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In This Edition

- Relationship between good business management and Occupational Health and Safety
- Preventing Bulling
- Rotator Cuff Syndrome
- Occupational Asthma
- Safety Leadership

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‘Preventing Bullying’

By Marina Vranjkovic. BSc (HSE). Email: marina.vranjkovic@outlook.com

Abstract

The psychological hazard of bullying within workplaces is a hazard which can have severe negative health impacts and is an issue that is a great source of concern for many employers. From increasing the risk of developing cardiovascular disease, depression and anxiety, to also having the ability to decrease productivity levels of employees. Not only can bullying cause an instant health effect, but it can also affect a person’s lifestyle and family relationships. The following article analyses published literature associated with the effects of bullying and describes how preventative programs against bullying have the ability to increase productivity levels and reduce negative health effects within a workplace. The article considers legal obligations of employers and review their responsibilities in managing and preventing this hazard.

Key words

Psychological. Prevention. Bullying. Productivity. Mental health.

Introduction

Over the past 20 years within Australia, there has been growing research within the field of psychological hazards and only more recently the effects of workplace bullying (Johnstone, Quinlan and McNamara, 2011). In today’s modern society, the issue of bullying within the workplace is a widespread problem that must be addressed in a systematic manner (Cascardo, 2011). With bullying having the ability to impact an individual’s family relationships, psychological wellbeing (causing depression or anxiety), general physical health (cardiovascular disease) and productivity levels, it is important that this psychological hazard is prevented (Brank, Hoetger and Hazen, 2012). Within Australia, it is estimated that over 33% of all employees have at some point in their careers been bullied (Standing Committee on Education and Employment, 2012). In response to this, preventative programs have been put in place to help combat these negative effects.

Methodology

To investigate the topic of preventative programs on bullying and their success with increasing productivity levels and decreasing negative health impacts, an initial literature review search was undertaken utilizing the Curtin University Library Catalogue.

To successfully navigate such a search

database, the keywords of bullying, prevention, productivity and mental health were utilized. Initially the keywords “bullying and workplaces” resulted in 1,324 articles. However, a more refined search using the keywords “bullying and workplaces and mental health” resulted in a smaller result of 41 peer reviewed articles. This provided an initial starting point for further research. In addition to this, keywords were changed from “bullying and workplaces” to more specific criteria such as “bullying and cardiovascular disease and workplaces” along with “bullying and depression and workplaces”, which resulted in 2 and 29 peer reviewed journal articles respectively.

Articles were chosen based on their relativity to the chosen topic, in regards to prevention programs, cardiovascular health and mental health effects that were a result of bullying. Articles that included topics such as sexual harassment or physical abuse in the workplace were not included in this review. A search undertaken on the Safe Work Australia website resulted in a range of relevant documents being found, which included Australian compensation claims reports and the Code of Practice on how to manage work health and safety risks. Along with this, further searches on Australian government websites produced additional reports in regards to workplace bullying and relevant legislation. In addition, further articles in the form of reviews were utilized in order to gain understanding and general background knowledge on bullying and prevention programs that are currently in place. Of

the reviewed publications 12 peer reviewed journal articles, 8 government publications and one law are included in this literature review.

Discussion on Workplace Bullying

As stated by Sauter, Murphy and Hurrell (2012), psychological disorders are leading occupational health problems. Psychological disorders are linked to a range of mental health disorders, which include depression, anxiety and general distress (Lahelma, Lallukka, Laaksonen, Saastamoinen, and Rahkonen, 2010). These psychological disorders are generally brought on by issues such as bullying, discrimination and harassment, all of which can and need to be prevented (Chan-Mok, Caponecchia and Winder, 2014). For this review the focus was on bullying and the effects this issue can have on an employee's mental/general health and productivity levels.

Workplace bullying has been defined as "the repeated and unreasonable behavior directed towards a worker or a group of workers that creates a risk to health and safety." (Safe Work Australia, 2013, p. 2). To clarify this further, unreasonable behavior includes withholding information that is key for effective work performance, setting tasks that are unreasonable, spreading misinformation or malicious rumors, and finally, changing work arrangements to deliberately inconvenience an employee (Safe Work Australia, 2011). It is stated widely that this degree of workplace bullying can lead to work-related stress, which in return can cause feelings of hopelessness, severe depression, anxiety and even cardiovascular disease (Bentley et al., 2009).

