

**BARRIERS TO THE IMPROVEMENT OF OCCUPATIONAL
SAFETY PERFORMANCE: A LEADERSHIP GROUP'S
PERSPECTIVE**

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Abstract

Whilst a large portion of contemporary occupational safety research is focused on understanding safety culture and safety climate as antecedents of unsafe behaviour, there is very little research that explores the barriers to the achievement of a positive safety culture or climate. Additionally, there is a paucity of research in the field of organisational safety that utilises qualitative research methodologies. This paper presents some of the results from semi-structured interviews conducted with 120 managers and occupational health and safety professionals working within one organisation. The organisation was in the process of introducing and implementing an occupational safety strategy aimed at decreasing injury and accident rates through the improvement of organisational safety culture and safety climate. Whilst a range of important themes emerged from the interview transcripts, this paper focuses on the barriers to the improvement of organisational safety as identified by the participants. The main barriers outlined were the commitment of organisational members to the improvement process, the dedication of resources, and characteristics of the existing culture. Similarities are drawn between the outcomes of this research and the literature associated with organisational change and resistance to change. Future research directions for the field of occupational safety are suggested highlighting the importance of drawing from research associated with organisational change.

BARRIERS TO THE IMPROVEMENT OF OCCUPATIONAL SAFETY PERFORMANCE: A LEADERSHIP GROUP'S PERSPECTIVE

INTRODUCTION

For at least the past two decades a significant portion of occupational safety research has been oriented toward improving safety performance, both at the individual and organisational level, through the improvement of safety culture and safety climate (Guldenmund, 2000; Zacharatos, Barling, & Iverson, 2005; Zohar, 1980). Using a case study methodology, this paper reports on a portion of the results of interviews conducted with members of an organisation, in the process of implementing an organisational safety improvement strategy. The aim of the strategy was to improve the organisational safety culture and safety climate. Whilst a spectrum of major themes emerged from the interviews, this paper is focused on the barriers to the success of the strategy. Three main barriers were identified by the participants; the level of commitment, the dedication of resources, and the existing organisational culture.

This paper is divided into five sections. The first section overviews the literature in the field of occupational safety with specific focus on safety culture and safety climate. The second section will outline the research method and the third the major findings. The fourth section provides a discussion of the findings while the fifth provides suggestions for further research.

OVERVIEW OF THE LITERATURE

In 2002, the Australian National Occupational Health and Safety Commission (NOHSC) put forward the National Occupational Health and Safety Strategy 2002-2012. The Strategy 2002-2012 was developed with the specific aim of reducing work-related fatalities by 20% and the incidence of workplace injury and illness by 40% by the 30th of June 2012 (NOHSC, 2002). A key principle of the strategy was to improve the ability of the government and organisations to foster a proactive style of safety management, and in doing so accentuating the importance of safety culture and safety climate.

Safety culture and climate are concepts that have been developed to provide both researchers and practitioners with a framework for the assessment of safety within organisations. Culture is defined by Schein (1985) as constituting three integrated levels of analysis: basic assumptions, espoused values and artefacts. The climate concept occurs at the level of espoused values and encompasses attitudes, beliefs and perceptions. Schein (1985) argues that climate precedes culture and that through the study of attitudes, cultural assumptions are reflected. Within the context of safety literature, safety climate represents the attitudes of the individual towards safety, hence providing a manifestation of safety culture.

Safety culture research, as the concept is defined here, is not as common as safety climate research. The safety climate concept is becoming increasingly dominant in safety research. Safety climate has been empirically linked with accidents (Mearns, Whitaker, & Flin, 2003), injury rates (Zohar, 2002), safety activities, safety involvement (Cheyne, Oliver, Tomás, & Cox, 2002), and safety-specific behaviours (Neal, Griffin, & Hart, 2000). The focus for much of the research in this field is on preventing unsafe behaviours. The main reason for this focus is that occupational safety research endeavours to prevent accidents and, therefore, a focus on accidents as a dependent variable is essentially reactive. The purpose of safety climate research is to be proactive or preventative and safety-related behaviour is our best predictor of accidents and injuries (Mearns, Flin, Gordon, & Fleming, 2001). Further, accidents occur rarely, making their applicability to the cross sectional data that dominates this field limited.

