Relations industrielles
Industrial Relations

How Precarious Employment Affects Health and Safety at Work: The Case of Temporary Agency Workers

L'influence de l'emploi précaire sur la santé et la sécurité au travail : évidences tirées d'une étude auprès de travailleurs d'agences de placement temporaire

Como el empleo precario afecta la seguridad y salud ocupacional: evidencia a partir de un estudio sobre los trabajadores temporarios de agencia

Elsa Underhill and Michael Quinlan

Volume 66, Number 3, Summer 2011

URI: https://id.erudit.org/iderudit/1006345ar
DOI: https://doi.org/10.7202/1006345ar

See table of contents

Publisher(s)

Département des relations industrielles de l'Université Laval

ISSN

0034-379X (print)
1703-8138 (digital)

Explore this journal

Cite this article

Underhill, E. & Quinlan, M. (2011). How Precarious Employment Affects Health and Safety at Work: The Case of Temporary Agency Workers. *Relations industrielles / Industrial Relations*, *66*(3), 397–421. https://doi.org/10.7202/1006345ar

Article abstract

Precarious employment has been associated with adverse occupational health and safety (OHS) outcomes across a range of studies. Temporary agency workers are particularly vulnerable, with studies showing they experience a higher incidence of workplace injury, and a greater likelihood of more severe injuries than all other employment types. Explanations for agency workers' higher risk of injury have, to date, been impeded by data limitations associated with researching temporary employment. This article seeks to begin filling this gap through analyzing the experience of agency workers based upon two data sources. The first is a unique qualitative and quantitative data set developed from investigated temporary agency and directly hired workers' compensation files; the second is focus groups of agency workers conducted in the State of Victoria, Australia. Quinlan and Bohle's (2004) Pressures, Disorganization and Regulatory Failure (PDR) model, developed to explain the greater OHS vulnerability of precarious workers, provides the framework for analyzing the data.

After explaining the key concepts in the PDR Model, the article analyses the data to test for evidence of economic pressures, disorganization at the workplace, and regulatory failure impacting upon temporary agency workers' health and safety. The analysis supports the relevance of the PDR model, and provides an understanding of additional and unique risk factors which contribute to agency workers' higher risk of injury. Temporary agency workers experience economic pressures in common with other types of precarious workers. However, these appear more acute amongst agency workers. They also confront disorganization risks, extending to mismatched placements; lack of familiarity with host workplaces; and more complex fractured communication. These contribute to workplace risks and create barriers to improving their experience. Many of these outcomes are a result of, or contribute to regulatory failure.

The analysis finds strong support for the explanatory value of the PDR model as a tool for understanding how precariousness contributes to temporary agency workers' adverse health and safety outcomes. It also suggests the complexities of the triangular employment relationship create additional economic insecurities and disorganization problems beyond those experienced by other types of workers, which the regulatory environment has yet to address.

© DÉPARTEMENT DES RELATIONS INDUSTRIELLES, UNIVERSITÉ LAVAL - ISSN 0034-379X – RI/IR, 66-3, 2011, 397-421

How Precarious Employment Affects Health and Safety at Work: The Case of Temporary Agency Workers

Elsa Underhill and Michael Quinlan

International studies indicate temporary agency workers are more likely to be injured at work than other types of employees. However explanations for this have been less forthcoming. This paper seeks to begin filling this gap. A study was undertaken in Victoria, Australia, of occupational health and safety (OHS) amongst temporary agency workers drawing upon workers' compensation claim files for injured agency and directly hired workers from 1995-2001, and focus groups of temporary agency workers conducted in 2003. In analyzing the results, use was made of risk factors identified in a model that has been developed to explain how precarious employment affects OHS – the pressure, disorganization and regulatory failure (PDR) model (Quinlan and Bohle, 2004, 2009). Drawing principally on qualitative data, the paper finds that whilst agency workers share common risk factors with other forms of precarious workers, unique characteristics associated with the triangular nature of agency employment heighten their vulnerability further.

KEYWORDS: precarious employment, temporary agency work, occupational health and safety

Introduction

Work organization and labour markets have experienced significant change in virtually all advanced industrial economies in recent decades. Important amongst these has been the rapid expansion of temporary agency work (also known as labour hire or leased workers). The number of agency workers more than doubled during the 1990s in most European Union (EU) member states, the United States of America (USA), and Australia (Storrie, 2002; Houseman, Kalleberg and Erickcek, 2003; Laplagne, Glover and Fry, 2005). By 2001, agency employment had stabilized at just under two per cent of the EU workforce (Arrowsmith, 2006)

Elsa Underhill, Senior Lecturer, Deakin Graduate School of Business, Deakin University, Burwood, Victoria, Australia (elsa.underhill@deakin.edu.au).

Michael Quinlan, Professor, School of Organisation and Management, University of New South Wales, Sydney, and Honorary Professor, Faculty of Health Sciences, University of Sydney, Autralia, and Adjunct Professor, Business School, Middlesex University, London, United Kihgdom (m.quinlan@unsw.edu.au).

Acknowledgment: We would like to thank the anonymous referees for their extremely thoughtful and constructive comments on our submission.

before more divergent patterns emerged. It has since grown steeply in some countries (such as Canada, Germany and several Northern and Eastern European countries), slowed in others (such as France), and fallen in yet others, such as the United Kingdom (Biggs, 2006; Arrowsmith, 2009; Vosko, 2010). In Australia, temporary agency workers' share of the workforce peaked at around five percent in the mid-2000s before falling quickly to around 2.5% in late 2008 when, with the onset of the global financial crisis, agency workers were amongst the first to lose their jobs (Louie *et al.*, 2006; ABS, 2008; Skilled Group, 2009). Occupying only a small percentage of the workforce, national statistics belie the importance of agency employment. In most developed economies, agency workers are disproportionately employed in low skilled and often hazardous occupations and industries, and their employment creates downward pressures on wages and employment conditions, safety, and union membership (OECD, 2002; Davidov, 2004; Arrowsmith, 2006; Underhill and Rimmer, 2009).

Since the 1990s researchers have been examining how changes in work organization have affected OHS, with most studies finding that job insecurity and precarious employment is associated with significantly worse OHS outcomes (Quinlan, Mayhew and Bohle, 2001; Quinlan and Bohle, 2009). Studies of temporary agency workers' OHS outcomes have produced similar results. In France, the US, Spain and Australia, agency workers have been found to experience a greater OHS risk than traditional, direct hire workers (see Silverstein, Viikari-Juntura and Kalat, 2002; Underhill, 2002; Smith *et al.*, 2010); most studies of injury severity agree they are injured more severely (Silverstein and Foley, 1998; Underhill, 2002; for an exception see García-Serrano, Hernanz and Toharia, 2010). Explanations for their greater vulnerability, however, have been constrained by the relatively small size of the temporary agency workforce and the difficulties researchers face in accessing such workers. Furthermore, survey analyses often group agency workers with other subsets of precarious employees, such as seasonal and on-call employees, limiting the identification of factors peculiar to agency work (Virtanen *et al.*, 2005; for example, Aronsson, 1999; Lewchuk, Clarke and de Wolff, 2008).

Those studies which have distinguished temporary agency work from other employment types have generally identified similar risk factors. These include poorer supervision (Rebitzer, 1995); inadequate training and experience (François and Lievin, 1995; Rebitzer, 1995; Paoli and Merllié, 2001); a younger workforce with fewer qualifications (François and Lievin, 1995; Underhill, 2008); exposure to higher risk tasks (François and Lievin, 1995; Paoli and Merllié, 2001; Iacuone, 2006; Louie *et al.*, 2006); lack of workplace voice; and pervasive regulatory failure (Johnstone and Quinlan, 2006; Vosko, 2010). Some characteristics (such as younger age distribution and lack of voice) are shared with other precarious workers (see for example Aronsson, 1999; Benavides *et al.*, 2006; Lewchuk,

Clarke and de Wolff, 2008; Keegel, 2009). Others, however, appear unique to the agency work context and may contribute to the heightened risk of injury experienced by agency workers.

