostly decide not to report an accident because they fear something: losing the job, losing the wages, being told off or

blamed or being thought to be unqualified by colleagues and supervisors.

The scenery is very different for Italian workers: a minor injury is considered by the sample the primary reason for not reporting (18.8%). Nevertheless, Italian workers tend to disagree with the submitted statements more often than immigrants: in fact, only small percentages (always under 16%) ascribe the failure to report an injury to the fear of losing the job, or being told off, or being blamed by workmates. Nearly none (0.7%) thinks injuries don't need reporting because worker's own faults. In conclusion, Italian workers do not seem to be afraid of losing their job and/or wages (61%), being blamed/mockered by supervisors and workmates (82.3%), being told off or punished when back at work (79%) or having to submit to the request of the employer not to report injuries to authorities (92%). Italians neither do think reporting an accident takes too much time (81.7%).

The global profile for the injured Italian worker as for non-reporting attitude is then completely different from the migrant worker's one: failure to report injuries depends for the Italian worker on the minority of the injury or on other personal reasons, not on feelings of fear of losing the job or spoiling the relationship with the employer, as it often happens for migrant workers instead.

Tab. 5: *Italians and immigrants' ranking of reasons of non-reporting.*

Italians	Immigrants
1. Minor injury (18.8%)	1. Minor injury (61.3%)
2. Fear of losing job/wages (15.7%)	2. Fear of losing job/wages (57.0%)
3. Fear of being told off (8.3%)	3. Fear of being told off (55.5%)
4. Too much time needed for reporting (7.3%)	4. Fear of being blamed by colleagues (33.5%)
5. Fear of being blamed by colleagues (6.3%)	5. Employer's request (26.5%)
6. Employer's request (2.3%)	6. Other practical difficulties (24%)

To sum up, data collected in Trentino through the survey confirm what some of the previous researches on native and non-native workers had already shown (6): both the frequency of injuries and their severity (working days lost) are higher among non-natives than among natives. If introducing the concept of vulnerability as the resultant of injuries frequency for the average number of working days lost, in Trentino, migrants are on average more vulnerable to occupational injuries than Italians.

3. The profile of the migrant and of the Italian victim of work injuries: similarities and differences.

3.1 Who is the injured immigrant and who is the injured Italian?

- *The injured immigrant worker is usually younger, married and better learned-* The injured immigrant worker is male in 82.5% of cases, while this figure is 78.7% for the Italians. Immigrated injured workers are also usually younger: to be more precise, nearly half of them (47.5%) are less than 34 years old, (while only 36.7% of injured Italians are under this age); but only a tenth of them (9.5%) are over 49 years old (in this case Italians are 22.7%). This result clearly reflects the demographic and occupational structure of migrant workers in our country (7). As for marital status, immigrants are more often married than Italians (66% versus 52.3%), while cohabitation is more common among Italians (11.7% versus 2.5%). As for education, migrants with a high degree of education (more than 13 years of school) are more often victims of occupational injuries than Italians with the same

level of education (14.5% versus 5.4%). The fact that a large number of immigrated injured workers in the sample have a high degree of education is probably linked to the division of tasks and skills between migrant workers and Italian workers. Many studies (8), in fact, confirm that migrants in their host countries are often employed in manual and under qualifying positions, despite their high qualifications. In this study, on a sample of 100 graduated Italians, 87.5% are employed as white-collars: none of the migrant workers with more than 13 years of education is a white collar, while more than 69% are employed as non-qualified blue collars in elementary occupations (occupational injuries are more common among blue collars).

- *Injured immigrants are mostly natives from European countries, show a good grade of permanence on the Italian territory and have a good level of Italian knowledge-* As for nationality, injured migrants come in the 52.5% of cases from European countries, in the 28% from Africa, in the 11% from America (9) and in the 8.5% from Asia. Considering the single countries of origin, Albanian citizens turn out to be the most exposed to occupational injuries (10) (15%), followed by Moroccans (14%) and Rumanians (13%). This data reflect the fact that these groups form the biggest immigrant communities on the Italian territory. Other workers who frequently are victims of injuries come from Serbia and Montenegro (8%), Tunisia (6.5%), Macedonia (4.5%), Poland (4%), Pakistan (3.5%) and Algeria

(3%). All other remaining countries settle under 2%.

As for immigrant permanence in Italy, 35.5% of immigrant workers have a valid permit of permanence (temporary) or are waiting for the renewal of it. The same percentage has a permanent residence card, while 11.0% of them have achieved Italian citizenship. Only three persons (1.5% of the sample) were clandestine at the time of the interview. On the whole, nearly two thirds of the immigrants on the Province of Trento's territory (63%) do hold a long term residence permit, which entitles them to stay in our country. A good grade of permanence on the Italian territory is confirmed for many immigrants by the number of years in our country: two thirds of the sample (65.2%) have been living in Italy for 8 or over 8 years, while only 10.1% of it up to 3 years.

Many studies consider the number of years of permanence and the knowledge of the language of the host country as proxy variables for acculturation and integration (11). For this reason, the interviewer thought appropriate judging the respondent's knowledge of the Italian language while administering the questionnaire: only one fifth of the respondents (21.6%) turned out having a poor knowledge of the Italian language, whereas 42.2% proved to have a good knowledge of it, being this consistent with the relatively long permanence of the respondents on the territory. Notwithstanding a good level of permanence in Italy, only a fourth (24.1%) of the sample was in possession of a valid permit when first arriving to our country (12). More than two thirds (67.9%) of the 84 people in the sample who declared to have entered the Italian territory illegally, admitted

staying in Italy without any permits for up to two years; the remaining 32.1% for over two years. The lack of a valid entitlement to reside compels clandestine subjects willing to work to underground jobs. There is no doubt that in these situations, when a work injury occurs, it is hardly ever reported. Therefore, it can easily be inferred that the presence of numerous irregular (at the beginning, at least) workers corresponds to a number of injuries that are highly likely to remain unreported.