Legal Obligations

Legally, in accordance to the OSH Act 1984 of Western Australia (Division 2, S19A), "an employer shall as far as practicable, provide and maintain a working environment in which the employees of the employer are not exposed to hazards..." (Occupational Safety and Health Act 1984, 2014, S19A). Therefore, under the OSH Act 1984, the psychological hazard of bullying results in the employer breaching the act, as they have not provided an environment where the employee is safe from psychological hazards. Consequently, the employer has

committed an offence and is liable for the employee's injury and associated costs (Occupational Safety and Health Act 1984 of Western Australia).

Along with this, "an employer is required to 'manage risks' by eliminating health and safety risks so far as is reasonably practicable, and if it is not reasonably practicable to do so, to minimise those risks" (Safe Work Australia, 2011, p. 3). Therefore legally, it is mandatory that business owners uphold and introduce programs to minimise and control this hazard, whilst also reporting on the effectiveness of such approaches. By doing this, a clear relationship between prevention programs and productivity/negative health effects would be shown (Safe Work Australia, 2011).

Impacts of Workplace Bullying

Amongst the other workplace hazards (including physical, chemical, mechanical or biological), psychological hazards are perhaps the most difficult to identify and are therefore harder to manage (Chan-Mok et al., 2014). The effects of bullying on a single employee have the ability to manifest and cause greater psychological effects and health disorders (Chan-Mok et al., 2014).

In a recent study, it was found that work related stress, as a result of bullying, increased the chance of developing cardiovascular disease by 1.6 times and also increased the chance of developing depression by 4.2 times (Kivimaki, Virtanen, Vartia, Elovainio, Vahtera and Keltikangas-Jarvinen, 2002). In addition to this, a recent 2012 report found that 6.8% of Australian employees had been bullied (six months prior to being interviewed) (McCarthy, 2013). However, a larger study found that the actual rate of Australian workplace bullying could in fact exceed 33%, which results in the risk of bullying causing a negative health effect to rise (Standing Committee on Education and Employment, 2012). The clear discrepancy in data collected, indicates that bullying is an issue that can go undetected, with the possibility that employees/employers are unaware of the common definition of bullying, or are unwilling to self report, which indicates prevention programs are not being utilized to an effective degree (Standing Committee on Education and

Employment, 2012).

It is therefore evident that workplace stress, as a result of bullying could be the cause of severe adverse effects to not only the mentality of an employee (depression), their general health (cardiovascular disease), but even the possibility of decreased work productivity (Standing Committee on Education and Employment, 2012).

Compensation Costs

As a result of workplace stress, it is documented that productivity is also affected (McTernan, Dollard and LaMontagne, 2013). In a recent study it was found that bullying related depression, discrimination or related job stressors, cost Australia \$12.6 billion annually (McTernan et al., 2013). This cost was due to related absenteeism, presenteeism and treatment costs (McTernan et al., 2013). The study also found that as a result of workplace stress (which included and highlighted the issue of bullying as a leading cause of workplace stress), lead to employees taking an average of 1.5-3 days off work, otherwise known as absenteeism (McTernan et al., 2013). In regards to presenteeism, employees who came to work whilst in a bully induced depressive state were only partly functional, which translated to approximately 2.3 days off work (McTernan et al., 2013). The degree to which bullying can cause a loss in productivity is clearly evident, not only are employers losing employees, but there is also a cost to replace and make up for the amount of lost time (McTernan et al., 2013).

In addition to productivity costs, a recent safety and compensation report stated that within Australia, stress-related mental disorders accounted for \$200 million worth of workers compensation claims a year, otherwise known as mental health injuries (Australian Safety and Compensation Council, 2006). Furthermore, it was also stated that in 2002, mental stress claims had the highest median cost of \$9,700 and the second highest average cost of \$16,400 (Australian Safety and Compensation Council, 2006). In addition to this, during 2010-2011, bullying/work related stress claims within Western Australia rose to a median direct cost of \$18,100 (Safe Work

Australia, 2015). It was also stated that from 2001 to 2012 there was a 17% increase in the number of serious claims caused by mental stress (which was inclusive of bullying), an increase of 37% in median time lost (productivity) and an increase of 69% in median compensation costs (Safe Work Australia, 2012). With such a high financial cost as a result of work related stress (inclusive of bullying), it is evident that this form of injury is not only increasing (leading to negative health impacts and more loss time injuries), but it is something that Australian businesses need to address and prevent.