Following successive reviews of studies in this field, Quinlan and Bohle (2004, 2009) developed the 'Pressures, Disorganization and Regulatory Failure' (PDR) model to explain how precarious employment in its broadest sense affected OHS. The purpose of this paper is to explore the applicability of the PDR model in the narrower context of temporary agency work. In this research, we draw upon data from a sample of injured temporary agency and directly hired workers and from focus groups of agency workers (most of whom had not been injured) to explore the relationship between the nature of temporary agency operations, the pressures experienced by temporary agency workers, and their higher risk of workplace injury.

This paper is divided into four further sections. First the PDR model is briefly explained. The following section details the methods used. Evidence for each dimension of the model is then examined, followed by a discussion and conclusion.

The PDR Model: How Precarious Employment Affects OHS

Quinlan and Bohle's PDR model groups factors explaining poorer OHS outcomes amongst precarious workers into three categories: economic and reward pressures; disorganization at the workplace; and regulatory failure. The first encompasses sources of income insecurity which influence safe work practices. Employment and income insecurity, and intense competition for work can contribute to a range of hazardous practices including work intensification, cutting-corners, accepting hazardous tasks, working when injured, and multiple job holding (Quinlan and Bohle, 2004). This factor might seem to overlap with Siegrist's (1996) notion of effort/reward imbalance and Lewchuk, Clarke and de Wolff's (2008) notion of employment strain, but it also includes the pressures arising from dependency and job insecurity (in subcontracting or agency labour arrangements).

The second factor, disorganization, concerns characteristics of organizations lacking commitment to a stable workforce. Where workforce instability prevents the sustaining of established rules, procedures and roles, then OHS knowledge and management systems become fractured, whilst inter-worker communication, task co-ordination, and lines of management control are weakened. Underqualified, under-trained and inexperienced workers become more commonplace. In this setting, contingent workers are less able to collectively organize or be heard at the workplace. Disorganization is not simply a result of employer oversight, it is "a characteristic feature of the relationship between contingent workers

and their employers. Use of temporary workers affects employer attitudes to induction, training, participation in workplace committees, and other activities with implications for safety" (Quinlan and Bohle, 2004: 93).

The third factor, an increased likelihood of regulatory failure, refers to the extent to which OHS and employment regulation is weakened by precarious employment arrangements. Gaps in employment protection and minimum entitlements emerge; compliance is weakened as employee awareness of entitlements declines or is undermined by their labour market vulnerability; and enforcement processes encounter hurdles such as identifying those with legal responsibility in multiemployer worksites. Inconsistencies or discriminatory aspects in both the form and implementation of regulation practices bear most heavily on those in precarious employment (including foreign and undocumented workers, Sargeant and Tucker, 2009). Table 1 summaries the key risk factors associated with each of the three components of the PDR model.

TABLE 1
Risk Factors Associated with the PDR Model

Economic and Reward Pressures	Disorganization	Regulatory Failure
Insecure jobs (fear of losing job)	Short tenure, inexperience	Poor knowledge of legal rights, obligations
Contingent, irregular payment	Poor induction, training and supervision	Limited access to OHS, workers' compensation rights
Long or irregular work hours	Ineffective procedures and communication	Fractured or disputed legal obligations
Multiple jobholding	Ineffective OHSMS / inability to organize	Non-compliance and regulatory oversight (stretched resources)

The model includes risk factors which may be considered worker-related, such as inexperience, multiple-job holding and poor knowledge of legal rights, as well as factors stemming from the employer. However, the former, as will be demonstrated below, are also linked to employer practices. These characteristics are not unique to precarious workers, but are experienced more acutely by them. The PDR model does not identify specific outcomes associated with particular risk factors; it proposes that existing risks will be exacerbated and new risks will emerge because of the factors identified in Table 1 above. This model has been applied in a number of empirical studies (McNamara, 2009; Bohle *et al.*, 2011), with refinements arising from its application to new empirical datasets. In the following section, the research methods for this application of the risk factors of the PDR model will be described. Ongoing research on the model seeks to identify the interconnections between the three broad categories of risk. Our study is restricted to assessing the value of these risk factors rather than the ways these interact.

Methodology

Researching temporary agency workers is difficult. They are physically dispersed, poorly unionized, often itinerant, and reluctant to disclose information for fear of job loss (Quinlan, Mayhew and Bohle, 2001; Lipscomb *et al.*, 2008). To overcome these constraints, two methods were used to gather data about their employment. The first involved examining individual worker's compensation files; the second used focus groups of temporary agency workers and the union officials who organized them.

In Victoria, all employees with a work-related injury (including independent contractors deemed workers) are entitled to wage compensation and the reimbursement of medical expenses. WorkSafe Victoria (WorkSafe), the government agency responsible for workers' compensation, sets employer premium rates, maintains data on all injured workers who lodge a claim, and compensates claimants. It contracts the management of claims, however, to insurance companies from whom employers purchase workers' compensation insurance. When an injured worker lodges a claim with their employer, the employer's insurance company can choose to investigate whether the injury meets the statutory requirement of being work-related and therefore whether the claim will be conceded. They may do so at the request of employers (not all such requests are accepted) or on their own volition. They also investigate claims involving occupational stress, severe injuries which may result in a common law negligence suit, and when the insurance agent or employer suspect the claimant is malingering. Employers have a financial incentive to challenge the legitimacy of claims because even though the system is no-fault based, their insurance premiums are partially experience-rated. For temporary agency workers, their employer's premium, not the host's, will be so affected by compensation claims. Once a worker's compensation entitlement ceases, or the claim has been rejected, the files are archived with WorkSafe.

A sample of injured agency and regular, direct hire workers was taken from these closed investigated compensation claim files. These files provided a rich source of information about the nature of placements and the circumstances surrounding agency workers' injuries. They typically contained a summary of the injured worker's employment history, witness statements, correspondence with the claimant, and medical reports. As investigations are conducted shortly after the alleged injury has occurred, the circumstances of the injury are fresh in the parties' memories, enhancing reliability. But the files also contained limitations. Claims involving acute injuries (such as fractures and amputations) concern obvious harm and were less likely to be investigated. They are underrepresented. Also, investigations mostly explored whether the claimant was entitled to compensation and did not analyse factors affecting injury causation. Gaps

in data thus occur, particularly in relation to contextual information about union membership, consultative processes, and whether training or adequate supervision was received prior to the injury occurring.

Approval was granted by WorkSafe to examine a random sample of 198 investigated temporary agency workers' compensation claims lodged between 1995 (the year in which their data base first identified temporary agency workers) and 2001. The sample was stratified by those occupational groups with the largest number of agency worker claims. The time period was limited to six years to keep data collection manageable and avoid recent sensitive claims. A contrasting sample of direct hire claimants was also taken, matched at the narrowest occupational level (such as forklift driver or warehouse packer) and year of claim to enable comparisons of injury experience while minimizing occupational and temporal effects. As the files contained private information an agreement was undertaken with WorkSafe that analysis would not identify claimants, and documents would stay within WorkSafe's offices. Ethics approval was received from the University of New South Wales.