3.2 Injured workers occupational career.

- *Injured immigrants often with minor experience-* As many researchers have suggested, having or not having a good work experience can make the difference, when it comes to occupational injuries: experience teaches how to identify hazards that may occur while working and makes you act subsequently in order to try to avoid any harmful or damaging aftermaths. In addition to this, during the years of permanence in the same company, workers receive several information and Health and Safety training, and acquire awareness of their rights and duties. In the questionnaire there were three different questions regarding experience: one question was about the work experience made on the Italian territory, another about the experience in the job (skills) and the last one about the experience acquired in the actual company of employment. For migrant workers, only the experience gained while working in Italy has been taken into account. This decision is due to the enormous differences that often characterize the organization of the job, the way the job is performed and the required skills in foreign countries. For all these reasons it would have been hardly impossible, besides being

useless too, to compare the occupational experience abroad with the one gained on the Italian territory.

Nearly three quarters of the interviewed Italians (72.3%) have more than 15 years of experience gained on the Italian territory; 68.0% of migrants have up to 10 years of experience in Italy, while only 15% of them have more than 15 years of experience in our country. As regarding to the experience in a specific job/ skills, 58.0% of Italian workers have more than 10 years of experience in the current job, whereas 54.5% of foreign workers have 5 or less years of experience. The experience gained in the current company or in the company of last employment is inferior to 3 years for nearly a half of the migrant workers (48.5%): only 5% of them have been employed in the same company for more than 10 years, versus a good 38.8% of Italians. Obviously, it is evident that the minor length of permanence on the Italian territory and the young age of many of the immigrants is directly linked to their minor experience.

- *Injured immigrants are exclusively blue collar* - Interviewees have also been asked questions regarding the type of job they were employed in at the time of the interview: answers have then been coded according to ISCO (13) European classification and then grouped in “white” and “blue” collar. A strong inequality between the two samples, with regard to the type of job, is immediately evident: Intellectual jobs (14) are almost exclusively assigned to Italians (15.3%), whereas immigrant workers are employed in manual jobs (99%). Over a half of the immigrants (54% vs. 32.3% of the Italians) are employed in elementary occupations, 34.5% of

them (vs. 38.4% of the Italians) are skilled workers (cat. 6,7,8) and 10.5% (vs. 14% of Italians) are salesmen (15).

- *Injured immigrants: more unionized than Italian victims* - 56.5% of the injured migrants are member of a trade union, versus 43.7% of the injured Italians. According to their short permanence on the Italian territory and their minor work experience, migrant workers have become members of a trade union later than Italian workers. In fact, 56.6% of migrant workers enrolled not earlier than 5 years ago, whereas 50.4% of Italian workers enrolled over 10 years ago.

- *Irregular work: more common among injured immigrants than injured Italians* - Interviewees have been questioned about their experience with irregular work. Questions focused on past experiences only (16). Over a half of the migrants (53.5% vs. 20.3% of the Italians) admitted having worked under the table in the past. The length of the irregular job settles under 2 years for both migrants and Italians (respectively 72.7% and 73.8%).

What are the reasons for working under the table? 28.8% of the Italian workers explained the decision to work under the table as their own preference; 27.1% said it was the employer’s preference; 16.9% admitted accepting irregularity because it was their second/casual job. The reasons are quite different for migrants: most of them had to settle for irregular work because they lacked a valid permit of residence (61.5%) or because this was the employer’s will (25%). On the basis of these answers (only 2.9% of migrants admitted working under the table for a personal preference), it is reasonably presumable that

foreign workers are willing to obtain regular contracts as soon as possible (i.e. as soon as they obtain a regular permit).

3.3 Company of employment and current job characteristics.

- *Injured immigrants: mostly employed in the field of Construction, Metal Manufacturing and Engineering, Hotels and Restaurants, Transport and Real Estate and Other Business Activities-* As for immigrants, injuries seem to occur mostly in the Industry Sector (17) (58% vs. 45% of the Italians), followed by the Services Sector (35.5% vs. 38.7% of the Italians) and by Agriculture (6.5% vs. 14% of the Italians). In the Public Sector 2.3% of the Italians (but no immigrants at all) have experienced occupational injuries. As for the Industry Sector, in the Construction area immigrants get more often involved in occupational injuries than Italians (26% vs. 19%), while in Metal Manufacturing and Engineering the injured immigrants are 11.5% versus a 7.3% of injured Italians. As for the Services, the largest number of injuries to immigrants occur in the field of Hotels and Restaurants (9% immigrants vs. 6.7% Italians), followed by Real Estate and Other Business and Caretaking Activities (8.5% vs. 3.6% for Italians) and Transport and Communication (7.5% vs. 6%) (18).

- *Injured immigrants are concentrated in small and mid-sized companies* - The injured immigrated workers are mostly employed in small and mid-sized companies (from 10 to 49 employees) (43.8%, versus a 31.9% of the Italians). On the contrary, Italian workers are more often employed in very small companies (they often own them) (34.6% of the sample

versus 28.9% of the immigrants' sample) and in large companies with more than 50 employees (33.6% vs. 27.4% of the immigrants).