The usefulness of the safety culture and safety climate concepts is not the focus of this research. The focus of this research is to explore *how* organisations can go about achieving a positive safety

culture and safety climate. More specifically, this research focuses on the perceived barriers to the achievement of a positive safety culture and safety climate.

METHOD

The purpose of this research is to explore the range of issues associated with the implementation of a strategy to improve safety performance through a focus on safety culture and safety climate. A single case study research design was employed in this research. Yin (1994: 23) defines a case study as being an empirical inquiry that “investigates a contemporary phenomenon within its real life context; when the boundaries between phenomenon and context are not clearly evident; and in which multiple sources of evidence are used.”

The key aim of this research was to ask “What are the key issues involved in the introduction and implementation of an organisational safety strategy?” Research problems focused on addressing *what* questions, as outlined by Yin (1994) and Cavana, Delahaye, and Sekaran (2001), are exploratory in that the intention is to understand a phenomenon as opposed to counting a series of frequencies associated with an event. In addition to being exploratory, there was also a descriptive element to the interviews. Due to the amount of data resulting from the interviews this paper focuses on one major theme identified in the data. This major theme was associated with the identification of barriers to the introduction and implementation of a safety improvement strategy.

The level of analysis in this research is the individual. One hundred and twenty interviews were conducted with employees of one organisation during 2005. These individuals were selected using a process of purposive sampling. The research participants in this project have been labelled the ‘leadership group’ for the purpose of this paper. This label has been used because the group included managers and occupational safety professionals; people who are in the position to drive the process of implementing a strategy aimed at improving organisational safety performance and who are therefore identified as a key stakeholder group. Members of the leadership group report, in most instances, to the executive and board level. Actioning the occupational health and safety strategy is very much the responsibility of the group interviewed. Based on the desire to capture the opinions of the leadership group as distinct from the broader population of general employees, purposive sampling was used (Neuman, 2000).

Semi-structured interviews were the primary source of data collected. The interviews were, with the participant’s permission, recorded and transcribed. An interview schedule was devised that included both factual, minor probing, and major probing questions (see appendix A). The interview data was analysed using the NVivo (2.0) software. Occupational safety research is a relatively atheoretical field, and therefore, the analytic technique applied in this research has not been based on theoretical propositions (Yin, 1994). Rather, a description approach was employed in which the broad responses to the implementation of an organisational safety improvement strategy were used as an analytic framework. Themes were originally identified as being a positive or negative comment on the existing status of organisational safety, or a positive or negative comment on the proposed organisational safety strategy. This process constitutes the early phases of conceptualisation in the analysis process with more in-depth analysis to follow (Yin, 1994).

The data analysis process was composed of three phases: open coding, axial coding, and selective coding. Open coding is undertaken as a first read through of the data and is designed to identify themes that tend to be buried in the text of the interview (Strauss & Corbin, 1998). Prior to the analysis process key themes were identified, for example the positive or negatives of the existing state of organisational safety or the proposed strategy. Through the process of open coding these initial themes were refined, and the more specific theme associated with characteristics of the organisation that could present barriers to the implementation of an organisational safety improvement strategy identified.

The second phase of analysis was axial coding. The themes identified during open coding remain flexible and change as more interviews are conducted and more data is analysed (Strauss & Corbin, 1998). Because in the open coding phase themes have been established, the second read through of the data allows the researcher to focus on the themes as opposed to the data (Neuman, 2000; Strauss & Corbin, 1998). During this phase of analysis the theme of barriers to strategy implementation was broken into three more specific themes, which will be discussed in the findings section.

During the final phase of data analysis, selective coding, the existing themes guide the consideration of the data, with a focus on comparisons or contrasts that exist between cases and specific themes (Neuman, 2000; Strauss & Corbin, 1998). In this research the three barriers identified during axial coding were reconsidered to determine if further elaboration of concepts could be undertaken. This paper does not report of the full process, but focuses only on the outcomes of the final phase of data analysis.