Preventative Programs

There are a range of programs in place to combat the psychological hazard of bullying. At the present time, the Australian Government Comcare has a large range of bullying resource kits available online. These resource kits include fact sheets, self-assessment tools and possible tool box meeting discussions (Australian Government Comcare, 2015). However, these resources do not document the degree to which bullying can affect an employee, and are usually directed at either the employee/employer doing the bullying, or the employee/employer who is victimized. Additionally, there are no figures or statistics indicating the degree of success that is had by such kits.

In a recent journal article, mention was made of ways in which organizations had implemented programs and policies in order to reduce workplace bullying (Ekundayo, 2014). According to the author, in order to manage bullying effectively, management should consider providing training to all new employees, review any performance gaps and ensure a zero-tolerance bullying written policy is in place (Ekundayo, 2014). However, a recent qualitative study noted that on average only 16.1% of a company's employees would regard their written policy on bullying as effective and only a minority (27.3%) of employees would receive any real training in regards to bullying (Salin, 2008). Along with this, it was also stated that employees felt more comfortable when management would regularly monitor performance gaps, which would ensure that the underlying problem would be found (Salin, 2008).

Additionally, a 2011 study which implemented a training program for zero tolerance bullying (including how to identify bullying and role play scenarios for both employees and employers), found that as a result of the program, employees had a higher level of trust that their workplace bullying issues would be addressed appropriately and found that their overall productivity and work ethic within the workplace had also increased (Meloni & Austin, 2011). From this study, it can be seen that a prevention program can in fact increase an employee's productivity levels and perhaps their overall mental health (Meloni & Austin, 2011).

From the studies and statistics mentioned above, there is a clear indication that a simple written policy is not effective enough to prevent the issue of bullying and a more hands on approach is required. As mental stress claims account for such a large proportion of Australia's compensation costs, it is clear that prevention programs are needed. Along with this, the clear evidence indicating negative health impacts as a result of bullying, whether it is cardiovascular disease or depression, indicates the strong need for a prevention program. In addition to this, it is apparent that by preventing the psychological issue of bullying through a written policy will not lead to an employee/employers productivity level to increase or lead to a reduction in negative health effects (from mental to general health). As identified through research, a more hands on approach, in the form of training workshops and zero tolerance bullying scenarios results in a greater change within a company, from increasing productivity to also reducing negative health impacts in the form of depression and cardiovascular disease.

Conclusions

When the psychological hazard of bullying occurs on a regular basis, the effects can be detrimental and result in chronic illnesses. Through bullying, an employee can develop mental health illnesses such as depression or anxiety and can even result in the employee developing cardiovascular disease. It is precisely for this reason that a thorough and effective management plan, in the form of

prevention programs (training sessions) should be introduced to each company and be put in place for every new employee. It is the responsibility of the employer to provide both the training and also ensure that the workplace is free from any hazards, whilst also following all safety guidelines and safety regulations. By ensuring a safe workplace and preventing workplace bullying, productivity levels will increase and negative health effects will decrease.

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Relationship Between Good Business Management and Occupational Health and Safety

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Abstract

This study examines the relationship between good business management and occupational health and safety. A business can be improved in both performance and profitability if the management team invested in work health and safety and made it a priority by integrating it into the culture of the business. Compliance to legislative standards improves a company's reputation. Incorporating a health promotion program into the company policy can improve employee's health while reducing presenteeism and increases the level of productivity, commitment, and motivation. This decreases costs associated with occupational accidents and health care costs, reduced labour costs related to absenteeism and better risk management.

Key words Health, safety, business, management, law, productivity

Methodology

This study was conducted by researching past journal articles relating to the relationship between good business management and occupational health and safety. Once the articles were read three main topics became apparent, these topics were legal requirements, productivity and cost effectiveness. More research was conducted focusing on these specific topics and articles with the most relevance were selected, reviewed and used to create the literature review.

Literature Review

The goal for businesses should be to create a structural capability, culture and competency around safe production (Foulke, 2008). In a work environment where employees feel safe, commitment will rise, which will improve levels of innovation, efficiency and risk control and create a competitive advantage for the business (Foulke, 2008). Weiss (2013) provides evidence that safety and health initiatives helps an organization improve its revenue and has a positive impact on employees and customer connection to the organization. These initiatives focus on compliance with occupational health and safety legal requirements, increased productivity and cost effectiveness. The main objective of these initiatives is to promote a healthy planet, healthy people and healthy profits.