- *Long shifts and overtime work for injured immigrants* - According to some researchers, the length of the shifts and the collocation of the working hours may increase the chance to incur in occupational injuries, because they interfere with the level of concentration and attention. Dembe *et al.* (2005) claim that subjects who work over 60 hours per week and those who work on shifts are more exposed to work injuries. This thesis seems to be confirmed by a study conducted by INAIL in Italy whose results suggest how working on a shift basis, especially on night shifts, could affect the sleep-wake rhythm in a negative way, increasing the possibilities of incurring in an injury (19). The studies also confirm the fact that immigrants are in a weak position and for this reason they often have no choice but accepting the less favorable shifts and working hours (20). The comparison between the shifts and the working hours in the two groups can then be useful in order to better understand the occupational injuries phenomenon.

According to what the respondents said, a migrant works on average more hours per week than an Italian: 27% of migrant workers work from 49 to 60 hours per week, whereas only 17.3% of Italian workers do that. An Italian worker usually works from 26 to 48 hours per week (69.7% versus a 58.5% of the immigrants). Besides, 62.5% of migrants, but only 47% of Italians, affirm working overtime. Two thirds (65.2%) of the Italian workers who affirmed working overtime also affirmed not to work overtime for more than 20 hours per month; nearly a half of the migrant

workers (52.0%) said they work overtime for more than 20 hours a month and 18.4% of migrants said they work over 60 hours overtime per month. Finally, there are no relevant differences between migrant and Italian workers with regard to working hours: it is just slightly more frequent among migrants to work on a shift basis (27.5% versus 24% of Italians).

- *Injured immigrants are more often employed with short term contracts* - A fifth of the Italians sample (21.7%) stated being self-employed, whereas the same statement was made by only 4% of the migrants. As for employees, it is rarer for migrants to have a permanent contract (57.8% vs. 79.1% of Italians): they are more frequently employed on a fixed/short term basis (17.2% vs. 6.8%), or on a seasonal basis (10% vs. 3.4%), or for temporary jobs (5.7% vs. 1.3%) or as consociated in cooperatives (3.1% vs. 0%). Six immigrants (3.1%) turned out being irregular workers at the time of the administration. Precarious work seems in the end to be another burden especially to the migrant worker's weak position.

3.4 Health and Safety in the workplace.

Information and training are of fundamental importance for the growth of safety culture among workers and, thereby, contribute to the reduction of occupational injuries. Interviewees have been questioned about some aspects regarding Health and Safety provisions and practices in their current company. To be more precise, questions were about the received information and training, the presence/absence of safety signs and protection devices on the machinery and the provision and use of personal protective equipment (PPE).

- *Injured immigrants receive information on hazards, on protections, are provided with informative written or visual material on how to work safely and attend to Health and Safety training less frequently than natives*- Migrant workers, in their current company of employment, appear to have lower opportunities to increase their safety culture. To be more precise, 70% of migrants (vs 88.7% of Italians) have received information about job-related Health and Safety issues and 75% of them (vs. 89% of the Italians) have received information about the prescribed protection devices and the protection equipment that need to be used while working. Furthermore, only 33% of migrants (vs. 55.3% of the Italians) affirmed of having received informative material (booklets, leaflets, videos, electronic devices) explaining how to perform tasks safely and only in 30.5% of cases (vs. 66% of the Italians) attended (for a corporate decision) Health and Safety training courses. The main difference between natives and foreigners can be seen looking at the percentages related to the attendance of Health and Safety training courses: immigrants who have not attended any course are double in number with respect to Italians. Presumably, there are companies which are not willing to invest money for the training of migrants who often do not have the necessary knowledge of the Italian language for fully understanding the given information or are more likely to stay within the company for short periods.

If only considering workers who have attended at least one Health and Safety training course in their current company of employment, immigrants usually attended one first course before starting

the job or as soon as starting it (24.6% vs. 12.1% of the Italians), whereas periodic training is more common among Italian workers (50% vs. 36.1%). As for the number of courses, 55.8% of the migrant workers have only attended one course (vs. 43.4% of the Italian workers); only a very low percentage of workers (13.1% of the migrants and 17.7% of the Italians) attend courses yearly or every two years.

Based on these results, it is possible to advance a first hypothesis: Italian workers attend more courses because they are more often employed in permanent positions (for this reason the company may be more willing to invest on their training) and/or because of their seniority in company (this implies they have the opportunity to take part in periodic refresher courses, besides the initial one). If this is true, immigrants seem to have received less training only because they have been employed for a shorter time or because precarious. However, the joint analysis of the above mentioned variables does not endorse this hypothesis: in fact, among injured workers with at least 5 years of seniority in current company, migrants have anyway received less training and often only attended one course. This statement does not change if considering workers with a permanent job. To sum up, lack of seniority and precariousness of contract do not explain the fact that immigrants receive less training than Italians.

- *Injured immigrants: mostly employed in companies where safety signs and engine-mounted protection devices are unsatisfactory-* Only two thirds (63.6%) of the immigrant workers (versus 80.7% of the Italian workers) think that the safety signs displayed in their company are adequate to the needs. 9.1% of the immigrants

versus 3% of the Italians think they are only partially adequate, and 21.7% vs. 15% affirm they are completely absent. 5.6% of the migrants versus 1.3% of the Italians do not know what to answer. With regard to the respondents' opinions about protection devices on the machinery, 62.1% of the immigrants versus 83.4% of the Italians think they are adequately present; 17.9% versus 8.3% of the Italians say protections are not always mounted, 11.0% versus 8.3% of the Italians say protections are absent. Nearly a tenth (9.0%) of the migrants do not know what to answer. Once again, migrant workers are more represented when safety is less taken into consideration.