Data coding was informed by the literature on precarious workers and OHS, and the broader OHS literature which flags variables such as shift work, working hours, and OHS management systems. Quantifiable data (such as the receipt of training) was coded into a database, and combined with WorkSafe's administrative workers' compensation data for statistical analysis. Qualitative data about factors such as perceptions of the quality of training, the causes of injuries, and injured workers' accounts of their employment experience, were recorded for micro case study analysis. In the data analysis phase, quantifiable data were first tested for statistically significant differences between injured agency and direct hire workers using SPSS 13.0 (chi-square tests, $p < 0.05$). Those variables revealed to be statistically significant were retained and explored further through qualitative analysis. Factors excluded through this process included non-Anglophone background, gender, shift work, provision of personal protective equipment, performing heavy arduous lifting, and highly repetitive tasks. The latter two variables were only significant at $p < 0.10$. While common themes were identified and analyzed using qualitative data, the restriction on copying files verbatim precluded analysis using content analysis software.

Table 2 gives the occupation and industry distribution of the sample. Over 85% were located in blue collar occupations, and half were performing low skilled jobs.

The second data source came from focus groups of agency workers and union officials who represented agency workers. Support for the focus groups was gained from the peak union body which promoted the research amongst their members. Five focus groups were held in late 2003 in metropolitan and

TABLE 2

Occupation / Industry Classification of Worker's Compensation Claimants' Sample

Occupation / Industry	Temporary Agency Workers		Direct Hire Workers	
	No.	%	No.	%
White collar, miscellaneous industries	28	14.1	28	14.1
Maintenance trades, primarily manufacturing industry[a]	27	13.6	30	15.2
Building industry trade and non-trade[b]	42	21.2	39	19.7
Stores, warehouse workers and truck drivers	54	27.3	52	26.3
Machinists, process workers, manufacturing industry	47	23.7	49	24.7
Total	198	100	100	100

[a] includes a small number of electricity generation maintenance workers

[b] includes a small number of mining and agricultural workers

regional Victoria. Each session lasted approximately 90 minutes. Of the 38 participants, 29 were employed as agency workers and nine were union officials. After collecting biographic information, the discussions explored participants' experience of working through a temporary employment agency, including the process of obtaining host placements, benefits experienced from working through an agency, the nature of workplace consultation and communication, union representation, training, safety, and return to work post-injury.

Focus group participants worked in non-unionized call centres, and unionized construction, local government, manufacturing, meat processing and warehouse distribution. Union values meant participants were more likely to be critical of agency work. They were also typically placed in unionized host workplaces, and likely to enjoy better employment conditions than other non-unionized agency workers. Proceedings were recorded for transcription, and common themes were identified. As only five groups were held, content analysis software was not considered necessary. In the following analysis, we draw only upon that data which develops our understanding of factors which contribute to agency workers' heightened risk of injury.

The PDR Model and the Experience of Temporary Agency Workers

In this section, the PDR model is used as a framework to introduce the research data described above to analyze the experience of agency workers and explain their greater propensity to be injured at work. The risk factors identified in the model are each addressed, drawing upon data from the workers' compensation files (hereafter 'injured workers') and from focus groups.

Economic and Reward Pressures

The first of the PDR factors, economic and reward pressures, includes insecure employment, contingent wages, long or irregular hours, and multiple job holdings. The workers' compensation claims data suggests agency workers were more prone to these job characteristics than direct hire workers. Of the injured workers, 84% of agency workers were hired on an hourly paid casual basis, without protection from arbitrary dismissal compared with only 15% of injured direct hire workers. Agency workers had shorter employment tenure, with only 29% employed for more than one year with their current employer compared to 78% of direct hire workers. Their working hours were also more irregular. Twenty-seven percent (27%) of agency workers worked irregular hours compared to only 9% of direct hire workers (all casuals). For the agency hire casuals, with wages contingent upon placements, irregular hours produced irregular income. An injured agency storeperson, for example, earned an average of AUD$276 per week over 15 weeks, but his weekly wage varied from a low AUD$105 through to AUD$621. The last of the economic and reward factors, multiple job holding, was not commonly reported in the claims files, with only 6% of agency and 3% of direct hire claimants (all casuals) reporting such. With the exception of multiple job holding, each of the risk factors identified as economic and reward pressures were evidenced amongst injured agency workers. Whilst these factors have been identified by Quinlan and Bohle (2004) as common to precarious workers in general, they were more pronounced amongst the injured agency workers than casual direct hire workers in this sample.

The workers' compensation files revealed several ways in which these factors enhanced agency workers' risk of injury and injury severity. First, agency workers' belief that they could easily be replaced by another agency worker heightened their fear of job loss, creating reluctance to report minor injuries. They worked with injuries, often until physically unable to continue. The pressure to attend whilst injured was compounded by lack of entitlement to sick pay which might otherwise have allowed them paid time off to recuperate. The account of a process worker with tendonitis typified this process:

> I kept working and put up with the pain… I didn't mention it to anyone at the time as I was concerned my job would be terminated. I mentioned it in passing to a couple of employees…that I may have to wear a wrist and knee brace. I needed the money and didn't want to attract attention by wearing a brace.

Quantifying this reluctance was problematic as claims investigators did not routinely ask injured workers whether job insecurity contributed to a delay in claims lodgement. Nonetheless, 7% of agency claimants compared to only 1% of direct hire claimants raised the issue in conversation with investigators.

An injured welder's comments, from the claims files, suggested typical agency workers' fears:

> I did not seek immediate medical treatment, which in hindsight I believe I should have. I know what it is like in this industry and I did not want to get a bad name. You know how word gets around…

Duration of placement did not necessarily lessen the risk of job loss. A process worker, for example, injured his knee six months into a placement yet was advised he would be replaced by another agency worker if he took two days off to rest. Consequently, he worked until no longer physically able to do so. After two months recovery time, he was certified medically fit to return to work on modified duties but was not offered another placement. Another claimant worked single handed after injuring the other hand, notwithstanding being 13 months into a placement. In contrast, only two injured direct hire workers' compensation claimants expressed a willingness to work when injured, and both were motivated by loss of overtime earnings, not fear of job loss. Agency workers' fears of job loss were well founded. Almost half (46%) the injured casual agency workers were offered no further placements after lodging workers' compensation claims, compared to only 14% of direct hired casual workers. Permanent agency workers fared better. Only 16% were dismissed after lodging a claim compared to 10% of permanent direct hire workers.

Focus group participants spoke of the uncertainty associated with continually changing host locations, not knowing when or where the next placement would be, or why they were moved with little notice. Comments such as "living by the mobile phone", "anybody can be moved or replaced at any time", "you refuse to work overtime, and all the bastards do is get somebody else in and you are gone" were commonplace. Some had regular hosts yet still irregular hours (such as call centres, warehousing and local councils), whilst others churned through hosts and registered with multiple agencies to ensure continuity of income (such as in construction, manufacturing and nursing). They understood well the increased exposure to risk which employment insecurity carried, even though few reported being injured at work. According to participants, agency workers who raised OHS issues with their employer or host were allegedly dismissed, and the perception that "safety concerns are ignored" was widespread.

Second, the PDR model highlights the relationship between economic insecurity and work intensification. This was supported by evidence which showed how the precarious economic position of agency workers led them to accept understaffing, task overload and the work pace achieved by more experienced permanent workers. In one workers' compensation case an electrical linesman injured his knee whilst pulling a heavy cable. According to the claims investigator:

> Ideally, two persons should be involved in this procedure, however due to the system in place at [the agency], that is not always possible…on many occasions, the pulling of [the] cable is carried out alone…there may be some form of negligence against [the agency] for not providing sufficient manpower to alleviate the risk of injury.