Legal Requirements

According to Sohawon & Whitaker (2011) failure to comply with occupational health and safety legal requirements specific to an organizations industry can result in fines and more severely imprisonment. Fines received by large organisations may seem insignificant although there are many concealed costs. These costs include employee and senior management's time taken to prepare for the case, legal fees, higher insurance premiums and the impact on the organizations reputation (Sohawon & Whitaker, 2011). The court trial may be successful for those affected and a civil action law suit for compensation could follow. Compensation settlements are very expensive and are a financial liability on the business therefore breaches of legal health and safety obligations should be taken seriously and be a top priority for senior management and employees (Sohawon & Whitaker, 2011). A Romanian case study (Rusu-Zagar, Iorga, Iorga, Rusu-Zagar, & Mocanu, 2013) examined how a health and safety management system can improve a company by promoting the application of legislation in regards to health and safety in the workplace. A systematic approach involves training employees, increasing their awareness to risks in the working environment, and implementing effective tools for managing specific issues relating to the company (Rusu-Zagar et al., 2013). By being compliant with the relevant

legislation it creates a safer and healthier working environment for employees.

Organisations are constructing a workplace culture that is safety orientated in order for employees to be more compliant with legal requirements (Moraru & Babut, 2012). Many companies in Romania have aimed to improve the health and safety of working conditions by making it a top priority. In these companies the management of health and safety is an essential part of their overall business management and safety is integrated into overall management processes. A sustainable and strong safety culture is developed by incorporating occupational health and safety management in all levels of the company. This is because the best way to ensure compliance with legislative obligations is through effective management (Moraru & Babut, 2012).

If a law requires an employee to achieve specific outcomes without advising them on the process; then it is important the employee required to comply can easily understand the law (Sherriff, 2011). The law should clearly state the required standard as well as the process of how the standard is determined. This is accomplished in Occupational Health and Safety laws by using the term reasonably practicable (Sherriff, 2011). It is important management understands this term because the most effective way of ensuring occupational health and safety is eliminating all potential hazards or to decrease to a reasonably practicable level (Sherriff, 2011).

An organization that strives for continuous improvement demonstrates that it is invested in its workers and product which is something sought after by potential investors and employees (Work Safe Victoria, 2006). This can be achieved through a three step process; the first step involves introducing change to the workplace through occupational health and safety innovations in order to keep employees,

suppliers and customers safe. These can include, new employee wellbeing programs or capital investment plans to reconfigure a work space in order to effectively manage traffic (Work Safe Victoria, 2006). The second step involves health and safety professionals meeting together to address workplace issues as a team to develop and implement controlled changes to the work environment. The last step is to keep up to date with best practice processes in industry as this demonstrates to stakeholders that the organization is invested in providing the best and most efficient safety methods for their employees and is a real competitor against other organizations in the industry (Work Safe Victoria, 2006).

Occupational illnesses and injuries cost companies thousands of dollars every year (Weiss & Gonser, 2013). Competent leaders will take into consideration all factors of an investment before giving consent, for instance considering how a job safety analysis can improve productivity efforts while ensuring all jobs are completed in a process that complies with current occupational health and safety laws (Weiss & Gonser, 2013). Corporate Social Responsibility (CSR) is another principal initiative in which organizations reduce risk to employees in an effort to decrease negative impact on human health and the environment (Weiss & Gonser, 2013). These investments are helpful as they assist organizations comply with occupational health and safety legal requirements.

Smallman and John (2001) suggest there is a link between work health and safety performance and consumer satisfaction. Organizations that are not compliant with work health and safety standards are considered to be at a disadvantage with a reduced status from a stakeholder's point of view (Smallman and John, 2001). Occupational health and safety is considered as a main factor distinguishing companies on an international level and has the potential

to affect its profit and reputation.

Productivity

Many studies have found an association between employee health and work productivity (Schultz & Edington, 2007). These studies establish that health risks have an impact on days employees are absent from work and also on the loss of productivity while at work. An increase in the amount of health risks led to a decrease in the employee's productivity (Schultz & Edington, 2007). A decrease in productivity can be measured by the costs related with presenteeism, presenteeism is defined as reduced on-the-job performance due to health complications (Schultz & Edington, 2007). It is often measured as errors on the job, the costs associated with decreased work output and failure to reach the organizations production standards.