- *Injured immigrants: lower provision and scarce use of personal protective equipment -* The use of personal protective equipment (PPE) is very important in order to prevent injuries and limit the damages whenever an accident is unavoidable. It is important to point out that 13% of the Italian workers and 4.5% of the migrant workers said the use of protective equipment is not prescribed in their job: this data reflects the fact that Italians are more frequently employed as clerks/administrative. To be more precise, 71.2% of the migrant workers (vs. 86.7% of the Italian ones) have been provided with the prescribed PPE, but 6.1% (the double than the Italians: 3.3%) have not received the complete equipment. Migrant workers asserted two times more than Italians (22.7% versus 10%) not having been provided with PPE, even if prescribed.

Some differences are evident also among those who should use personal protective equipments while working: more Italians (72%) than migrants (60.8%) affirmed to always or often use the prescribed protections, while 18.8% of migrants

and 11.1% of Italians stated to never using them. When asked about reasons for not using the prescribed protections, Italian workers tend to justify the failure of PPE use by saying it causes discomfort (31%), or they have not been provided with it (18.1%) or alleging the fact that it makes the job slower (10.3%); for their part, immigrants affirmed the failure of use is mainly due to the lack of provision (44.6%), followed by discomfort (17.4%) and perceived uselessness (8.4%) (21).

- *Injured immigrants: passive attitude towards PPE use and submissive behavior towards their superiors*- Since according to Italian regulation in force (D.Lgs 81/2008 - Testo Unico sulla Sicurezza sul Lavoro (22), employer and employee are jointly and severally liable for Health and Safety related issues; the surveyor tested (thanks to the aid of hypothetical situations) the willingness of the worker to become an active subject in the management of his/her own and other people's safety in the workplace. The three hypothetical questions refer to very common and concrete situations the worker may have experienced in the past or may be likely to experience in the near future: 1. "If a personal protection device broke or was out of order while you are working, what would you do?"; 2. "If you saw one of your workmates working without any protections he/she is supposed to use, what would you do?"; 3. "If you worked without the protections you are supposed to use and your supervisor became aware of it, what would happen?".

Results show that, in case a protection would be unusable or broken, nearly half (47.4%) of the immigrants versus less than a third of the Italians' sample (29.1%) admit they would not care at all

or would inform the person in charge only at the end of their shift. 18.4% of the immigrants (vs. 22.7% of the Italians) would promptly inform their supervisor, but would be ready to resume work without protective equipment, if asked to. Only 32.2% of the migrants and 45.3% of the Italians say they would refuse to resume work unless a substitutive protection is provided. Immigrants also turned out to be more careless than Italians in case they would note a workmate not using the prescribed protections: in fact, two thirds of them (66.4% vs. 46.5% of the Italians) affirm they would not care at all; less than a third (30.9% vs. 41.3%) would tell the workmate to wear the prescribed protections. Only Italian workers, and only 5.8% of them, would deem appropriate to inform the supervisor in charge of the workmate's negligence. Finally, 40.1% of migrants and 24.4% of Italians affirm their supervisor wouldn't point anything out or wouldn't even realize the fact that a worker doesn't use the prescribed PPE. Only a half of the migrant workers (50.5% vs. 61% of the Italian workers) think they might be verbally warned or told off, and just a very little percentage (2.6% vs. 5.2% of the Italians) believes they might receive a written warning or a fine.

In general, immigrants appear to be more indifferent to the use of protections and more submissive to their superiors than their Italian workmates: this attitude may be linked to a lesser knowledge of the Italian Health and Safety rules and of the workers' rights and duties, to a scarce safety culture, but also to the fear of losing the job or of retorts by the employer. As for them, supervisors seem to be unconcerned for the respect of the Health and Safety rules by the

immigrants: this may be ascribable to the fact that migrants are often employed in companies with a scarce safety culture.

3.5 Explaining victimization of migrants and Italians.

After having depicted a profile of the migrant and on the Italian victim, the study has focused on the identification of factors influencing the frequency of occupational injuries in the two samples (23). The main findings of this analysis may be summarized as follows:

- Injury frequency decreases for each additional year of experience in the job,
- Being employed in a permanent position (in contrast with precarious contract) is associated with a decrease in injury frequency,
- Being employed in Hotels and Restaurants, Real Estate and Other Business Activities, Metal Manufacturing and Engineering is associated with an increase in injury frequency.

A limited experience in job, precariousness of the job contract and employment in “dangerous” sectors explain, at least partially, injury frequency in the two groups. Beyond common factors, peculiar aspects characterize the two groups. As for migrants, two peculiar elements are important: first of all, as proficiency in Italian increases, injury frequency decreases; second, when considering skilled blue collar workers in comparison with all other workers, injury frequency rises up. As for Italians, instead, safety training emerges as an explaining factor: when attendance to Health and Safety training is periodical, injury frequency decreases. Even though some variables are common for the two

groups, in some cases they have a different influence on injury frequency (24). Experience in the job strongly influences injury frequency in both groups of workers, especially Italians. Similarly, the type of contract (permanent or precarious) is an important explicative factor and it settles on slightly higher values for migrant workers, rather than for Italians. The influence of the field of employment, is similar for both groups; while the type of job only seems to influence the frequency of injuries when foreign workers are considered. Finally, but only for Italian workers, a relevant variable is represented by the attendance to training courses, whilst language is a typical factor for migrants.