The context of the organisation is critical in case study research particularly in terms of understanding the data, the analysis and the implications of the analysis (Neuman, 2000). While the identity of the organisation must remain anonymous, it is still possible to discuss its general characteristics and history.

Organisational context

Yin (1994) stated that in case study analysis, the organisational context is critical because if the unit of analysis is embedded in the case, and is permitted to become the focus of the research, then the process is not following a case study method. While the level of analysis in this research is the individual, it is the process of implementing a safety improvement strategy in the organisation that is of primary interest. Given the importance of the organisation in this research, this section will briefly outline its key characteristics.

The organisation studied is a manufacturing company employing approximately 8000 people across Australia and New Zealand. The organisation is comprised of a number of both small and large plants some of which are original company plants and others acquired over the company's history. Therefore, there are a number of employees who have been employed with the original company for their entire working lives, others who have been with the company for a shorter time but were employed by that company and, other people who were employed by the company following a merger or acquisition. The plant sizes vary from being small to relatively large. Some of the plants have existing occupational health and safety strategies either devised by employees of the organisation being researched or as the result of initiatives of previous company ownership. The occupational health and safety strategies employed at the plant level range from being comprehensive to minimalist. In a number of instances the occupational health and safety strategy only barely meets legislative requirements, which emphasise not only compliance but also the proactive management of occupational health and safety, and the creation of strong and self-regulating safety cultures. The intention of the newly proposed strategy is that it will integrate all plants under common goals and objectives. While the strategy encompassed both occupational health and occupational safety, the focus of this company is overwhelmingly occupational safety.

FINDINGS

A number of themes emerged from the broad research focus on the issues associated with the implementation of an organisational safety improvement strategy, and the more specific focus on the barriers to the implementation of such a strategy. The findings revealed the following three key themes as being prominent barriers to the implementation of occupational safety improvement strategies focused on the creation of more positive safety climates and safety cultures: commitment and buy-in to the implementation of the strategy, the dedication of resources, and the

existing culture. In each of these broad themes, more specific concepts have been identified. Passages from the interview text have been included to exemplify the themes.

Commitment and buy-in

The notions of commitment and buy-in were perceived by the safety leadership groups as being critical in the implementation of a safety improvement strategy. Commitment is an issue that has been noted within previous research as being critical to ensuring people behave safely and also therefore in the reduction of accidents and injuries (Barling & Hutchinson, 2000; Zacharatos et al., 2005). In this research, however, commitment was perceived as an issue that could prevent the implementation of the new strategy. The issue of commitment was discussed in terms of who should show commitment, and how commitment can be displayed.

“... commitment by management, because we basically have two or three of our managers attend meetings anyway. I think that shows a commitment.”

“So what we’re trying to do is get the people’s commitment to go home in the same condition they come to work and we’re doing everything we can to ensure that happens.”

“I think it is walking the walk, not just sort of sitting in ivory towers showing people what to do. I guess it’s about getting people involved and making them understand why they have to do it and how it’s going to benefit them.”

The issue of buy-in was also often discussed in conjunction with commitment in the context of gaining support for the implementation of the new strategy. Support, or buy-in, was seen as being critical to the success of the strategy, but more importantly, a lack of effort in the past to obtain such support was seen as being a barrier to implementation. Within these responses there was a strong underlying notion of needing to sell the strategy in order to get support.

“You’ve got to have people’s buy-in. If you don’t have people’s commitment and buy-in to it, you will leave the strategy on the ground.”

“... what usually happens is they get implemented at a corporate or higher up level We’re told ... there’s no assistance from corporate. ... you’ll have a roll out strategy.”

Dedication of resources

With respect to occupational safety, the investment and dedication of resources such as money, time, control, and expertise is an issue discussed and debated within many organisations, and is often a battle for many occupational health and safety professionals. In the majority of cases in this current research, control was perceived as being available to the leadership group to implement change. However, money was often a little more difficult with some respondents recognising money as a limitation, while others perceived the importance of occupational safety to justify the expenditure.