In a cross-sectional study by Biron, Brun, Ivers, & Cooper (2006) they used data collected from a Canadian organisation that has a total of 3825 employees to examine how often presenteeism occurred. The results were significantly high; fifty percent of workers who were ill still came to work. This was mainly due to employees being stressed due to having heavy workloads, hazardous job status' and those with a high skill set (Biron et al., 2006).

Champoux (2015) outlines the risk factors that contribute to presenteeism, these include poor diet, lack of exercise, being overweight, poor relations with co-workers and high stress. Additionally employees with the following health conditions musculoskeletal disorders, chronic pain, arthritis, depression and anxiety can contribute to presenteeism (Champoux, 2015). These conditions are associated with poor working conditions. Champoux (2015) suggests that workplace health promotion programs have a positive effect on employees as they can offer organizational leadership, health risk screenings and can create a

supportive workplace culture.

Health Risk Appraisals (HRA) are a common screening tool used in the health promotion industry to measure a person's health (Cancelliere, 2011). It is often the first step in multi- component health promotion programs. According to Cancelliere (2011) a HRA can help predict health related risks and can be used to establish the correct intervention. These interventions can improve employees sleep, pain management and stress management; therefore decreasing presenteeism (Cancelliere, 2011).

An analysis was conducted in the UK (Cooper & Patterson, 2008) which described the effects on employees when a health and wellbeing program was implemented at their workplace.

The program lasted for 12 months and involved employees receiving coaching in exercise, nutrition and mental resilience (Cooper & Patterson, 2008). The results found the majority of participants had an increase in energy levels since starting the program. This increased their concentration levels while at work. The participants were also coping better with the pressures and stress of working in a large organization (Cooper & Patterson, 2008). Overall the program has proved to be a benefit not only to employees but also to the business itself.

A study conducted in Malaysia (Sen & Yeow, 2003) examined if applying an ergonomic intervention which is designed to improve work stations would also improve the productivity of employees working in an electronic factory. The aim was to address the issue of operator discomfort which usually led to back pain (Sen & Yeow, 2003). The results were positive and the improvements to the workstations led to a reduction in the number of rejected products produced (Sen & Yeow, 2003). This suggests improving ergonomic factors helps to increase productivity as it decreases discomfort for the employee.

According to Wolf (2008), investing in a

work health and safety system can improve the performance of an organization in a number of ways. These include higher levels of cooperation, morale and motivation by employees in the workforce (Wolf, 2008). As a result increased productivity, more efficient and safer working methods requiring fewer employees to work on one task, better risk management and minimizing unplanned costs through effective business stability planning (Wolf, 2008).

Cost Effective

In 2014 there were 4821 occupational fatalities and 2.8 million nonfatal workplace injuries which occurred in the United States (Pagell, Veltri, & Johnston, 2016). The United States Occupational Safety and Health Administration (OSHA, 2014) estimates occupational injuries and illness' cost organizations in the United States \$170 billion per year. Many manufacturing companies are not using safety systems which are cost efficient by decreasing the risk of injuries to workers. The main reason for this is because managers and employees don't take safety seriously which is common for many industries (Pagell et al., 2016). The implementation of safety and health management systems can reduce illness and injury costs by up to forty percent (Pagell et al., 2016). Management systems assist in improving safety culture within a workplace; this allows employees to feel safe while performing their job.

A study conducted by Kara, Kothari, Genaidy, Weckman, Shell and Karwowski (2008) examined how uninsured and insured costs affected manufacturing firms. The aim of the study was to identify areas within an organization to invest in order to reduce health-care costs. Kara et al. (2008) identified the direct costs as employee health-care cost, workers compensation and equipment maintenance. While indirect costs which also affected operational costs included employee training, lost production time, employee

turnover and rework (Kara et al., 2008). Through the use of safety interventions health risks are minimized, costs can be decreased and work practices are improved.

A financial assessment of workplace health and safety programs was examined by Paez (2013). The study was established using the following method, a health and safety assessment which identified critical components of the work environment that can be improved, performance objectives set, implementation of a health and safety management plan and continuous review of the plan. An Economic Assessment of the Working Environment (EAWE) is a tool used in the study to measure the health status of an organization before and after the intervention and provides an estimate of the cost benefits of the intervention (Paez, 2013). Paez (2013) described a successful business as one that provides employees with a workplace that increases their satisfaction, decreased operation costs, increased performance and improved revenue. The results from the study revealed the most beneficial and cost effective Health and safety programs focused on investing in employees by enhancing their skills with training programs and altering work processes to increase efficiency (Paez, 2013). In order for an organization to reach their long term goals, health and safety programs should be reviewed constantly to ensure the company stays compliant to relevant laws.