In conclusion, the frequency of injuries is influenced by factors linked to the structure of the labor market (activity sector, type of contract, type of job), as well as by individual elements (experience, language knowledge) and Health and Safety provisions and practices (Safety course attendance).

4. Conclusion.

Thanks to the survey, the profile of the injured Italians and migrants has been depicted and some explaining factors have been highlighted. It is then possible to underline similarities and differences between victims, and giving more detailed explanations for the over-victimization of migrants.

Tab. 6: *Profile of migrant and Italian victim of occupational injuries: synoptic table.*

	Italian Victim	Immigrant Victim
Injury Frequency (mean)	0.36	0.69
Working days lost (mean)	56.5	71.0
Vulnerability (mean)	19.4	46.4
Experience of non-reporting in the past	No (79.6%)	No (63.5%)
Gender	Male (78.7% of cases)	Male (82.5%)
Age (mean)	40.3 years	36.7 years
Marital Status	Married/cohabitant (64.0%)	Married/cohabitant (68.5%)
Education	Medium-high (> 8 years) (51.6%)	Medium-high (> 8 years) (61.0%)
Type of permit of residence	-	Long term permit (63.0%)
Length of permanence in Italy (mean)	-	11.5 years
Level of Italian knowledge	-	High (42.2%)
Country of origin	-	Albania (15.0%), Morocco (14.0%), Romania (13.0%)
Work experience (mean)	22.7 years	9.2 years
Experience in job (mean)	16.0 years	6.7 years
Experience in current company (mean)	10.9 years	3.6 years
Type of work	Blue collar (84.7%), in particular skilled worker (38.3%)	Blue collar (99.0%), in particular elementary occupations (54.0%)
Field of employment	Industry (45.0%), Services (38.7%) As for Industry: Construction (19.0%), Manufacturing (21.7%) As for Services: Wholesale and Retail Trade/Repair of Goods (9.3%)	Industry (58%), Services (35.5%) As for Industry: Construction (26.0%), Manufacturing (29.5%) As for Services: Hotels and Restaurants (9%), Real Estate Activities (8.5%)
Company size	Very small, large	Medium
Type of contract	Permanent (83.8%)	Permanent (58.3%)
Working hours	Day job with no shifts (76.0%)	Day job with no shifts (72.5%)
Weekly hours	Up to 48 hours (75.3%)	Up to 48 hours (66.0%)
Overtime work	No (53.0%)	Yes (62.5%)
Information on work hazards	Yes (88.7%)	Yes (70.0%)
Information on protections	Yes (89.0%)	Yes (75.0%)
Provision with informative material	Yes (55.3%)	No (67.0%)
Training courses attendance	Yes (66.0%)	No (69.5%)
Provision with PPE	Yes (86.7%)	Yes (71.2%)
Use of PPE	Frequent (72.0%)	Frequent (60.8%)
Trade union membership	No (56.3%)	Yes (56.5%)
Past experiences of irregular work	No (79.7%)	Yes (53.5%)

First of all, the issue of occupational injuries affects differently the two groups: injury occurrence is higher for non native workers with injured migrants incurring in occupational injuries twice as often than Italians, with a frequency of 0.69 (vs. 0.36 of Italians) and an average of 71 working days lost as a consequence of injuries in current company (versus 56.5 of Italians).

Immigrants' vulnerability is more than double with respect to that of Italians (46.4 vs. 19.4). In addition, one third of migrant workers versus one fifth of Italian workers have not reported injuries in the past.

When it comes to *individual characteristics of the injured worker*, many similarities emerge: both Italian and migrant injured workers are male, married or cohabitant and with a medium-high level of education. Injured migrants are slightly younger than Italian ones. Injured migrants mainly come from Albania, Morocco and Romania; they do have a long term permit of residence, an average permanence on the Italian territory of 11.5 years and, in more than one-third of the cases, a good proficiency in Italian.

As for *employment history*, whilst both injured Italians and migrants are blue collar, the firsts are more often skilled workers, the seconds are more represented in elementary occupations. Furthermore, migrants are characterized by a much lower work experience, experience in job and seniority in current company. At present, migrants are more often members of trade unions and have had past experience with irregular work in half cases (vs. 20.3% of Italians).

Concerning *company of employment and current job characteristics*, both injured Italians and migrants are employed in the field of Industry

(especially in Construction and Manufacturing) and Services. As for Services, Italians are more represented in Wholesale and Retail Trade/Repair of Goods, while migrants are more represented in Hotels and Restaurants and Real Estate and Other Business Activities. Both injured Italians and migrants are employed mainly with permanent contracts, but having short term ones is more common for migrants. Migrants usually work the greatest number of hours per week and, in case of overtime work, they usually work longer shifts.

Finally, as for *Health and Safety in the workplace*, relevant differences has emerged. A lower percentage of migrants than Italians has been provided with information on job hazards, on protections and with material explaining how to work safely. Two third of migrants have not attended any Health and Safety training, whilst the same percentage of Italians has. Migrant are also less frequently provided with PPE and, even when provided, use them less frequently.