In another workers' compensation case, a worker was required to construct one wooden pallet every 30 seconds, lifting 630 bearers weighing five kilograms each, per day. He was injured within two days of commencing the placement. The claim investigator summed up the worker's experience as "he had a bit of trouble keeping up with his co-worker who was a big bloke who had obviously more technique having been involved in the job for much longer…there was potential for him to suffer an injury as claimed". Thus some tasks became high risk because of the cost pressures resulting in understaffing by agencies, whilst hosts had unrealistic expectations of the capacity of agency workers to adapt quickly to tasks to which their direct hire workers were already accustomed.

Work intensification was raised frequently by focus group participants, especially those performing repetitive low skilled tasks such as in call centres and warehousing. One agency storeperson contrasted his experience with that of host employees:

> When there's clocks on you and you're timed on a lot of things, you always run the risk of accidents happening more so than if you didn't have the clock on. The clock is on the agency people even more, you can just see the permanents work slower, because they know they've got a job. … We've had agency guys pass out, working hard… was stifling hot up there (level 3, warehouse)…they were under the impression they wouldn't get hours, so they went flogging themselves then they passed out.

Likewise, the allocation of higher risk tasks to agency workers was recognized as 'part-and-parcel' of being an agency worker. According to the focus group participants, it arose from both organizational decisions to outsource high risk tasks, and from host supervisors and employees managing work organization to favour permanent employees. A focus group of outdoor council agency workers described how host employees passed on the worst jobs to the agency workers: "When I first started working for (the agency) I was the one who had to walk over the piles of rubbish…Doing the mowing up the hill…Collecting stones from up the hill compared to on flat grounds". Such practices not only placed agency workers at greater risk, but reinforced their perception of being second class workplace citizens.

Together, the two sources of data illustrate the PDR model's contention that economic and reward pressures produce multiple risk factors which are experienced more acutely by agency workers. This disadvantage is compounded by disorganization characteristics discussed in the next section.

Disorganization at the Workplace

Disorganization, the second category of risks in the PDR model, encompasses a range of characteristics which emerge in organizations that lack a commitment to a stable workforce (see Table 1). Most factors associated with disorganization could not be measured quantitatively from the data sets in this study. The analysis thus draws primarily upon qualitative data.

The demographic characteristics of the injured agency workers in the workers' compensation files were consistent with those identified by Quinlan and Bohle (2004) as indicative of disorganization. One-third had either no prior work experience or experience unrelated to their placement (compared to only 8% of direct hire workers) and, as noted earlier, their employment tenure was significantly shorter. Consistent with their temporary status, they also had significantly less experience at the workplace where they were injured compared to direct hire workers (an average of 8.7 compared to 62.6 months). Experience can also be related to age. One quarter of agency workers were young (less than 25 years old), compared to only 11% of injured direct hire workers. However, they were not the group most vulnerable to injury early in a placement. Older agency workers, aged 25-34 years, were more vulnerable, injured on average 3.39 months into a placement compared to 5.26 months for the younger workers. In contrast, direct hire workers exhibited the more established relationship between age and injury, with younger workers injured on average at 29.66 months tenure compared to 35.15 months for the 25-34 year age group (as all workers in this dataset were injured, incidence of injury by age cannot be measured).[1] Lack of familiarity with host tasks appeared to increase the risk of injury more than the absence of broader experience (see Breslin and Smith, 2006). Important was the potential for a mismatch between agency workers' skills and work capacity, and hosts' placement needs.

Mismatching agency workers' capabilities to placement requirements took two forms. The first concerned workers' physical capabilities to perform host tasks. Thus, former white collar and long term unemployed workers were allocated labouring placements to which they were physically unsuited. In one workers' compensation case, "a small, rather overweight man with very poor muscles" (medical report) reported an injury to his upper limbs three days into a placement. The medical report continued "…his very diffuse symptoms can only be accounted for by muscular soreness due to unaccustomed activity for three days, having previously done no physical work at all for several months". The second form of mismatch involved inadequate worker qualifications and experience for the placement. This was especially evident amongst trade workers placed to perform tasks which required more specialized or different skills. One worker's compensation case concerned a motor mechanic who crushed several

fingers whilst repairing a tractor on the first day of placement in a council workshop. A host employee commented that "as a general motor mechanic involved in servicing ordinary motor cars, he would not have had any exposure to such heavy duty equipment". Focus group participants offered further insights into this risk. A construction industry union official described how under-qualified and poorly placed workers posed risks to both themselves, and host employees:

> Our blokes have got to refuse to work with these people because they're just downright dangerous, they haven't had the experience, they're sent out there, they've never seen a 100 tonne mobile crane before, they're spellbound when they see the damn thing, they've got a ticket for an overhead crane in a factory and they haven't a got clue how to do it…

Injuries associated with mismatched skills, by their nature, tended to occur early in a placement especially when some agencies placed workers without position descriptions from hosts or placed newly hired workers quickly without seeking documentation of prior experience. None of the injured direct hire workers' data revealed injuries associated with this risk factor.

The second disorganization risk factor concerned poor induction, training and supervision. However a substantial number of workers' compensation claims files (for agency and direct hire workers) did not clarify whether claimants had received training, reflecting the claims investigators' objective of establishing the existence of a work-related injury rather than investigating injury causation. Also, to the extent that the question was raised, it was only in the context of events immediately preceding the injury. Amongst injured agency workers, 16% and 20% were known to have received induction from the agency and host respectively, but such data were missing from 59% of the files.

Qualitative data on training were more revealing, showing a variety of deficiencies. In some instances host training was not comprehensive enough. In one worker's compensation case, a distribution centre packer received on-the-job training from the host on the first day of his placement, but was injured the next when a motorized trolley jack ran over his foot. He claimed "At no stage had I been given any advice on possible dangers or working capability of the pallet jack by [the host]". In another such case, the host provided an extensive but standard induction training designed for direct hire workers; much of the content (such as social club activities and company long-term objectives) was irrelevant to the needs and interests of agency workers. In yet other cases, hosts provided training for workplace specific but not general OHS risks such as manual handling, incorrectly assuming the agency had already provided this. Hosts too often appeared to assume that casual observation of others, and 'common sense' could replace training.

One focus group agency worker in manufacturing who had been employed by the host prior to maintenance being outsourced seven years earlier described how "Before my job was outsourced I regularly participated in training…since then I've had one short training course, in seven years". Focus group agency workers believed the absence of training reflected their employers' prioritization of cost minimization. They also believed agencies preferred to place less skilled, lower paid workers over more experienced, better qualified workers.

Poor training coupled with inexperience, unfamiliarity, and mismatched placements increased the need for effective communication to enable agency workers to perform tasks safely during a placement. Yet fractured communication, manifested in communication breakdowns between agency workers, the agency, and the host, appeared widespread. Most common was the inability of agency workers to get either party to respond to OHS concerns, both arguing that it was the other party's responsibility. A focus group warehouse storeperson expressed frustration and a sense of powerlessness with the refusal of employers and hosts to respond to OHS concerns:

> We always get the ping-pong ball…the labour hire [agency] company says it was the host's decision, the host says it's got nothing to do with us…

In some instances, agency workers believed this contributed to the severity of their injury as they continued to work whilst injured, awaiting a response from either party. These problems were not evident amongst direct hire injured workers; responsibility for OHS lay clearly with their employer without a third party upon whom blame could be placed.