“At this point I have 100% control”

“Sadly it all reflects on dollars. There’s a lot you can do if you’ve got an endless you know, budget because everything you implement costs money.”

“If we need to spend money then it becomes a little more difficult but if it’s a matter of safety it wouldn’t be a problem.”

The issue of time and the dedication of resources were seen as being quite strongly integrated. In terms of being a barrier to the implementation of the safety improvement strategy people found that

they simply did not have the time in their role or position description to perform safety tasks to their full capacity.

“For people who are currently very busy, if there is an additional time allocation required, it may become very difficult.”

“If a strategy is put in place and it can be resourced effectively, now that means it’s not just picked up by a few again and added on to another job, then it’s going to be effective... we went down the road of having safety coordinators and then safety coordinators became safety environment coordinators and then safety and environment coordinators became systems coordinators”

An additional issue raised as part of the discussion on resources was associated with having sufficient staff on site to effectively administer occupational safety programs.

“I think half the problem with a lot of sites is they’re under staff, under manned. Don’t have the availability of someone to continually keep an eye on the safety on site.”

“We don’t have enough people on the ground to do it properly.”

Characteristics of the existing culture

Through the process of coding the data, it was recognised that the previously identified themes of commitment, buy-in and the allocation of resources were interrelated with perceptions of the existing organisational culture. The interview data from the respondents highlighted the impact of organisational culture on perceptions of occupational safety and safety outcomes.

The first of the major themes associated with the effect of the existing organisational culture on the implementation of a safety improvement strategy was in the extent to which production and cost effectiveness were central to organisational values. The balance between production and protection is one that is often discussed in the field of occupational safety (Berger, 1999; Mayhew & Quinlan, 1999; Quinlan, 1999).

“X is about results. In the short-term a lot of the OH&S improvements will cost money and at the site level, sites are reluctant to spend money, because we’re so driven to get a result each month.”

“They (top management and executives) see it as a sideline to the business rather than integral to the business.”

“At the moment safety lags behind profit and the environment.”

“The current focus isn’t on safety, it’s on productivity and profit rather than safety and not that safety is overlooked, but the major focus if you ask most people would be that”

An additional issue highlighted as a characteristic of the existing culture, and a barrier to the implementation of the new strategy, was that safety is not necessarily a priority simply because it is the ‘right thing to do.’ Social responsibility is a critical issue within the contemporary organisational context but has not necessarily infiltrated perceptions of occupational safety in this case.

“I mean, they don’t want anyone to get hurt but the focus is on the reduced insurance costs, and even to the point where the national OHS manager has gone to the board to talk about this to the senior managers and he’s had to do it from a cost reduction point of view, this is why we should embrace it, not because it’s a good thing. This is the right thing and that’s how he’s argued we should be attempting doing this for cost reduction, which is the wrong way round.”

“I think it will extremely benefit X in changing the culture and making financial benefits to the business and emotional benefits to our employees by reducing the impact on them personally and their families. Are we concerned about safety? Yes, we are. Is it our priority? No, it’s not.”

DISCUSSION

Commitment and buy-in

The notion of being committed to safety, at both the management and employee level, as well as buying into the process of organisational safety improvement was outlined by the leadership groups as being critical in the implementation of the new safety strategy. In addition to buy-in, members of the leadership group also made reference to involvement and participation by employees, and support or assistance from management as ways in which commitment can be generated and displayed. In the occupational safety literature there is a considerable amount of literature associated with commitment, involvement, and participation. Barling and Hutchinson (2000) suggest that a key factor in the improvement of safety performance at the individual level is to employ a commitment-based approach to management as opposed to a control-based approach. Barling and Hutchinson (2000: 77) state that this approach “increases employees’ trust in management and commitment to the organisation.” The success of such an approach relies on management taking the time to develop trusting relationships with workers and through the demonstration of commitment through action. If workers perceive themselves to be valuable assets to the organisation, as opposed to dispensable capital or commodities, they are more likely to reciprocate with organisational commitment, have the power to make changes and work toward optimal safety performance.

