

Occupational health and safety professionals strategies to improve working environment and their self-assessed impact

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Abstract. Research suggests that Occupational Health and Safety (OHS) practitioners have difficulty influencing the decision-making process because they are placed on the sidelines in the organisation. This paper analyses the strategies that OHS practitioners use to fulfill their job role and the impact they have on the working environment and OHS management systems. Semi-structured interviews were conducted with ten New Zealand OHS practitioners from mainly large private and public organisations about their job role, OHS tasks, strategies and their impact. The interviews were tape recorded, transcribed, entered into a qualitative data management programme and analysed thematically in relation to their strategies, barriers and their impact on the OHS management system and working environment. The analysis revealed that these OHS practitioners used multiple strategies - chosen in relation to the situation, the stakeholders and their own resources. They saw themselves as change agents or facilitators. They preferred to use a knowledge strategy, supported by an audit strategy. Their last resort was a regulation strategy. All of the practitioners had a positive impact on stakeholders' knowledge, attitude and behavior and on OHS management systems. Some practitioners improved the working environment but few were involved in introduction of new technology.

Keywords: Change process; change strategy; management; practitioners; influence

1. Introduction

Occupational Health and Safety (OHS) practitioners employed as OHS managers, OHS coordinators or OHS advisors in organisations are often placed on the sideline when decisions are made about the daily operation of the organisation and particularly about changes in the organisation [3,7,10,11]. This can make it difficult for them to directly influence the decision-making process and to maintain, improve or create a good working environment.

During the last decade research into the role of OHS professionals has increased. In general it has two different perspectives.

The first perspective has its onset in the OHS profession and focuses on description of the OHS professionals' tasks. These studies are mainly survey based and do not describe the dynamics in the

organisation and how the OHS professional navigates in the organisation to improve the working environment [1,6,8,9,13-15]. The research describes OHS professionals as technically oriented safety practitioners. Some are involved with change and design processes but many do not consider change and design-related activities [9]. Survey based research adds very little to our understanding of the personal, professional and organisational factors that may impact on the professionals' strategic impact [14].

The second perspective has its onset in the ergonomics discipline and looks at OHS professionals' strategies and how effective they are in influencing the change process and in improving the working environment. These studies are based on more qualitative research methods, including case studies and semi-structured interviews [3,7,10,12,16,17].

Hasle and Jensen [10] conclude from their case studies that OHS practitioners have difficulties initiating changes and that one of the explanations is their difficulty in ensuring that OHS is included on the agendas of the organisations' central decision-making process. Hasle and Sørensen [11] found the OHS practitioners preferred strategies - called the 'regulation strategy' and the 'knowledge strategy' - as a main contributing factor to their limited influence.

The 'regulation strategy' is based on the threat of punishment if the organisation does not comply with the law. This strategy has become more difficult to apply after reforms of legislations inspired by the Robens Report. The 'knowledge strategy' has been the dominant strategy where the OHS practitioner supplies the stakeholders with information on the relation between exposure and consequences and suitable solutions. The decision-makers then implement them. The argument for implementation is often build on 'best interest' i.e. economic benefits for the employer, or an 'ethical argument'. Hasle and Sørensen [11] suggest a supplementary strategy identified by Broberg and Hermund [3] where the OHS practitioner has to act as a 'political reflective navigator', also identified by other authors from an ergonomics research perspective [7]. Theberge and Neumann [16] found that the ergonomist in their study acted as 'political reflective navigators'. *"Political in the sense of pursuing a work environment agenda (...) reflective in the sense of being able to switch between different roles and mobilizing different kind of knowledge depending on the context (...) a navigator in the sense of knowing how to navigate in the complex surrounding in the technological change process"* [17, p 81].

The OHS profession oriented research fails to address the OHS practitioners' strategies and their influence in an organisational context. The ergonomics oriented research on practitioners focuses more on specialist OHS practitioners but address their strategies and identifies the need to look at the practitioner as a 'political reflective navigator' and the ways in which they can exert power.