Another aspect of fractured communication, which also appeared unique to agency workers, was the lack of social support (extending to antagonism) from host employees which contributed to agency workers' sense of isolation whilst also potentially complicating their access to workers' compensation payments. Some agency workers, for example, could not recall the names of co-workers when asked who witnessed their injury, weakening the legitimacy of their claim and delaying entitlement to compensation. In other cases, host employees questioned the legitimacy of claims by agency workers, a practice not evident in the direct hire injured workers' files. In one worker's compensation case, an agency worker lodged a claim for stress after three weeks of what she described as belittling behaviour by host employees towards her, including continually referring to her as "the temp" rather than by name, and giving her an unreasonable workload. The latter, she believed, was because host employees incorrectly thought she received AUD$25 per hour, not the lesser AUD$15.50 per hour the agency paid her. None of the casual direct hire injured workers, who may also be considered 'outsiders' relative to permanent workers, reported encountering the persistent communication breakdowns experienced by injured agency workers.

The final component of disorganization identified by Quinlan and Bohle (2004) is ineffective OHS management systems and the inability of workers to collectively organize. Two common manifestations were agency workers' lack of knowledge of the host's OHS system requirements, especially the need to report injuries, and their explicit exclusion from such reporting systems. Some hosts only learnt of an agency worker's injury once a workers' compensation claim had been lodged with the agency. Consequently, hosts had limited records upon which to develop preventative measures, and injured workers' compensation claims were delayed because hosts could not confirm the incident. The exclusion of agency workers from hosts' OHS systems also resulted in exposure to risks not encountered by host employees. One worker's compensation case concerned an agency forklift driver who was injured when he slipped on grease on the step of a forklift. The host's systems required that "Each driver is responsible for the ongoing cleanliness on a daily basis of any fork he is using. While permanent employees of the company use the same forklift each day, casuals can swap and change from one fork to another during the course of the day depending on the type of work being undertaken…" (investigator's report). A manufacturing focus group agency worker described how segregation in OHS management could increase risk:

> We argued for 6 months to get ventilated safety masks…the host eventually supplied them to the (direct hire) production workers, but still refused to supply them to us.

Whilst systematic approaches may be taken to preventative housekeeping amongst host workers, these examples show they may not be extended to agency workers.

Such exclusion is compounded by lack of collective voice. A manufacturing focus group worker reported losing capacity to voice concerns because of fear of black listing, coupled with acute employment insecurity:

> You're not about to whack your hand up in a hurry because you get targeted…Word spreads quickly amongst the [agency] firms and then the worker is offered no further work.

Disorganization characterized many aspects of agency work. It was most pronounced early in a placement when mismatched placements and poor training heightened the risk of injury, reflected in the timing of injuries experienced by the injured agency workers. Eighteen percent of agency worker claimants were injured during the first week of their placement; 35% within the first month. By contrast, only 5% of direct hire workers were injured during their first month of employment. Over time, different manifestations of disorganization exposed agency workers to a higher risk of injury, particularly fractured communication, segregated OHS management systems, and barriers to organized expression of workplace grievances.

Regulatory Failure: Regulatory Context and Agency Workers' Vulnerability

The PDR model identifies four elements of regulatory failure: lack of knowledge of legal rights/obligations; limited access to those rights; disputed legal obligations; and non-compliance coupled with regulator oversight. The injured workers' data offered few insights into worker knowledge of entitlements, whilst the focus groups were composed primarily of union members aware, perhaps untypically, of their rights. The discussion which follows thus disregards the first risk factor, focusing instead upon the other three. It will be seen that there is substantial overlap between regulatory failure and the other components of the PDR model. Many of the risk factors and outcomes discussed above result from, or contribute to, regulatory failure.

First, evidence from the workers' compensation files suggested agency workers were constrained because most were employed as casuals with minimal protection from arbitrary dismissal. Both agency employers and hosts could easily assert no further placements to workers perceived as troublemakers, or those who lodged workers' compensation claims. Fear of job loss constrained agency workers from reporting injuries, taking time off to recover, or exercising their right to voice concerns about OHS risks. These constraints were not evident in the comparable data on directly hired casual and permanent injured workers.

Agency workers' fear of asserting rights was also evident in their attitudes to union membership and representation. Focus group evidence revealed fear of discrimination – typically dismissal – for being a union member or seeking union support. A union official (focus group participant) described how requests for union assistance often hinged upon anonymity:

> We get our phone calls from [agency] employees after hours…a lot don't even want the company to know they are union members…when you go out there they specifically say to you "Don't mention my name…

Reluctance, extending to unwillingness to call upon union support underpins other risk factors in the PDR model.

Another element of regulatory failure concerns non-compliance and enforcement problems. Important here is the right to OHS worker representation. Focus group participants repeatedly raised concerns about the threat to employment associated with becoming an OHS representative:

> That's why we haven't got many OHS reps, just as we haven't got many [shop] stewards – the minute you raise an issue, they move you out…

Unions have traditionally played an important role in day-to-day enforcement of workers' rights in Australia. Union officials participating in the focus groups

explained how that role was constrained by the expansion of agency work. One aspect of this concerned worker anonymity caused by high turnover amongst agency workers. According to one shop steward:

> Down in the yard I used to know every job that was vacant, I could tell who was casual…who was still off for Workcover, sick leave, annual leave… but I couldn't give you any idea now because of just the sheer numbers of labour hire workers…

A further risk factor concerns the potential for legal obligations to be disputed when the responsibility for OHS lies with more than one party. Both the agency employer and host typically have responsibility for providing agency workers with a safe and healthy workplace. This includes ensuring workers have the skills and knowledge to work safely, and that hazards are identified and controlled before placements commence. Agency employers must ensure hosts have undertaken preventative actions such as risk assessments, and monitor the health and safety of workers at the host workplace (Underhill, 2008). The injured workers' data revealed the deficiencies in training by agency employers and hosts, whilst focus group participants reported that often neither party fulfilled their obligations. OHS problems continued unabated whilst agency employers and hosts 'passed the buck' between one other.

Regulatory failure was common across the agency sector. Whilst the first of the risk factors could not be reliably assessed from available data, the other risk factors were evident amongst agency workers in this study. The concluding discussion draws together these findings and highlights those factors which distinguish the agency employment and OHS experience from that experienced by other precarious employees.

Discussion and Conclusion

This paper aimed to explore the explanatory value of the PDR model in the context of temporary agency work. Qualitative data from the injured workers' claim files and focus groups offered unique insights into the experience of temporary agency workers. From this, it is clear that the risks they face are broadly consistent with those identified in the PDR model. Some of these risks are common to other forms of precarious employment (as would be expected, given the origins of the PDR model); others are peculiar to agency employment because of the triangular employment relationship which distinguishes their employment from direct hire employment. The discussion which follows focuses upon those characteristics which are shaped by the interrelationship between temporary agency operations, host employers, and temporary agency workers and which accentuate or produce new risks. The PDR model helps explain why temporary agency workers experience poorer OHS outcomes than direct hire employees because it

draws out key characteristics of their employment and the regulatory environment which impact upon health and safety.

First, economic and reward pressures are especially pervasive in temporary agency work because of the reliance by temporary agency employers upon casual workers. Agency employers claim it is only economically viable to hire workers when there is a placement available with a host, and that requires unfettered access to a casual workforce (Underhill and Quinlan, 2010). For agency workers, this results in prolonged uncertainty over when and where they next work. There are no regulatory constraints upon agencies using casual employees in this way. Nor are there legal constraints upon direct hire employers hiring casuals in the same manner. However, the capacity of agency employers to effectively dismiss workers who report an injury or take time off to recover from a minor injury, or circumvent protection against discrimination (such as for being a union member or raising a grievance), by claiming no further host placements were available, contributed to agency workers' acute sense of insecurity. These pressures were perceived by agency workers as contributing to their greater risk of injury, and injury severity, through their need to work with injury (work and non-work related), and endure task overload and work intensification.