How is it possible to better explain differences in victimization between the two groups? Some considerations and more detailed indications on the reasons why migrants suffer higher victimization when it comes to occupational injuries can be done. As seen, some factors influencing the occurrence of occupational injuries are common for the two groups, while some others are specific of each group. A first specific aspect regarding migrants is represented by the *language barrier*, that probably limits the effectiveness of information and training, everyday's communication with workmates and supervisors, the ability to understand warning shouts, etc. A second factor is represented by the fact of *being a skilled worker*: the ability to fully

understand and elaborate the received information and training, together with an adequately secured environment are of primary importance, especially for workers carrying out skilled and probably more dangerous tasks. Unfortunately, migrant workers, besides having linguistic difficulties, are more often employed in companies with a scarce concern for Health and Safety rules. In addition to this, as seen when analyzing the profile of the injured worker, migrants are more likely to be employed precariously and in dangerous sectors and to have a lower level of experience in job than Italians. Since *precariousness, limited experience in job and inherent hazardousness of some activity sectors* have all been proved to be associated with an increase in the frequency of injuries both for Italians and migrants, migrants' over-representation in these unfavorable situations over-expose them to occupational injuries as well. On these premises, it is possible to suggest some priorities that may need intervention.

Structural interventions on the labor market: improving contractual stability and granting a fairer division of tasks between Italians and migrants - First of all, stability of the job contract plays a key role in explaining the phenomenon, both for Italians and migrants: a short term employment means a higher exposure to injuries, because it implies less familiarization with the workplace, with the specific tasks to be carried out and, consequently, it means a minor ability to recognize hazards and adopt the necessary countermeasures. In addition to this, workers with temporary recruitment contracts might, on purpose, expose themselves to risks or behave in a less careful way in order to show to their employer/supervisor to be "good and willing"

workers, in order to "deserve" an extension of their contract. Changes to labor market directed to a **higher work stability** are the way to foster specialization and to give security to workers. As far as migrants are concerned, as seen when analyzing the profile of the injured worker, they are over-represented in unfavorable situations (short term contracts, more hazardous sectors, dangerous occupations, poor working environment and strenuous working hours): structural interventions to **give less chances to the company to take advantage of weak employees** could also reduce work injuries of underprivileged categories of workers.

Interventions aiming to increase safety culture and employees' level of training and information; ad hoc interventions for migrant and less experienced workers - Specific Health and Safety training courses, especially when attended on a regular basis, are associated with a decrease in injury vulnerability. Providing workers with constant training on hazards and safety practices is the best way to teach them how to behave and work safely, and to keep high the attention on safety in the workplace. While for Italians training is an influencing factor for injuries, this is not true for migrants: for them, in fact, language is an important intervenient variable. Because injury frequency increases as the proficiency in Italian decreases, the lack of a thorough knowledge of Italian is a barrier that can reduce the effectiveness of training. As a consequence, **targeted training** is a factor to rely on in order to reduce work injuries: with regard to migrant workers, this means paying special attention to their level of knowledge of the Italian language, in order to make training the most useful as possible.

Moreover, experience has also emerged as an important factor in influencing injuries: the vulnerability decreases as experience increases, both for Italians and for migrants. A short job experience means a lower level of specialization in the tasks and, subsequently, less confidence in carrying them out, less ability to realize if something is going wrong and counteract promptly. For all these reasons, **ad hoc training, especially on the job, is needed for workers with a limited experience** (most of which are young ones).

Endnotes.

(1) Inail, *Rapporto annuale sull'andamento infortunistico 2005*, Milano, 2006; Inail, *Rapporto annuale sull'andamento infortunistico 2006*, Milano, 2007; Inail, *Rapporto annuale sull'andamento infortunistico 2007*, Milano, 2008; Inail, *Rapporto annuale sull'andamento infortunistico 2008*, Milano, 2009.

(2) Ahonen E.Q., Benavides F.G., "Risk of fatal and non-fatal occupational injury in foreign workers in Spain", *Journal of Epidemiological Community Health*, 60, 2006, pp. 424-426; Thurston W., Verhoef M., "Occupational injury among immigrants", *Journal of International Migration and Integration*, Vol. 4, n. 1, 2003, Springer Netherlands Pransky G., Moshenberg D., Benjamin K. et al., "Occupational Risks and Injuries in Non-Agricultural Immigrant Latino Workers", *American Journal of Industrial Medicine*, 42, 2002, pp. 117-23; Lee G., Wrench J., "Accident prone immigrants- An assumption challenged", *Sociology*, Vol. 14, No. 4, 1980, pp. 551-66; Anderson J.T.L., Hunting K.L., Welch L.S., "Injury and Employment Patterns Among Hispanic Construction Workers", *Journal of Occupational and Environmental Medicine*, Vol. 42, N. 2, February 2000, pp. 176-185; Carangan M., Tham K.Y., Seow E., "Work-related injury sustained by foreign workers in Singapore", *Ann Acad Med Singapore*, 33, 2004, pp. 209-13; Backer C.C., "Ethnic differences in accident rates at work", *British Journal of Industrial Medicine*, 44, 1987, pp. 206-211; Loh K., Richardson S., "Foreign-born workers: trends in fatal occupational injuries, 1996-2001", *Monthly Labor Review*, June 2004, pp. 42-53; Loomis D., Richardson D., "Race and the risk of fatal injury at work", *American Journal of Public Health*, Vol. 88, No. 1, 1998, pp. 40-44; Mulloy K.B., Moraga-McHaley S., Crandall C., Kesler D.O., "Occupational Injury Mortality: New Mexico 1998-2002", *American Journal of Industrial Medicine*, 50, 2007, pp. 910-920;

Pittau F., Spagnolo A. (a cura di), *Immigrati e rischio infortunistico in Italia*, IIMS, Roma, 2003.

(3) Data presented in this piece of work comes out from a research realized by the author for the International Ph.D. in Criminology /Catholic University of Milan, completed in 2010.