This paper addresses the gaps that both research streams have not addressed, by analysing the strategies of OHS practitioners employed as internal OHS advisors or managers (not specialist OHS advisors or experts) in organisations in New Zealand. It also examines their impact on the OHS management system and on the working environment. The OHS practitioners' strategies are analysed in relation to the strategies identified by

Hasle and Sørensen [11] and are also analysed for other strategies.

2. Method

A qualitative research method was used to explore the strategies used by OHS practitioners. Interviews were conducted with ten OHS practitioners employed mainly in large (only one organisation had fewer than 100 employees and seven had more than 500 employees) private and public organisations on the North Island of New Zealand. Half were women and half men. All had more than 6 years experience as OHS practitioners. Only two were employed in part-time positions. Five were employed as OHS managers and five as OHS advisors. Tables 1 and 2 show respectively the demographics of the five public sector and the five privately employed practitioners. Each practitioner is labeled to indicate the industry sector in which they were employed.

To try and recruit practitioners with different backgrounds, five were recruited through the New Zealand Institute for Safety Management and five through snow-balling. The interviews lasted approximately two hours and consisted of two parts:

- a semi-structured part about the practitioners background, job role and activities, their goals, obstacles they faced, their place in the organisation, and cooperation with different stakeholders;
- a structured part where a list of OHS related tasks [9], a table dividing OHS task into strategic and operational levels and three dimensions: organizational, technical and human [4] and with an impact ladder [5] were presented.

In the structured part the practitioners were asked to fill in the tables or the list and give examples. The mixed interview method was used to approach the OHS practitioners' strategies from different angles. It was anticipated that it would be difficult for the practitioners to describe their strategy.

The interviews were transcribed, entered in a qualitative data management programme (QSR NVIVO 9) and analysed thematically [2]. A broad coding scheme was developed: job role, personal aim, collaboration, impact, strategy and also strategy according to Brun & Loisel [4]. Each transcript was initially analysed and coded by the author. The strategy section was analysed and divided into specific strategies described by Hasle and Sørensen [11] and strategies that emerged from the interviews.

Table 1
Demographics of the OHS practitioners in public sector organisations

OHS practitioner	Health	District Council	Finance	Social service	Finance & service
Numbers of employees	1001 - 10,000	101 - 500	1001 - 10,000	> 10,001	101 - 500
OHS function placed in org.	HRM dept	HRM dept	HRM dept	OHS dept	-
Job title	OHS(E) manager	OHS(E) advisor	OHS(E) advisor	OHS(E) advisor	OHS(E) manager
Years as OHS practitioner in the organisation	2-3	2-3	0 - 1	0 - 1	0 - 1
Years as OHS practitioner	6-10	6-10	6-10	11-15	16 - 20

Table 2
Description of interviewed OHS practitioners in private sector organisations

OHS practitioner	Service & Cleaning	Electrical production	Paper production	Distribution	Plastic production
Numbers of employees	> 10,001	501 - 1000	501 - 1000	501 - 1000	51 - 100
OHS function placed in org.	HRM dept	report direct to GM	report direct to GM	HRM dept	OHS dept
Job title	OHS(E) advisor	OHS(E) advisor	OHS(E) manager	HR(OHS) advisor	OHS(E) manager
Years as OHS practitioner in the organisation	0 - 1	6-10	2-3	6-10	6-10
Years as OHS practitioner	11-15	> 20	6-10	11-15	16 - 20

The impact on OHS management and the working environment was entered in an excel spreadsheet from the tables and supplemented by the impact coded in NVIVO.

The impact ladder had seven rungs describing different levels of impact: Rung 1 - Changes in the knowledge of the players, Rung 2 - Change in attitudes of players (actors), Rung 3 - Improvements in the company's approach to the working environment (own contribution), Rung 4 - Better production processes, from the point of view of the working environment, Rung 5 - Reduction in stresses, including accident risks, Rung 6 - Reduction in accidents and disorders, Rung 7 - Improving health, including reduction in sick leave [5].

3. Results

3.1. OHS practitioners personal drive

The OHS practitioners had slightly different reasons for wanting to work with OHS as an internal advisor or manager. Some only mentioned one reason but most mentioned more than one. The main drivers were:

- Experience of work-related illnesses or injuries to colleagues or family

- Interest in creating good working environments
- To initiate change.