Second, the risk factors associated with disorganization in the PDR model were demonstrated in the data, coupled with additional factors which appear specific to agency employment. The interactions between agency employers and hosts accentuated disorganization risks identified by Quinlan and Bohle (2004), and produced unique risks consistent with the concept of disorganization. Three risk factors were identified as either unique to or significantly compounded by the triangular employment relationship: mismatched placements; unfamiliarity with host workplaces and tasks; and communication barriers.

Before discussing why these factors are especially pronounced amongst agency workers, it is necessary to briefly summarize key characteristics of the temporary agency work in Australia. Barriers to entry are low; capital requirements are minimal; and business licensing regulations, which might otherwise deter new entrants, do not exist (Parliament of the Commonwealth of Australia, 2005). Most agencies are small businesses, competing on price. Around the time data were collected for this study, 80% of agencies employed fewer than 10 administrative employees (ABS, 2003); by 2009, the largest agency held only 12% of the placement market (Hargrave and Janes, 2009). Although some agencies may differentiate themselves on the basis of an attribute other than price (such as occupational specialization), most large agencies are forced to compete with smaller operators on price, notwithstanding their greater capital costs (Underhill and Quinlan, 2010).

Three OHS risks flow from these competitive pressures. First are mismatched placements. Agencies are compelled to place workers quickly or risk losing the host to another agency (Underhill and Quinlan, 2010). This contributes to the mismatch between workers' skills, experience and capabilities, and hosts needs (see also Allen, Sompayrac and White, 2002). Poorly matched agency workers could be readily replaced by others; those injured because of the mismatch could be easily dismissed. These mismatched placements increased workers' risk of injury, whilst poor induction and OHS training precluded development of knowledge about safe work practices. Second are risks associated with exposure to unfamiliar workplaces. Hosts' expected that agencies placed workers immediately capable of performing the job and allowed workers no adjustment time nor task specific training. Unfamiliarity with the hosts' tasks and workplace risks left agency workers vulnerable to injuries early in a placement, notwithstanding any broader experience and knowledge. Third, as placements continued, fractured communication created additional risks. Agency workers' experience differed from that of direct hire workers because of this. They effectively had two masters – the agency and the host – neither willing to accept responsibility for OHS problems; they had to communicate with a party external to the workplace to resolve problems; and they were less likely to be integrated with co-workers sharing a common employer and common problems (Pocock, Prosser and Bridge, 2004). Importantly, protection from dismissal for raising grievances was less available.

The third category of PDR risks is regulatory failure. As explained above, many of the risks associated with economic pressures and disorganization were based upon and compounded by regulatory failure. Non-compliance with statutory obligations appeared wide-spread. With such a predominance of small operators, regulatory failure may be attributed to lack of knowledge by agency employers, but a culture of non-compliance was also evident. Focus group participants' concerns with non-compliance extended beyond OHS and employment security to basic rights such as receiving the minimum wage for all hours worked. This culture of non-compliance was arguably facilitated by the problems regulators faced in enforcing legal obligations across the agency industry. The smaller agency employers, with minimal fixed capital, easily close when threatened with prosecution, and re-open under another legal identity (Vickery, Interview, 2008). Furthermore, limited resources of regulators result in a preference for 'demonstration effect' prosecutions of large stable companies. Consequently smaller agencies operate without fear of prosecution, in the knowledge they can 'disappear' should an employee be sufficiently severely injured to warrant prosecution. Direct employers, in contrast, are more readily identifiable by regulators, have more capital and reputation to protect, and are unable to 'disappear' when threatened with prosecution. Thus the risk of regulatory failure is less pervasive amongst large agencies and direct hire employers.

The evidence upon temporary agency workers lends support to the utility of the PDR model as a means of explaining the poorer OHS outcomes experienced by precarious workers. Additional risk factors were identified, but these are variations upon those identified by Quinlan and Bohle (2004) under the umbrella of disorganization. A strength of the PDR model, in fact, is the identification of the three sources of risk with which the particular attributes of specific forms of precarious employment can be identified and categorized.

The data analyzed in this study suggest temporary agency workers experienced different and more acute risks than direct hire employees. However there are several qualifications to observe. First, the injured workers' data were limited to those workers' compensation claimants whose claims had been investigated by the insurance agent. Hence, those with acute injuries were under-represented in the sample. Also gaps in data collection by the insurance investigator precluded the isolation of variables which may be relevant but could not be identified. Second, focus group participants were predominantly blue-collar unionized agency workers (the exceptions being call centre workers) who were well-informed about, but largely dissatisfied with, agency employment. Other occupational groups with high levels of agency employment, such as nurses, may see the OHS risks of agency work quite differently (Underhill, 2005). Likewise, the extent to which the experience of these agency workers with respect to issues such as discrimination and lack of workplace voice is shared by other workers could not be assessed. Notwithstanding these qualifications, the data in this study provide insight into the OHS experience of agency workers renowned for their inaccessibility to researchers; indicates risk factors unique to this form of employment; and suggests avenues for further research.

Notes

1 Analysis of variance and post-hoc tests using the Bonerroni test were applied and statistically significant differences were identified between the youngest agency workers and those aged over 55 years ($p < .01$); and between those aged 25-34 and all older workers except those aged 35-44 years ($p < .05$); for direct hire workers, statistically significant difference were found between those aged 15-24 years and those over 45 years ($p < .01$); and 25-34 year olds compared to those over 45 years ($p < .01$).

References

ABS. 2003. *Employment Services 2001-02*. Canberra: Australian Bureau of Statistics, Catalogue 8558.0.

ABS. 2008. *Forms of Employment.* Canberra: Australian Bureau of Statistics, Catalogue 6359.0.

Allen, Richard S., Joanie Sompayrac and Charles S. White. 2002. "How Closely Are Temporary Workers Screened? Results of a National Survey of Temporary Agencies." *SAM Advanced Management Journal,* Spring, 31-36.

Aronsson, Gunnar. 1999. "Contingent Workers and Health and Safety." *Work, Employment and Society*, 13 (3), 439-459.

Arrowsmith, James. 2006. *Temporary Agency Work in an Enlarged European Union*. Luxembourg: Office for Official Publications of the European Communities.

Arrowsmith, James. 2009. *Temporary Agency Work and Collective Bargaining in the EU*. Dublin: European Foundation for the Improvement of Living and Working Conditions, http://www.eurofound.europa.eu/.

Benavides, Fernando G., Joan Benach, Carles Muntaner, George L. Delclos, Nuria Catot and Marcelo M. Amable. 2006. "Associations between Temporary Employment and Occupational Injury: What Are the Mechanisms?" *Occupational and Environmental Medicine*, 63 (6), 416-421.

Biggs, D. 2006. "The Decline of the Temporary Worker: A Regional Perspective." *Local Economy*, 21 (3), 249-263.

Bohle, Philip, Harold Willaby, Michael Quinlan and Maria McNamara. 2011. "Flexible Work in Call Centres: Working Hours, Work-life Conflict & Health." *Applied Ergonomics*, 42 (2), 219-224.

Breslin, F. C. and P. Smith. 2006. "Trial by Fire: A Multivariate Examination of the Relation between Job Tenure and Work Injuries." *Occupational and Environmental Medicine*, 63, 27-32.

Davidov, Guy. 2004. "Joint Employer Status in Triangular Employment Relationships." *British Journal of Industrial Relations*, 42 (4), 727-746.