Research in the field of occupational safety indicates that the presence of high-performance work systems (HPWS), which are based on the themes of commitment, empowerment, and involvement are important in the improvement of organisational safety performance (Zacharatos et al., 2005). HPWS are associated with quality leadership and relationships, which have also been found to predict safety citizenship behaviours. Safety citizenship behaviours are a reconceptualisation of established organisational citizenship behaviours in a more content specific in the form, aimed at improving team and organisational performance in relation to safety (Hofmann, Morgeson, & Gerras, 2003).

Dedication of resources

The availability of resources within the work environment, and specifically the impact of such availability on safety performance, is encompassed within the safety literature, particularly with respect to job design. As discussed previously having access to quality work, which includes job control or autonomy, has linked to safety performance and safety related behaviour (Parker, Axtell, & Turner, 2001; Turner, Chmiel, & Walls, 2005). The issue of staffing or having the staff working on each site was also outlined as being critical to the achievement of safety objectives. The issue of work overload or job demand is prevalent in occupational safety research (Embrey, 1992; Hofmann & Stetzer, 1996; Mullen, 2004). When individuals perceive their workload to be excessive, they are likely to short-cut safety-related components of the job, to meet their production expectations. This balance between production and protection is often noted within the literature (Berger, 1999; Mullen, 2004). Additionally, training is an indicator of the money and time committed to safety that is often encompassed in safety climate measures (Flin, Mearns, O’Connor, & Bryden, 2000). Interestingly, money is not an issue that is often explicitly referred to in the occupational safety literature, however, the focus on resourcing in terms of training, workload, and staffing numbers suggest that the commitment of resources is of critical importance.

Characteristics of the existing culture

The existing culture of the organisation is clearly not in support of the improvement to occupational safety performance. Low accident organisations and those with high levels of safety performance are characterised as being those in which safety is given a high priority by all staff members (Lee, 1998) and value is placed on the safety of employees (Hofmann & Morgeson, 1999). The organisation in this case study does not display these characteristics. Further, it could be argued that if the organisational culture was more focused on the employees as an asset, performance level in terms of both production and occupational safety would improve (Zacharatos et al., 2005). It can also be argued that such a culture change would be associated with higher levels of commitment and buy-in and a greater dedication of resources. In this case it is apparent that both the organisational culture and safety culture need to change. Research in the field of occupational safety is increasingly focusing on the impact of larger organisational factors, such as the organisational climate and HPWS, on safety specific outcomes such as a positive safety culture or safety climate and individual level safety performance (DeJoy, Schaffer, Wilson, Vandenberg, & Butts, 2004). Höpfl (1994) argued that the safety culture of an organisation, and therefore by association the safety climate, can not be considered as separate from the organisational context in which it exists. Therefore, if organisational safety performance is to improve within this organisation, the safety culture and organisational culture must change.

Based on the issues raised in the interviews therefore, culture change is a major issue in the improvement of organisational safety performance. The establishment of an organisational strategy for safety is important, however it must be supported by initiatives to change the existing culture, and confront the barriers to such change. There is an abundance of literature in the field of organisational change and culture change, and yet it is not represented in the occupational safety literature. It is this gap that forms the basis for the following suggestions for future research.

FUTURE RESEARCH

There is a strong focus within much of occupational safety literature on the need for a positive safety culture and safety climate (Zohar, 2003) as a method for improving organisational safety performance. Additionally, the impact of larger organisational factors on safety outcomes is also increasingly being researched (Zacharatos et al., 2005). The organisation being studied here was engaged in a process of improving the organisational safety climate and culture, however, the data suggests that there are a number of barriers to the implementation of such a strategy that are both safety-specific and characteristic of the organisation more generally. Therefore, there is not only a need for change with respect to the safety culture and climate but also organisational culture and climate. The importance of the literature in the field of culture change and change management therefore becomes apparent.