In addition to these basic drivers individual practitioners mentioned safety as a passion, liking working with legislation, seeing OHS as contributing to a healthy and productive business, and liking the challenge of facilitating change. The OHS practitioner in social service expressed her reason for working in OHS this way: *"I really love working with people and I like to make a difference and to know that the work that I'm doing with, say, an office of people is helping to keep them safe"*. The practitioner from paper production expressed this way: *"I like it now because I have a very big influence on the culture of the workplace. For a workplace with around 2000 people one person can make a big deal, and I find that I have a good opportunity to change and that's what I like about it"*. To sum up, the drivers for the OHS practitioners were to create changes, help people and develop a good working environment.

3.2. OHS practitioners job role

It could be expected that there would be a difference in job role depending on whether the OHS practitioners were employed as an OHS manager or OHS advisor. Their description of their job role did

not seem to be dependent on the formal title. Some practitioners in the OHS advisors role functioned more like a manager, particularly where they were centrally placed and cooperated with other OHS advisors in regional units or where they were the only one employed to work with OHS.

Advising management was a main part of the practitioners' role. It was expressed by using different words like: *"advice and support management"*, *"coaching management"*, *"train management in hazard management"*, *"encourage and help management manage OHS"* or *"help develop a plan to manage OHS and drive our leaders"*. The different expressions could reflect differences in strategic approach on how to advise management. Some of the statements are focused on middle and first line management. Only two directly mentioned that their role was to work with or advise staff/workers.

Overseeing/monitoring the OHS management system, developing and implementing OHS policies, making the OHS system work, and preparing for OHS audits was another part of the role that was mentioned by all practitioners. Two practitioners in advisor roles did not mention monitoring the OHS system because their OHS manager did that. All had a strong focus on maintaining the management system and making sure that the system would pass the next audit.

Complying with legislation was another theme that came through as a part of the practitioners job role, expressed as identifying gaps or to prevent prosecution which was seen as the same as preventing harm: *"In a nutshell, my role is to keep the, prevent, it sounds horrible, but prevent the organisation from being prosecuted by the Department of Labour, but with that the idea is if the systems are bad enough that we are prosecuted it would have meant that someone was seriously hurt. So it's both preventing prosecution and preventing someone from being hurt"*.

Table 3 illustrates how the OHS practitioners placed themselves in relation to Brun and Loiselle's [4] division of activities on strategic or operational levels and in the three dimensions organizational, technical and human. It clearly shows that they had a strong focus on the organisational dimension, followed by the human dimension and that very few focused on the technical dimension. It also shows that they operated on both the strategic and the operational level except for the practitioner in cleaning and service.

In brief the main part of the OHS practitioners' job role was to advise, coach, encourage or drive

management, to develop, maintain and implement the OHS management system, make sure that OHS audits were passed and to ensure that the organisation complied with the law. The OHS practitioners' role to give advice to management and to make sure that they complied with the law fits well with a strategy that builds on the regulation strategy and the knowledge strategy. The focus on management system and passing OHS audits is consistent with a strategy that may be identified as an 'audit strategy'.

Table 3

OHS practitioners' tasks, placed in relation to strategic and operational activities and organisational (Org), technical (Tec) and human (Hum) dimensions. "X" indicates main focus, "x" indicates secondary focus

OHS practitioner	Activity level	Dimension		
		Org	Tec	Hum
Health	Strategic	X		
	Operational	X	x	
District council	Strategic			X
	Operational	X	x	X
Finance & admin.	Strategic	X		X
	Operational	x		
Social service	Strategic			X
	Operational	x	x	X
Finance & service	Strategic	X		
	Operational	X		
Service & cleaning	Strategic			
	Operational	X		X
Electrical production	Strategic	X		x
	Operational	X	x	
Paper production	Strategic	X		X
	Operational	X		x
Distribution	Strategic	X		X
	Operational	X		X
Plastic production	Strategic	X		X
	Operational	x	x	x

3.3. OHS practitioners' impact

The impact on OHS and OHS management is measured on the impact ladder and is a combination of the OHS practitioners self-assessed impact while filling in the ladder during the interview and describing examples and impact during the interviews.