François, M. and D. Lievin. 1995. *Emplois précaires et accidentabilité: enquête statistique dans 85 entreprises*. Paris: Institut national de recherche et de sécurité.

García-Serrano, Carlos, Virginia Hernanz and Luis Toharia. 2010. "Mind the Gap, Please! The Effect of Temporary Help Agencies on the Consequences of Work Accidents." *Journal of Labor Research*, 31, 162-182.

Hargrave, G. and T. Janes. 2009. *2008/09 Half Year Results*. CEO Presentation, Skilled Group, Melbourne, 25 February.

Houseman, Susan, Arne Kalleberg and George Erickcek. 2003. "The Role of Temporary Agency Employment in Tight Labor Markets." *Industrial and Labor Relations Review,* 57 (1), 105-127.

Iacuone, David. 2006. "Power and Labour Hire in the Victorian Construction Industry." *Journal of Occupational Health and Safety Australia and New Zealand*, 22 (1), 61-72.

Johnstone, Richard and Michael Quinlan. 2006. "The OHS Regulatory Challenges Posed by Agency Workers: Evidence from Australia." *Employee Relations*, 28 (3), 273-289.

Keegel, Tessa. 2009. "Tell Me about It: Worker Participation in Occupational Health and Safety and Hazard Communication in the Workplace." Melbourne: University of Melbourne, Unpublished doctoral thesis.

Laplagne, P., M. Glover and T. Fry. 2005. *The Growth of Labour Hire Employment in Australia*. Melbourne: Productivity Commission, Staff Working Paper.

Lewchuk, Wayne, Marlea Clarke and Alice de Wolff. 2008. "Working without Commitments: Precarious Employment and Health." *Work, Employment and Society*, 22 (3), 387-406.

Lipscomb, H., K. Kucera, C. Epling and J. Dement. 2008. "Upper Extremity Musculoskeletal Symptoms and Disorders among a Cohort of Women Employed in Poultry Processing." *American Journal of Industrial Medicine*, 51, 24-36.

Louie, Amber, Aleck Ostry, Michael Quinlan, Tessa Keegel, Jean Shoveller and Anthony LaMontagne. 2006. "Empirical Study of Employment Arrangements and Precariousness in Australia." *Relations Industrielles / Industrial Relations*, 61 (3), 465-486.

McNamara, Maria. 2009. "A Comparative Study of the Occupational Health and Safety Outcomes of Permanent and Temporary Hotel Workers in Ireland and Australia." Sydney: University of New South Wales, Unpublished Doctoral Thesis.

Organization for Economic Co-operation and Development [OECD]. 2002. *OECD Employment Outlook*. Paris: Organization for Economic Co-operation and Development.

Paoli, P. and D. Merllié. 2001. *Third European Survey on Working Conditions*. Dublin: European Foundation for the Improvement of Living and Working Conditions.

Parliament of the Commonwealth of Australia. 2005. *Making it Work: Inquiry into Independent Contracting and Labour Hire Arrangements*. Canberra: Commonwealth of Australia, House of Representatives Standing Committee on Employment, Workplace Relations and Workforce Participation.

Pocock, B., R. Prosser and K. Bridge. 2004. *'Only a Casual...' How Casual Work Affects Employees, Households and Communities in AUSTRALIA*. Adelaide: School of Social Sciences, University of Adelaide.

Quinlan, Michael and Philip Bohle. 2004. "Contingent Work and Occupational Safety." *The Psychology of Workplace Safety*. J. Barling and M. R. Frone, eds. Washington, DC: American Psychological Association, 81-106.

Quinlan, Michael and Philip Bohle. 2009. "Over-Stretched and Unreciprocated Commitment: Reviewing Research on the OHS Effects of Downsizing and Job Insecurity." *International Journal of Health Services*, 39 (1), 1-44.

Quinlan, Michael, Clare Mayhew and Philip Bohle. 2001. "The Global Expansion of Precarious Employment, Work Disorganisation, and Consequences for Occupational Health: A Review of Recent Research." *International Journal of Health Services*, 31 (2), 335-414.

Rebitzer, James B. 1995. "Job Safety and Contract Workers in the Petrochemical Industry." *Industrial Relations*, 34 (1), 40-57.

Sargeant, Malcolm and Eric Tucker. 2009. "Layers of Vulnerability in Occupational Safety and Health for Migrant Workers: Case Studies from Canada and the UK." *Policy and Practice in Health and Safety*, 7 (2), 51-74.

Siegrist, Johannes. 1996. "Adverse Health Effects of High-Effort / Low-Reward Conditions." *Journal of Occupational Health Psychology*, 1 (1), 27-41.

Silverstein, Barbara and Michael Foley. 1998. *Protecting Contingent Workers from Work-Related Injury*. Melbourne: Paper presented to the Ergonomics Society of Australia Conference, October.

Silverstein, Barbara, Eira Viikari-Juntura and John Kalat. 2002. "Use of a Prevention Index to Identify Industries at High Risk for Work-Related Musculoskeletal Disorders of the Neck, Back, and Upper Extremity in Washington State, 1990-1998." *American Journal of Industrial Medicine*, 41, 149-169.

Skilled Group. 2009. *Annual Report 2007/08*. Melbourne: Skilled Group Proprietary Limited.

Smith, Caroline, Barbara Silverstein, David Bonauto, Darrin Adams and Z. Joyce Fan. 2010. "Temporary Workers in Washington State." *American Journal of Industrial Medicine*, 53 (2), 135-145.

Storrie, Donald. 2002. *Temporary Agency Work in the European Union*. Luxembourg: Office for Official Publications of the European Communities.

Underhill, Elsa. 2002. *Extending Knowledge on Occupational Health and Safety and Labour Hire Employment: A Literature Review and Analysis of Victorian Worker's Compensation Claims*. Melbourne: WorkSafe Victoria.

Underhill, Elsa. 2005. "Winners or Losers? Work / Life Balance and Temporary Agency Workers." *Labour and Industry*, 16 (2), 29-59.

Underhill, Elsa. 2008. "Double Jeopardy: Occupational Injury and Rehabilitation of Temporary Agency Workers." Sydney: University of New South Wales, Unpublished Doctoral Thesis.

Underhill, Elsa and Malcolm Rimmer. 2009. "State Protection for Temporary Agency Workers: Australian Developments." *The Modernisation of Labour Law and Industrial Relations in a Comparative Perspective*. W. Bromwich, O. Rymkevich and S. Spattini, eds. Netherlands: Kluwer Law International, 173-192.

Underhill, Elsa and Michael Quinlan. 2010. "Strategies for Improving the Safe Placement of Labour Hire Workers." Report prepared for the Queensland Division of Workplace Health and Safety, Deakin University, Melbourne.

Vickery, Max. 2008. Manager, Prosecutions Branch, WorkSafe Victoria, Melbourne, Interview.

Virtanen, Marianna, Mika Kivimäki, Matti Joensuu, Pekka Virtanen, Marko Elovainio and Jussi Vahtera. 2005. "Temporary Employment and Health: A Review." *International Journal of Epidemiology*, 34, 610-622.

Vosko, Leah. 2010. "A New Approach to Regulating Temporary Agency Work in Ontario or Back to the Future?" *Relations Industrielles / Industrial Relations*, 65 (4), 632-653.