In this case study, the barriers to change outlined by the leadership group present significant challenges to the proponents of the organisational safety improvement strategy. The need for organisational change is generally triggered by environmental factors that warrant the intentional changing of goals and demands by the organisation (Jimmiseon, Terry, & Callan, 2004; Piderit, 2000). A major issue in the success of such a change process therefore is that it is "reliant on generating employee support and enthusiasm for proposed changes" (Piderit, 2000: 783). Whilst a full review of the extant organisational/culture change literature is not within the scope of this paper its relevance to the field of occupational safety, both in terms of research and practice is clear. Two major issues will be discussed here suggesting starting points for the integration of the organisational change and organisational safety literature: first, the motivations for change and second, the commitment to change.

Within the organisational change literature there is an emphasis on the fact that change is planned, intentional, and strategic. Before it is sensible to begin contemplating *how* to implement change, it is first necessary to consider *why* such change is necessary (Armenakis & Bedeian, 1999). In the

case of this organisation this is a critical point of contention that can be summarized in the following statement:

“I mean, they don't want anyone to get hurt but the focus is on the reduced insurance costs, and even to the point where the national OHS manager has gone to the board to talk about this to the senior managers and he's had to do it from a cost reduction point of view, this is why we should embrace it, not because it's a good thing. This is the right thing and that's how he's argued we should be attempting doing this for cost reduction, which is the wrong way round.”

For as long as occupational safety is perceived as being a peripheral to the core business of production, an issue explored in the sociological approach to safety (Bohle & Quinlan, 2000), the levels of motivation and commitment for change will suffer (Herscovitch & Meyer, 2002). Burke and Litwin (1992) argue that in order for change to occur, it must be transformational. Transformational change is instigated because environmental forces, both within and external to the organisation, impact on the organisational values, mission, and strategy, the leaders, and the culture. Such transformational change is followed by transactional change in which structure, management practices, policies and procedures each impact work unit climate. Work unit climate impacts motivation levels, which in turn impacts individual needs and values, and tasks and individual skills. As a result of these proceeding interactions, individual and organisational performance improves. The emphasis in the transactional change phase is on what top management believes is the organisations' mission and strategy, what employees believe is the central purpose of the organisation, and on the capacity of leaders to “serve as behavioural role models for all employees” (Burke et al., 1992: 532). Based on the data collected through the interview process, occupational safety and the safety of employees is not a major concern of the executive group and whilst the leadership group acknowledge its importance, the prevailing attitude is difficult to change. Given these facts, more research is needed on how the role of occupational safety professionals can be strengthened within the organisational context, the impact of legislation on the attitudes of company executives, and ways in which such attitudes can be more effectively shifted. In this vein Armenakis and Bedeian (1999) outline that research on the process issues associated with change is a major theme in organisational change research. Process issues include the role of federal, state, and other local or smaller interest groups that can impact the organisations input markets (i.e. labour market), conditions of employment, and the nature of outputs. In terms of occupational safety we need to consider why some aspects of the environment have evoked such a rapid change while others (e.g. safety), have not.

The second issue to be highlighted here is the importance of obtaining commitment to change and also a commitment to the objective of having a safe organisation, such that ‘the way we do things around here’ (Deal & Kennedy, 1982) is safely. The first point to make is that if people do not have the same perspectives as to why change is necessary, then they are less likely to be motivated to make changes to their behaviour. If these people are in the top echelons of management then the effect will likely be that the change process is not successful (Burke et al., 1992). In effect, commitment to change connects people with change associated goals, and without such commitment, the change process generally fails (Conner, 1992; Conner & Patterson, 1982). The relationship between commitment and positive organisational safety performance is being increasingly established in the occupational safety literature (Barling & Hutchinson, 2000). However, if in order to obtain positive organisational safety performance change is necessary, then commitment to the process of change is equally important (Herscovitch & Meyer, 2002). This again presents a direction for future research in the field of occupational safety.

While concepts such as commitment and change can be effectively researched using quantitative techniques, definitions of culture indicate qualitative techniques are more suitable. There is a paucity of qualitative research in the field of occupational safety and therefore, in order to facilitate the integration of the organisational change, culture, and organisational safety literatures broader spectrums of methodologies need to be applied.