(4) The chosen type of sampling is quota sampling. This choice is linked both to the lack of the complete list of the reference populations and to the need to reproduce in the samples some important characteristics of the relative reference populations. To be more precise, as far as the Italian sample is concerned, the proportions of the reference population have been followed for three variables, i.e. gender, age and field of employment. In the sample of immigrants, in addition to gender, age and field of employment, the sample follows the proportion of the different nationalities of injured migrant workers.

(5) $(\text{Number of injuries}/\text{Years of experience}) * (\text{Total working days lost}/\text{Number of injuries}) = \text{Total working days lost}/\text{Years of experience}$.

(6) Fuentes A., "The need for effective and comprehensive planning for migrant workers", *American Journal of Public Health*, Vol. 64, No. 1, 1974, pp. 2-10; Sinclair S.A., Smith G.A., Xiang H., "A comparison of nonfatal unintentional injuries in the United States among U.S. born and foreign-born persons", *Journal of Community Health*, Vol. 31, No. 4, 2006, pp. 303-325; Ahonen E.Q., Benavides F.G., "Risk of fatal and non-fatal occupational injury in foreign workers in Spain", *Journal of Epidemiological Community Health*, 60, 2006, pp. 424-426; Corvalan C.F., Driscoll T.R., Harrison J.E., "Role of migrant factors in work-related fatalities in Australia", *Scandinavian Journal of Work, Environment & Health*, 20, October 1994, pp. 364-70; Loh K., Richardson S., "Foreign-born workers: trends in fatal occupational injuries, 1996-2001", *Monthly Labor Review*, June 2004, pp. 42-53.

(7) Please note that gender and age are two of the samples stratification variables: this means the foresaid percentages reflect the percentages of injured workers in the reference populations.

(8) Daly F., "Health and Safety Concerns of Migrant Workers: The Experience of Tunisian Workers in Modena, Italy", *Finisterra*, XXXIX, 77, 2004, pp. 105-127; Nissen B., *Construction Safety Practices and Immigrant Workers: A Pilot Study*, Report for the Center to Protect Workers' Rights, Center for Labor Research and Studies Florida International University, 2004.

(9) All respondents but one came from South America.

(10) For the setting up of the immigrants sample, the proportions of injured workers from different nationalities have been maintained, so that the percentages of injured in the sample reflect the percentages of the population.

(11) Corvalan C.F., Driscoll T.R., Harrison J.E., "Role of migrant factors in work-related fatalities in Australia", *Scandinavian Journal of Work, Environment & Health*, 20, October 1994, pp. 364-70; Thurston W., Verhoef M., "Occupational injury among

immigrants”, *Journal of International Migration and Integration*, Vol. 4, n. 1, 2003, Springer Netherlands.

(12) Because of the delicacy of the question, an high percentage of non-responses has been achieved (33.7%).

(13) ISCO classification consists of the following nine categories: 1. Directors and chief executives, 2. Professionals, 3. Technicians and associate professionals, 4. Office clerks, 5. Service workers and shop and market sales workers, 6. Skilled agricultural and fishery workers, 7. Craft and related trades workers, 8. Plant and machine operators and assemblers, 9. Elementary occupations.

(14) Directors and chief executives, professionals, technicians and associate professionals, office clerks.

(15) This trend is confirmed by the available data on employment in Trentino in 2007 (OML, 2008): on a sample of 100 migrant workers, 75.2% were blue collars (this percentage fell to 35.7% if considering the complete population). Only 12.4% of migrants (vs. 40% of the complete population) were employed as white collars or as directors and managers.

(16) First of all because most of the people addressing to Inail have reported or are going to report an occupational injury, and that implies being regularly (or, at least, partially regularly) employed or having just been regularized at the time the accident occurred (which is only possible for some categories of workers). In addition to that, due to the delicacy of the issue, questioning about the current employment could have led to many non responses or, even worse, to the spoiling of the relationship between interviewer and respondent, with a possible subsequent refusal to finish the questionnaire.

(17) It is important to remember how the field of employment (or company’s activity sector) was one of the criteria used for the setting up of the sample. For this reason, the distribution of the injured workers in the samples, as for field of employment, coincides with the distribution of the injured workers’ in the reference populations.

(18) The number of injuries suffered by each of the two groups has to be contextualized according to the number of employed workers (of each group). This point has been analyzed thanks to official data on injuries (Inail) contextualized with data on workforce (Istat): in this way, the so often mentioned hypothesis that migrants are over-represented in injuries only because of their concentration in the most dangerous sectors has been rejected by statistical data.

(19) Ortolani G., “A che ora ti sei fatto male”, *Dati Inail sull’andamento degli infortuni sul lavoro*, n. 7, luglio 2005.

(20) Daly F., “Health and Safety Concerns of Migrant Workers: The Experience of Tunisian Workers in Modena, Italy”, *Finisterra*, XXXIX, 77, 2004, pp. 105-127; Dembe A.E., Erickson J.B., Delbos R.G., Banks S.M., “The impact of overtime and long work hours on occupational injuries and illness: new evidence on the United States”, *Occupational and Environmental Medicine*, 62, 2005, pp. 588-597.

(21) Even though this question was introduced by a neutral statement, whose aim was to neutralize the less desirable behavior (i.e. the failure of use), a fifth part of the whole sample (25.2% of immigrant workers and 15.9% of native workers) preferred not to answer.

(22) “D.Lgs. 81/2008: Consolidated Law on Health and Safety in Workplaces”.