All of the OHS practitioners had impact on the first three rungs:

- **Rung 1: Changes in the knowledge of the players.** This was achieved particularly through training and coaching first line managers and OHS representatives.
- **Rung 2: Change in attitude and behavior.** Many of the examples were about how first line management came to accept that OHS, safety audits and hazard management were their

responsibility and how management started coming to the OHS practitioner for help after training sessions. Only a few examples described change of workers' and senior managements' attitude and behavior.

- **Rung 3: Improvement of the company's approach to the working environment (own contribution).** Many examples described their contribution to: the implementation of OHS management systems; the improvement of how the system functioned; integration of OHS in other systems, like contractor management; implementation of systems on the operational level, like job safety analysis before performing a job; management of return to work, and; improved the OHS organisation, like changing the OHS committee from functioning like a garbage can to a planning group and establishing local OHS coordinators and securing resources for them.

Fewer OHS practitioners had impact on the rungs higher up on the ladder. Seven of the practitioners had influenced the production or the work process (Rung 4). Some examples were on a micro level, like getting better chairs and improving the set-up of the workstation. Other examples were change of layout that reduced manual handling and risk of colliding with forklifts, and management of clients that could pose threat. Only two examples on this rung were related to introduction of new equipment, change processes or new buildings. One example was in relation to a vehicle used for hearing tests, where the practitioner assessed workflow and cooperated in changing the layout. The other example was in relation to a new distribution centre. The OHS practitioner succeeded in influencing many small things but was unable to arrange for an air-conditioning system to be installed. Subsequently this created problems with the workplaces becoming too hot in the summer and too cold in the winter.

There were three examples of the OHS practitioners influencing the reduction of exposure (Rung 5). One was measured by a reduction of incidence of threats. Another was a reduction of chlorine gas leaks. A third was a reduction in accident risks by implementing guarding and by reducing lifting and carrying.

Interestingly, five OHS practitioners claimed that they had influenced reductions in accidents and disorders and sick leave (Rungs 6 and 7). Two gave examples of both reducing the numbers of sick leave or lost-time injuries by changing the way that injuries

were managed. Only one of the examples actually focused on changing the working conditions, both by implementing a new way of managing change processes and by adapting the job to the returning employee. Two examples involved a reduction in the number of accidents and lost days in which more than 50% was sustained. Both practitioners explained their influence involved training of management in hazard management and in monitoring of the implementation of corrective action after incident and accident investigation. The two practitioners had been OHS practitioner in the organisations two and six years respectively.

3.4. OHS practitioners' strategies

Most of the OHS practitioners' strategies could be described as reactive rather than proactive i.e. reaction to injuries, accidents, exposures or other problems. There were elements of proactive strategies and they all wanted to create systems that could prevent harm and control hazards, production or work systems. Three gave examples where they had been involved in introduction of new technology, or moved to a new building. One gave an example where she had influenced how organisational change processes were managed. The OHS practitioners did not manage to get their change through in the two examples involving new buildings. The arguments they used were based on the knowledge strategy, their knowledge about problems that would arise and how it could be solved. In the case mentioned earlier, under impact, management didn't want to install the air conditioning system because it was too expensive. In the other case the building plans were inspected and approved by the authority so management did not think that tiles in the entrance area would be a problem. They had had several slips on rainy days after moving into the new building. Management in the organisation was very regulation-focused. Following this, the OHS practitioner used this problem and another example to implement a "lesson learned" register to prevent the same failures from happening in the future.

In the practitioners' effort to improve the existing production system and work system some (7 out of 10) informed top management about the organisations OHS performance. The information they gave was related to injury and accident statistics and lost-time injuries, status on OHS audits and changes in regulation. Few of the practitioners also gave information on more positive performance

indicators like refresher training in manual handling and work station set-up. The intention with the information was to make top management aware of problems and get their buy-in to the plans for the coming year. The arguments were mainly economic and ethical. An example from one of the interviews: *"What I did with the health and safety plan was lining it up with the people capability, objectives of the organisation; the financial objectives of the organisation"*. The OHS practitioners used the buy-in from top management to strengthen their influence in the relation to middle and first line management. In some cases where the OHS practitioner didn't have buy-in from the national top management and the organisation had a head office overseas, they used "orders" from head office to increase influence both in relation to top management and lower level management.