LIMITATIONS

Yin (1994) identified three limitations of the case study research method. Yin (1994) first stated that often researchers allow bias to infiltrate qualitative research, and second that case studies result in massive amounts of data. In addressing these two issues Yin (1994) states that bias is an issue that must be considered carefully in all research methods, and that case study research does not necessarily need to be cumbersome and as such, should not be confused with ethnographic or participant-observation styles of research. The third limitation of the case study method outlined by Yin (1994) is associated with the capacity to generalise the results of single case study research, and even multiple case research when the sample is not considered representative. In addressing this concern Yin (1994: 21) states that “the case study, like the experiment, does not represent a ‘sample,’ and the investigators goal is to expand and generalize theories (analytic generalization) and not to enumerate frequencies (statistical generalization).”

CONCLUSION

The field of occupational safety remains relatively segregated from the broader management literature. Evolution in the field of occupational safety does not necessarily require the creation and development of new and unique theories but can benefit from the adaptation of existing theories. As outlined in the literature review, the notions of safety culture and safety climate are of critical importance within the field of occupational safety. It is important therefore to begin to research ways in which organisations can obtain positive safety cultures and safety climates, using methodologies that diverge away from the conformist quantitative traditions.

APPENDIX A

Factual question: What is your role in the organisation?

Minor probing: If you could do two or three things to improve health and safety within your immediate workplace, what would they be?

Major probing: What problems or barriers to you see to the implementation of the proposed OHS strategy?

REFERENCE LIST

- Armenakis, A.A., & Bedeian, A.G. (1999). Organizational change: A review of theory and research in the 1990s. *Journal of Management*, 25, 293-315.
- Barling, J., & Hutchinson, I. (2000). Commitment vs. control-based safety practices, safety reputation, and perceived safety climate. *Canadian Journal of Administrative Sciences*, 17, 76-84.
- Berger, Y. (1999). Why hasn't it changed on the shopfloor? In C. Mayhew & C.L. Peterson (Eds.), *Occupational health and safety in Australia: Industry, public sector and small business* (pp. 52-64). St Leonards, NSW: Allen & Unwin.
- Bohle, P., & Quinlan, M. (2000). *Managing occupational health and safety: A multidisciplinary approach* (2nd ed.). Sydney, NSW: Macmillan.
- Burke, M.J., Borucki, C.C., & Hurley, A.E. (1992). Reconceptualizing psychological climate in a retail service environment: A multiple-stakeholder perspective. *Journal of Applied Psychology*, 77, 717-729.
- Cavana, R.Y., Delahaye, B.L., & Sekaran, U. (2001). *Applied business research: Qualitative and quantitative methods*. Sydney, NSW: John Wiley.
- Cheyne, A., Oliver, A., Tomás, J.M., & Cox, S. (2002). The architecture of employee attitudes to safety in the manufacturing sector. *Personnel Review*, 31, 649-670.
- Conner, D.R. (1992). *Managing the speed of change: How resilient managers succeed and prosper where others fail*. New York: Villard Books.
- Conner, D.R., & Patterson, R.W. (1982). Building commitment to organizational change: *Training and Development Journal*, 36, 18-30.
- Deal, T.E., & Kennedy, A.A. (1982). *Corporate cultures: The rites and rituals of corporate life*. Reading, MA: Addison-Wesley.
- DeJoy, D.M., Schaffer, B.S., Wilson, M.G., Vandenberg, R.J., & Butts, M.M. (2004). Creating safer workplaces: Assessing the determinants and role of safety climate. *Journal of Safety Research*, 35, 81-90.
- Embrey, D.E. (1992). Incorporating management and organisational factors into probabilistic safety assessment. *Reliability Engineering and System Safety*, 38, 199-208.
- Flin, R., Mearns, K., O'Connor, P., & Bryden, R. (2000). Measuring safety climate: Identifying the common features. *Safety Science*, 34, 177-192.
- Guldenmund, F.W. (2000). The nature of safety culture: A review of theory and research. *Safety Science*, 34, 215-257.
- Herscovitch, L., & Meyer, J.P. (2002). Commitment to organizational change: Extension of a three component model. *Journal of Applied Psychology*, 87, 474-487.
- Hofmann, D.A., Morgeson, F.P., & Gerras, S.J. (2003). Climate as a moderator of the relationship between leader-member exchange and content specific citizenship: Safety climate as an exemplar. *Journal of Applied Psychology*, 88, 170-178.
- Hofmann, D.A., & Morgeson, P. (1999). Safety-related behaviour as a social exchange: The role of perceived organizational support and leader-member exchange. *Journal of Applied Psychology*, 84, 286-296.
- Hofmann, D.A., & Stetzer, A. (1996). A cross-level investigation of factors influencing unsafe behaviours and accidents. *Personnel Psychology*, 49, 307-339.
- Höpfl, H. (1994). Safety culture, corporate culture: Organizational transformation and commitment to safety. *Disaster Prevention and Management*, 3(3), 49-58.