SUMMARY

How Precarious Employment Affects Health and Safety at Work: The Case of Temporary Agency Workers

Precarious employment has been associated with adverse occupational health and safety (OHS) outcomes across a range of studies. Temporary agency workers are particularly vulnerable, with studies showing they experience a higher incidence of workplace injury, and a greater likelihood of more severe injuries than all other employment types. Explanations for agency workers' higher risk of injury have, to date, been impeded by data limitations associated with researching temporary employment. This article seeks to begin filling this gap through analyzing the experience of agency workers based upon two data sources. The first is a unique qualitative and quantitative data set developed from investigated temporary agency and directly hired workers' compensation files; the second is focus groups of agency workers conducted in the State of Victoria, Australia. Quinlan and Bohle's (2004) Pressures, Disorganization and Regulatory Failure (PDR) model, developed to explain the greater OHS vulnerability of precarious workers, provides the framework for analyzing the data.

After explaining the key concepts in the PDR Model, the article analyses the data to test for evidence of economic pressures, disorganization at the workplace,

and regulatory failure impacting upon temporary agency workers' health and safety. The analysis supports the relevance of the PDR model, and provides an understanding of additional and unique risk factors which contribute to agency workers' higher risk of injury. Temporary agency workers experience economic pressures in common with other types of precarious workers. However, these appear more acute amongst agency workers. They also confront disorganization risks, extending to mismatched placements; lack of familiarity with host workplaces; and more complex fractured communication. These contribute to workplace risks and create barriers to improving their experience. Many of these outcomes are a result of, or contribute to regulatory failure.

The analysis finds strong support for the explanatory value of the PDR model as a tool for understanding how precariousness contributes to temporary agency workers' adverse health and safety outcomes. It also suggests the complexities of the triangular employment relationship create additional economic insecurities and disorganization problems beyond those experienced by other types of workers, which the regulatory environment has yet to address.

KEYWORDS: precarious employment, temporary agency work, occupational health and safety

RÉSUMÉ

L'influence de l'emploi précaire sur la santé et la sécurité au travail : évidences tirées d'une étude auprès de travailleurs d'agences de placement temporaire

L'emploi précaire a été associé au travers de diverses études à des effets négatifs en matière de santé et sécurité au travail (SST). Les travailleurs d'agences de placement temporaire seraient particulièrement vulnérables, des études rapportant à leur égard une plus grande incidence de blessures en milieu de travail ainsi qu'une plus grande probabilité de subir des blessures sévères comparativement à tout autres types d'emplois. Les explications du risque de blessures plus élevé chez ces travailleurs ont, à ce jour, été entravées par des limites de données associées à la recherche sur l'emploi temporaire. Cet article cherche à combler cette lacune en analysant l'expérience de travailleurs d'agences de placement à partir de deux sources de données. La première est un ensemble de données qualitatives et quantitatives unique développé à partir d'une enquête auprès de telles agences et de fiches de paie de travailleurs directement embauchés; la seconde est constituée de groupes de discussion de travailleurs d'agences de placement temporaire menés dans l'état de Victoria en Australie. Le modèle de Quinlan et Bohle (2004) « pressions, désorganisation et échec de la réglementation » (ou PDR pour « Pressures, Disorganization and Regulatory Failure »), développé pour expliquer la plus grande vulnérabilité des travailleurs précaires en SST, fournit le cadre d'analyse des données.

Après avoir expliqué les concepts clés du modèle PDR, cet article analyse les données pour tester la présence de l'impact des pressions économiques, de la désorganisation en milieu de travail et de l'échec de la réglementation sur la santé et la sécurité des travailleurs d'agences de placement temporaire. L'analyses confirme l'adéquation du modèle PDR et produit une compréhension de facteurs additionnels et uniques qui contribuent au risque plus élevé de blessure des ces travailleurs. Bien que ces derniers vivent des pressions économiques comme c'est le cas pour d'autres types de travailleurs précaires, ces pressions semblent plus aigües parmi les travailleurs d'agences de placement temporaire. Ils doivent également affronter des risques de désorganisation dont des placements inadéquats, un manque de familiarisation avec leurs milieux de travail d'accueil, et des communications plus complexes fracturées. Ces éléments contribuent aux risques en milieu de travail et créent des barrières à l'amélioration de leur expérience de travail. Plusieurs de ces situations sont un résultat de, et contribuent à, l'échec de la réglementation.

Cette étude constitue un appui important à la valeur explicative du modèle PDR comme outil pour comprendre comment la précarité contribue à la dégradation de la SST des travailleurs d'agences de placement temporaire. Elle suggère également que la complexité de la relation d'emploi triangulaire de ces travailleurs crée de l'insécurité économique additionnelle et des problèmes de désorganisation au-delà de ceux vécus par d'autres types de travailleurs, ce à quoi la réglementation ne s'est pas encore adressée.

MOTS CLÉS : emploi précaire, agence de placement temporaire, santé et sécurité au travail

RESUMEN

Como el empleo precario afecta la seguridad y salud ocupacional: evidencia a partir de un estudio sobre los trabajadores temporarios de agencia

El empleo precario ha sido asociado a resultados negativos de seguridad y salud ocupacional (SSO) por una gama de estudios. Los estudios muestran que los trabajadores temporarios de agencia son particularmente vulnerables y que ellos experimentan una alta incidencia de lesiones ocupacionales y una probabilidad mas elevada de lesiones graves comparados a todos los otros tipos de trabajadores. Las explicaciones del alto riesgo de lesión de los trabajadores de agencia han sido obstaculizadas por las limitaciones de los datos asociados a las investigaciones sobre el empleo temporario. Este artículo pretende contribuir a colmar este vacío mediante el análisis de la experiencia de los trabajadores de agencia basado en dos fuentes de datos. Se trata en primer lugar de un conjunto de datos cualitativos y cuantitativos únicos desarrollados por la agencia temporaria estudiada a partir de los datos de compensación de los trabajadores contratados; el segundo grupo de datos proviene de entrevistas de grupo con trabajadores de agencias en el estado

de Victoria, Australia. El modelo Presiones, Desorganización y falta de Regulación (PDR), desarrollado por Quinlan y Bohle (2004) para explicar la más grande vulnerabilidad en cuanto a la seguridad y salud ocupacional de los trabajadores precarios, constituye el marco para analizar estos datos.

Después de explicar los conceptos claves del modelo PDR, el artículo analiza los datos para evaluar la evidencia de presiones económicas, la desorganización en el lugar de trabajo y la ausencia de regulación que impactan sobre la seguridad y salud ocupacional de los trabajadores temporarios de agencias. El análisis sustenta la pertinencia del modelo PDR y procura una comprensión de los factores de riesgo adicionales y únicos que contribuyen al riesgo mas elevado de lesiones de los trabajadores de agencias. Los trabajadores temporarios de agencias experimentan presiones económicas comunes a los otros trabajadores precarios, sin embargo estas presiones aparecen más agudas en el caso de los trabajadores de agencias. Ellos confrontan también los riesgos de desorganización, incluyendo colocaciones mal emparejadas; la ausencia de familiaridad con los lugares de trabajo huéspedes, y las complejas comunicaciones fracturadas. Esto contribuye a los riesgos en el lugar de trabajo y crea barreras para mejorar sus experiencias. Muchos de estos efectos son un resultado de la falta de regulación o contribuye a dicha falta.

El análisis ofrece un fuerte apoyo al valor explicativo del modelo PDR como instrumento para comprender cómo la precariedad contribuye a los resultados adversos en seguridad y salud ocupacional de los trabajadores temporarios de agencies. También se sugiere que las complejidades de la relación de empleo triangular crean inseguridades económicas y problemas de desorganización adicionales mas allá de lo que experimentan otros tipos de trabajadores, cuyos ambientes de regulación dejan también a desear.

PALABRAS CLAVES: empleo precario, trabajo temporario de agencia, salud e higiene ocupacional