Most of the OHS practitioners tried to influence middle management to accept that OHS in their area was their responsibility and to manage hazards, report incidents and accidents, and manage injured workers return to work. They used several and varying strategies. In several cases the OHS practitioner worked with the manager on hazard identification, incident reporting or in relation to writing standard operational procedures. In other cases they chose to show the manager how to do it and let them have a go at it. In some situations they actually did tasks like filling in an accident report for the manager. Which of the three strategies they chose was dependent on the manager's experience and pressure and their own resources at the time. In a few cases the practitioners used a strategy that made the managers' performance on OHS visible to senior management and to the OHS committees. This strategy built on monitoring systems of corrective actions, compulsory safety audits or central accident reporting system. Status on performance was reported to senior management and to the OHS committees. One practitioner described it this way: *"On the more regular side, I simply go to my database of what corrective actions that we have and I print off on a regular basis which ones are overdue and I make sure that their leaders and their managers are aware that they have to manage it"*.

OHS audit was used by several of the OHS practitioners to guide the managers' and the OHS committee's work e.g. by focusing on one area of the audit each month. In that way the practitioner set the agenda for the OHS committee meetings and for the manager's OHS tasks. It was explained by one practitioner in this way: *"(...) we're getting the committees to do a monthly focus on each element [of*

the audit] just so that, you know... we've been doing, perhaps, the end of year thing on an annual basis where everybody runs around, does the whole self assessment. So we were saying: "Let this be a topic of the month as well as let's just take a little chunk of this and see how we're doing". This could be identified as a new strategy "the audit strategy".

The OHS practitioner did not mention examples where they have used the regulation strategy. It could be because they preferred to use the knowledge strategy and the less threatening requirements posed by the OHS audit.

Most of the practitioners collaborated with the OHS committee and with the OHS representatives. They had a very high influence on the OHS committees' agenda and they used the meetings to guide mainly the OHS representatives and, to a lesser extent, management. They saw the OHS representative as very important stakeholders and used them in different ways. In one organisation they functioned as OHS coordinators at the local sites and the OHS practitioner informed them and planned parts of their tasks. In another case the OHS practitioner used them as messengers to the managers. In one case the OHS representatives were coordinated by the trade union. The trade union was very powerful and had in one case blocked the enforcement of use of protective glasses and in another case excluded permanent contractors from the OHS committee meetings. The OHS practitioner applied a collaboration strategy where external consultants were used on high priority projects for the union representative, to try and make them more cooperative.

All the practitioners emphasized the importance of influencing different stakeholder groups and choosing different strategies in relation to the different stakeholder groups. It was described as: *"A lot of what you do in health and safety is you have to sell it. You have to sell it and promote it, and so we do a lot of that promotion. (...) I think you have to use different strategies for your target audience"*. When asked about how she knew which strategy to choose she replied: *"Trial and error, yeah, pretty much. It's like that everywhere, isn't it? Yep, trial and error, but also, (...) you meet with people, you have discussions, it helps to inform you of what the culture is like and what their appetite for risk is or not. I think that's quite important to be able to gauge and read what the organisation's priorities are. It's very political"*.

Several of the OHS practitioners worked closely with other departments, particularly facilities management, security and emergency departments

and Human Resource Management. The practitioners also found that they had to sell the OHS argument to the managers of these departments. This can be seen as a continuous task, as one of the practitioners expressed it: *“what we find (...) is you have to start all over again. Like with contractor management, when there's a change of staff. They'll have their own priorities. You have to re-educate. We've just had a great facilities management. He was onboard with us (...) getting our staff incorporated and integrated and then we've had a change of manager and the whole thing is: “Why do I have to do this(...)”. So we have to start all over again re-educating him”*.