A Romanian study (Lucian, 2013) observed the importance of improving health and safety in the working environment in order to ensure the organization is well managed, sustainable and is successful. Lucian (2013) explained the costs of work related accidents may have a major financial impact on a business, especially if they are small. Some costs include, loss of income and production, increased insurance premiums or working days lost due to sick leave.

These factors can cause a small business to become bankrupt. That is why it is important for business' to understand the costs involved in a workplace accident so they can properly manage it if one were to occur (Lucian, 2013). Lucian (2013) carried out his study through occupational health and safety risk assessment and risk management on organizations. He aimed to identify hazardous areas in the working environment and work processes that could be improved in order to eliminate or decrease risk to employees. This intervention resulted in less illness and accidents, reduced absenteeism, decreased interruption to the production process, optimized equipment and workplace that are maintained to a good working standard contributes to better quality and productivity and reduces risk to health and safety (Lucian, 2013).

Employers are spending billions of dollars annually on health care to rehabilitate employees with physical and mental health problems (O'Keefe, Brown, & Christian, 2014). For many employees stress caused by the workplace is a major mental and physical hazard and has been found to cause workplace injuries, mood disturbances and mental health problems (O'Keefe et al., 2014). In order to decrease the incidence of occupational stress businesses need to improve the quality of employees work life by implementing administrative and organizational changes. By applying new work health and safety policies occupational stress will decrease among employees and reduce the cost businesses are spending on health care (O'Keefe et al., 2014).

Conclusion

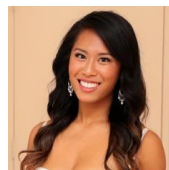
Evidence supports a positive relationship between a work culture driven by safety and successful performance of the company. Many studies have shown the importance of organizations investing in a health and safety management system as it can contribute to improving their productivity and profitability. This is due to employees who are healthy

tending to have higher levels of motivation, morale and commitment which lead to increased productivity and achieving a higher quality of work. Interventions improve work processes and optimize working environments which can reduce risks to safety and health of employees. A decrease in the number of workplace injuries and diseases reduces absenteeism which means less risk in terms of liability and can lower costs associated with health care and production interruptions. This article has clearly demonstrated effective management of health and safety is associated with an improved business reputation and business excellence.

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Rotator Cuff Syndrome: Effects, Psychosocial and Return to Work Barriers Impacting the Injured Worker, Employer, Insurer and Family

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Abstract

Rotator Cuff Syndrome (RCS) is a commonly reported work-related injury. RCS pathology and symptoms present differently from individual to individual and can result in different functional limitations and barriers to returning to work depending on the individual, employer and also the occupation in which the injured worker was participating in prior to injury. This literature review focused on the effects of RCS on an individual, employer and other parties. Barriers in regards to return to work specifically for an injured worker with RCS were explored. In addition, obligations for the employer, employee and insurer under the Workers' Compensation and Rehabilitation Act 2003 (QLD) have been considered as well as where these obligations may become difficult to implement.

Keywords

Rotator cuff syndrome. Return to work. Barriers. Psychosocial factors.

Introduction

Rotator Cuff Syndrome (RCS) involves degenerative changes in the rotator cuff tendons with age, compression of the tendons, and ischemia by impingement or increased intramuscular pressure (Roquelaure, Bodin, Ha, Le Manac'h, Descatha, Chastang, Lecierc, Goldberg, & Imbernon, 2011). It is well documented that RCS can affect a person's ability to complete activities of daily living and restrict participation in many life areas such as work and employment, education, community and social life (Hopman, Krahe, Lukersmith, McColl & Vine, 2013).

RCS is a major cause of musculoskeletal pain and absence from work in the general and working populations (Roquelaure et al, 2011). Safe Work Australia (2012) indicated that 18% of work-related injuries in 2009-10 were due to chronic joint/muscle conditions, with shoulder conditions being a high proportion of this category. Hopman et al (2013) indicate that 13% of all shoulder problems presenting to General

Practitioners (GPs) are considered work related. Common occupations with higher rates of RCS include construction workers, carpenters, fish and meat processing workers and industrial workers (Hopman et al, 2013 and Silverstein, Bao, Fan, Howard, Smith, Spielholz, Bonauto & Viikari-Juntura, 2008).