(23) The statistical technique used is multiple linear regression.

(24) The model for the Italian sample describes 49% of the variance of the dependent variable (injury frequency). By controlling for other variables, injury frequency is significantly negatively related to experience in job ($p=0.000$), stability of job contract ($p=0.000$) and Health and Safety training ($p=0.000$), whilst positively related to field of employment ($p=0.001$). In the same way, the model for migrants sample describes 33% of the variance of the dependent variable. By controlling for other variables, injury frequency is significantly negatively related to stability of contract ($p=0.001$), experience in job ($p=0.000$), and knowledge of Italian ($p=0.014$), whilst positively related with field of employment ($p=0.010$) and type of job ($p=0.031$).

Bibliography.

- Ahonen E.Q., Benavides F.G., “Risk of fatal and non-fatal occupational injury in foreign workers in Spain”, *Journal of Epidemiological Community Health*, 60, 2006, pp. 424-426.
- Ahonen E.Q., Benavides F.G., Benach J., “Immigrant Populations, Work and Health—A Systematic Literature Review”, *Scandinavian Journal of Work, Environment & Health*, 33, 2, 2007, pp. 96-104.
- Anderson J.T.L., Hunting k.L., Welch L.S., “Injury and Employment Patterns Among Hispanic Construction Workers”, *Journal of Occupational and Environmental Medicine*, Vol. 42, N. 2, February 2000, pp. 176-185.
- Backer C.C., “Ethnic differences in accident rates at work”, *British Journal of Industrial Medicine*, 44, 1987, pp. 206-211.
- Carangan M., Tham K.Y., Seow E., “Work-related injury sustained by foreign workers in Singapore”, *Ann Acad Med Singapore*, 33, 2004, pp. 209-13.
- Corvalan C.F., Driscoll T.R., Harrison J.E., “Role of migrant factors in work-related fatalities in Australia”, *Scandinavian Journal of Work, Environment & Health*, 20, October 1994, pp. 364-70.
- Daly F., “Health and Safety Concerns of Migrant Workers: The Experience of Tunisian Workers in Modena, Italy”, *Finisterra*, XXXIX, 77, 2004, pp. 105-127.

- Dembe A.E., Erickson J.B., Delbos R.G., Banks S.M., "The impact of overtime and long work hours on occupational injuries and illness: new evidence on the United States", *Occupational and Environmental Medicine*, 62, 2005, pp. 588-597.
- Fuentes A., "The need for effective and comprehensive planning for migrant workers", *American Journal of Public Health*, Vol. 64, No. 1, 1974, pp. 2-10.
- Inail, *Rapporto annuale sull'andamento infortunistico 2005*, Milano, 2006.
- Inail, *Rapporto annuale sull'andamento infortunistico 2006*, Milano, 2007.
- Inail, *Rapporto annuale sull'andamento infortunistico 2007*, Milano, 2008.
- Inail, *Rapporto annuale sull'andamento infortunistico 2008*, Milano, 2009.
- Lee G., Wrench J., "Accident prone immigrants- An assumption challenged", *Sociology*, Vol. 14, No. 4, 1980, pp. 551-66.
- Loh K., Richardson S., "Foreign-born workers: trends in fatal occupational injuries, 1996-2001", *Monthly Labor Review*, June 2004, pp. 42-53.
- Loomis D., Richardson D., "Race and the risk of fatal injury at work", *American Journal of Public Health*, Vol. 88, No. 1, 1998, pp. 40-44.
- Mulloy K.B., Moraga-McHaley S., Crandall C., Kesler D.O., "Occupational Injury Mortality: New Mexico 1998-2002", *American Journal of Industrial Medicine*, 50, 2007, pp. 910-920.
- Nissen B., *Construction Safety Practices and Immigrant Workers: A Pilot Study*, Report for the Center to Protect Workers' Rights, Center for Labor Research and Studies Florida International University, 2004.
- Nuwayhid I., Fayad R., Tamim H., Kassak K., Khogali M., "Work-Related Injuries in Lebanon: Does Nationality Make a Difference?", *American Journal of Industrial Medicine*, 44, 2003, pp. 172-81.
- Ortolani G., "A che ora ti sei fatto male", *Dati Inail sull'andamento degli infortuni sul lavoro*, n. 7, luglio 2005.
- Osservatorio del Mercato del Lavoro, *XXII Rapporto sull'occupazione in Provincia di Trento*, Franco Angeli, 2008.
- Pittau F., Spagnolo A. (a cura di), *Immigrati e rischio infortunistico in Italia*, IIMS, Roma, 2003.
- Pransky G., Moshenberg D., Benjamin K. et al., "Occupational Risks and Injuries in Non-Agricultural Immigrant Latino Workers", *American Journal of Industrial Medicine*, 42, 2002, pp. 117-23.
- Sinclair S.A., Smith G.A., Xiang H., "A comparison of nonfatal unintentional injuries in the United States among U.S. born and foreign-born persons", *Journal of Community Health*, Vol. 31, No. 4, 2006, pp. 303-325.
- Thurston W., Verhoef M., "Occupational injury among immigrants", *Journal of International Migration and Integration*, Vol. 4, n. 1, 2003, Springer Netherlands.
- Zhang X., Yu S., Wheeler K., Kelleher K., Stallones L., Xiang H., "Work-Related Non-Fatal Injuries Among Foreign-Born and US-Born Workers: Findings From the U.S. National Health Survey, 1997-2005", *American Journal of Industrial Medicine*, 52, 2009, pp. 25-36.