- Jimmiseon, N.L., Terry, D.J., & Callan, V.J. (2004). A longitudinal study of employee adaptation to organizational change: The role of change-related information and change-related self-efficacy. *Journal of Occupational Health Psychology, 9*, 11-27.
- Lee, T. (1998). Assessment of safety culture at a nuclear reprocessing plant. *Work and Stress, 12*, 217-237.
- Mayhew, C., & Quinlan, M. (1999). The effects of outsourcing on occupational health and safety: A comparative study of factory-based workers and outworkers in the Australian clothing industry. *International journal of health services, 29*, 83-107.
- Mearns, K., Flin, R., Gordon, R., & Fleming, M. (2001). Human and organizational factors in offshore safety. *Work and Stress, 15*, 144-160.
- Mearns, K., Whitaker, S.M., & Flin, R. (2003). Safety climate, safety management practice and safety performance in offshore environments. *Safety Science, 41*, 641-680.
- Mullen, J. (2004). Investigating factors that influence individual safety behaviour at work. *Journal of Safety Research, 35*, 275-285.
- Neal, A., Griffin, M.A., & Hart, P.M. (2000). The impact of organizational climate on safety climate and individual behavior. *Safety Science, 34*, 99-109.
- Neuman, W.L. (2000). *Social research methods: Qualitative and quantitative approaches*. Sydney, NSW: Allyn and Bacon.
- NOHSC. (2002). *National OHS Strategy - 2002-2012*. Retrieved 26 August, 2004, from <http://www.nohsc.gov.au/nationalstrategy/>
- Parker, S.K., Axtell, C.M., & Turner, N. (2001). Designing a safer workplace: Importance of job autonomy, communication quality, and supportive supervisors. *Journal of Occupational Health Psychology, 6*, 211-228.
- Piderit, S.K. (2000). Rethinking resistance and recognizing ambivalence: A multidimensional view of attitudes toward an organizational change. *Academy of Management Review, 25*, 783-794.
- Quinlan, M. (1999). The implications of labour market restructuring in industrialized societies for occupational health and safety. *Economic and Industrial Democracy, 20*, 427-460.
- Schein, E.H. (1985). *Organizational culture and leadership: A dynamic view*. London: Jossey-Bass.
- Strauss, A., & Corbin, J. (1998). *Basics of qualitative research: Techniques and procedures for developing grounded theory*. London: Sage.
- Turner, N., Chmiel, N., & Walls, M. (2005). Railing for safety: Job demands, job control, and safety citizenship role definition. *Journal of Occupational Health Psychology, 10*(4), 504-512.
- Yin, R.K. (1994). *Case study research: Design and methods*. Beverly Hills, CA: Sage.
- Zacharatos, A., Barling, J., & Iverson, R.D. (2005). High-performance work systems and occupational safety. *Journal of Applied Psychology, 90*, 77-93.
- Zohar, D. (1980). Safety climate in industrial organisation: Theoretical and applied implications. *Journal of Applied Psychology, 65*, 96-102.
- Zohar, D. (2002). The effects of leadership dimensions, safety climate, and assigned priorities on minor injuries in work groups. *Journal of Organizational Behavior, 23*, 75-92.
- Zohar, D. (2003). Safety climate: Conceptual and measurement issues. In J.C. Quick & L.E. Tetrick (Eds.), *Handbook of occupational health psychology* (pp. 123-142). Washington: American Psychological Association.