This literature review identifies the effects of being diagnosed with RCS has on the person, their family and their workplace. Barriers in regards to returning to work with RCS will also be explored. Finally, obligations for the employer, employee and insurer will be considered in regards to the Workers' Compensation and Rehabilitation Act 2003 (QLD) and possible barriers that may occur for these parties to carry out their obligations under this Act.

Methodology

An initial inquiry of the Curtin University Library catalogue and Google Scholar was conducted to search for articles on the topics of rotator cuff syndrome and return to work, barriers and psychosocial factors impacting on return to work. Articles were excluded if the focus was

predominately on medical treatment and treatment outcomes. Search terms using key words rotator cuff syndrome, return to work, barriers and psychosocial factors were used. Seventy-five publications were found and reviewed with 13 of the most relevant publications referenced in this article along with 2 relevant laws.

Effects of Injury On an Individual, Family and Workplace

RCS can result in pain and/or weakness often restricting a person's ability to carry out their self-care, household duties, other daily activities and to work (Hopman et al, 2013). Shaw, Domanski, Freeman and Hoffele (2008) state that pain, weakness and loss of motion are the most common symptoms reported for RCS. A person with RCS can wake throughout the night due to pain, interrupting sleep routines (Dembe, 2001). It has been documented that workers with an occupational upper-extremity disorder either were not able to return to work due to the nature of the work, or were required to change roles to slower paced duties that required less force due to the injury (Dembe, 2001). The individual not only experiences physical symptoms in regards to having RCS, however psychosocial factors may also impact.

Dembe (2001) indicates that depression and other psychological reactions could occur if the pain and/or disability occur for prolonged periods. The individual may also develop beliefs in regards to their injury ("*I will never get better*"), have a negative experience with the workers' compensation system and legal involvement may impact on motivation to return to work ("*if I stay off work, I will have a bigger payout*") (Dembe, 2001). The injured person may also have negative beliefs in regards to their workplace and/or supervisor (e.g. relationship breakdown, decreased support from the workplace).

Studies have also shown that workers with upper-extremity musculoskeletal disorders such as RCS were more likely to have moved home and lost their car

due to financial constraints (Dembe, 2001). In addition, the loss of being able to participate in hobbies and interests was also a factor in workplace injuries (Dembe, 2001). These factors could lead to a secondary psychological condition.

Occupational injuries including RCS can also have impacts on the family members, co-workers, the workplace along with many other parties (Dembe, 2001). People surrounding an injured worker can be affected in a variety of ways (e.g. vocational, psychological, behavioral, social, economic and functional) and can impact on each other (Dembe, 2001).

The injured person's family may have role changes to account for duties the injured person is no longer able to complete. Family members may be required to take on caring responsibilities and be required to assist with self-care tasks. The ability of the family member to continue with their own work role may also be impacted. Financial implications could occur due to loss of wages. Future plans for the family (e.g. moving to a bigger home, more children) may need to be changed. Finally, psychological and behavioral responses have been shown to occur in other parties of a workplace injury such as care givers, managers, family members and other work colleagues (Dembe, 2001).

RCS frequently results in lost productivity and significant financial costs for industry and employers (Hopman et al, 2013). Both direct costs (e.g. medical care, litigation costs, salaries, equipment, increased workers compensation premiums, injury management costs, transportation costs, cost of new equipment) and indirect costs (e.g. down time, loss of production, investigations, idle time repairing equipment, replacement of the worker, lowered employee morale, unfavorable public relations and increased labor conflict) can occur due to workplace injury (Dannenberg, 2011).

Barriers that Prevent the Injured Worker from Returning to Work

Psychosocial, employer/workplaces and

injury factors can be barriers in regards to preventing an injured person to return to work (Mills, Jansz & Guthrie, 2016). The Flags Model is one that is well known in the industry with Red Flags indicating physical risk factors (e.g. pain, decreased strength, reduced range of movement) and Yellow Flags indicating psychosocial risk factors (Shaw-Mills, 2009). Psychosocial factors include:

- Attitudes and beliefs;
- Emotions;
- Behaviors;
- Family;
- Compensation issues; and
- Work (Kendall, 2002 cited in Shaw-Mills, 2009).