The last couple of examples illustrate how the practitioners analyse the organisation to identify the different strategies they can apply. They are aware that they have to involve different stakeholders in different situations and that the strategy has to be tailored to the situation and the stakeholders.

Most of the practitioners emphasized the importance of having a network outside the organisation where they could exchange experience, find support and find new knowledge and ideas. They positively used the inspectors from the Department of Labour as consultants to try and build a positive relation. They also used injury prevention consultants from the Accident Compensation Cooperation to train and guide in relation to injury prevention.

4. Discussion

The analysis of the ten interviews shows that the OHS practitioners had a political agenda aimed at creating a better working environment and that most of them want to create change and see themselves as initiators of change. In their description of their job role their focus is on influencing and advising management and on either developing, effectively implementing or maintaining an OHS management system. This suggests that they accept that they are placed on the sideline in the decision-making process in the organisation as described by the ergonomics research stream [3,7,10,11]. The practitioners that were interviewed in the present study were focused on the organisational and human dimension and were very little oriented towards the technical dimension in the organisation. This could be a function of the organisations size and the general focus of the Health and Safety in Employment Act in New Zealand. Only a few practitioners were involved with the introduction of new equipment and organisational

change processes. In doing so, they had difficulty influencing the outcome. The practitioners used the knowledge strategy based on ethical arguments and were not able to convince management that they should increase costs or increase the standard above what was accepted by authorities. The practitioners tried to use the negative consequences of management decision to strengthen their position in future change processes.

The practitioners mainly worked on systems to improve the existing working environment. Thus they mainly had a reactive strategy but working on building OHS management systems that could help the organisation to be more proactive. Their strategies were targeted at top management, middle and first line management and OHS representatives. The strategies built on informing top management about OHS problems, mainly based on accident and injury statistics to gain support for their OHS plans. Their strategies were primarily built on the knowledge strategy, secondarily on an audit strategy and lastly on a regulation strategy. Support from top management was used to strengthen their influence in relation to middle and first line management in order to make them consider OHS and do what they should, according to the OHS management system.

The practitioners used a variety of strategies in relation to first line management. This included training, coaching, working with them on specific tasks, using OHS representatives as messengers and making it visible to the OHS committee and top management how they performed in relation to the accepted plans or key performance indicators. The OHS audits were also used as an argument to make first line management work on OHS. In relation to first line and middle management, the practitioners' strategy again built on a knowledge strategy but arguments that leant on the regulation and audit strategy seemed to be stronger. Most of the OHS practitioners used the OHS representatives as allies.

The main impact of the OHS practitioners was on the stakeholders' knowledge, attitude and behavior and on the way the organisation managed OHS. This clearly resulted from their focus on implementing and maintaining OHS systems and influencing and advising management. Some had also had an impact on improvements of the production system and helped in reducing exposure and contributing to reducing of the numbers of accidents.

Strategies that OHS practitioners choose should be seen in relation to the organisations' attitude to OHS and OHS management. The OHS practitioners' strategies seem to be developed in relation to the

conditions they meet in the organisation. They try to find support from different stakeholders and choose strategies that reflect their (the stakeholders) needs. In this way the practitioners act as political reflective navigators as found in a study of ergonomics consultants [17]. The impact that OHS practitioners can have is also influenced by the organisations' OHS status. OHS practitioners could be more proactive by being more involved in the introduction of new equipment and change processes, but this would require a change in the organisations' understanding of integrating OHS and also a change in the OHS practitioners' approach to OHS. In order to better understand how OHS practitioners can influence organisations and improve the working environment, future research needs to explore how the different stakeholders interact with OHS practitioners and how it is seen in relation to the maturity of the OHS management systems in the organisation. This can be achieved through case studies in which different stakeholders are interviewed and the OHS management system is assessed.

5. Conclusion

The OHS practitioners interviewed in the present study acted as facilitators of change aimed at improving the working environment. They acted as political reflective navigators, focused on developing and maintaining OHS management systems and advising management. They preferred to use a knowledge strategy, supported by an audit strategy. As a last resort, they used a regulation strategy. Their main impact was on stakeholders' knowledge and attitude and the organisations' management of OHS.

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