Work factors that can determine whether a worker returns to work include how much the worker likes his job and gets on with his supervisor (Bigos, 1991 seen in Shaw-Mills, 2009), perception on safety environment and funding towards occupational health and safety projects, job insecurity (Silverstein et al, 2008), supervisory and organizational support (Shaw-Mills, 2009) and job satisfaction and motivation to return to work (Dembe, 2001).

Further factors that may impact on the return to work outcome for an injured worker includes:

- Early referral to appropriate rehabilitation services;
- Consultation and communication between all key parties;
- Utilisation of health providers for prompt treatment
- Education of all staff to the importance of rehabilitation programs to ensure a safe and effective return to work (Kenny, 1995).

Studies have indicated positive effects of modified work for workers with musculoskeletal complaints as per RCS (van Duijn, Miedema, Elders and Burdorf, 2004). However, employers tend to not be able to identify modified duties that are within an injured workers restrictions and/or injured workers do not believe they are capable of returning to any work (van

Duijn et al, 2004). In addition, changing work tasks and /or organization of work tasks have also been identified as a barrier (van Duijn et al, 2004). In this case, a workplace assessment from a qualified person such as an Occupational Therapist, maybe beneficial to assist in identifying the modified duties.

In addition, it has been documented that with rotator cuff tear surgery, Workers' Compensation (WC) patients have inferior results compared with non-WC patients (Bhatia, Piasecki, Jay, Romeo, Cole, Nicholson, Boniquit & Verma, 2010). This result is not only for successful function post-surgery, however, there is also a decreased return to work outcome. Nove-Josserand, Liotard, Godeneche, Neyton, Borel, Rey, Noel and Walch (2011) also indicated that a person was less likely to return to work following surgical repair of the rotator cuff (42% compared to 94%) if the injury was a result of a work related condition. This could indicate, that receiving Workers' Compensation benefits or having a work related injury in itself is a barrier to a successful return to work with RCS. However, the specific reasons behind this result requires further investigation.

Bhatia et al (2010) showed that from an individual factor, alcohol use, was significant to an individual only returning to restricted-duty employment and also repair failure.

Obligations of the Employer, Employee and Insurer

Prevention of a work place injury is preferential over a workplace injury occurring. In Queensland, the Work Health and Safety Act 2011 (QLD) provides a framework and outlines responsibilities to persons conducting a business or undertaking (PCBU) as well as employees to protect the health, safety and welfare of all workers at work. The PCBU must ensure, so far as is reasonably practicable, the health and safety of workers at the workplace (Work Health and Safety Act 2011, QLD). This requires the PCBU to have documented policies for work health and safety and that these policies are being

trained, implemented and reviewed frequently. In addition, PCBU must show that they are consulting with workers on health and safety concerns. This is generally completed through meetings or a nominated Work Health and Safety Committee.

Employees' have a number of obligations including a legal responsibility to act in a safe manner in the workplace, comply with formal procedures in the workplace, take reasonable care for their own health and safety, take reasonable care that their actions and/or omissions do not adversely affect the health and safety of others, reasonably comply with lawful instructions and cooperate with any reasonable policy or procedures (Work Health and Safety Act 2011, QLD). Employees have the right to cease work which they deem unsafe to complete.

However, even with good intentions from all parties, a workplace injury may still occur. The Workers' Compensation and Rehabilitation Act 2003 (QLD) sets out specific obligations for the employer, employee and insurer after a workplace injury has occurred. An employer is legally liable for compensation for injury sustained by a worker employed by the employer (Section 46). To ensure a worker is able to be remunerated following a workplace injury, Section 48 of the Workers' Compensation and Rehabilitation Act 2003 (QLD) states that all employers must be insured and remain covered to the extent of accident insurance, against injury sustained by the worker.

Employers who pay annual wages of more than \$7,124,520 for the preceding financial year or are in a high risk industry with wages of more than \$3,562,260 must appoint a rehabilitation and return to work coordinator. The coordinator has the responsibility to assist with injury management including communication with the employee, developing return to work programs, monitor the programs and liaise with other parties to ensure that the program continues to be safe. In addition, the coordinator is to educate the

employees and management about workplace rehabilitation (Workers' Compensation and Rehabilitation Act 2003, QLD). The employer has an obligation to assist or provide rehabilitation (Workers' Compensation and Rehabilitation Act 2003, QLD). Employers should attempt to find suitable duties were able to improve the chances of an earlier return to work. In regards to RCS, suitable duties will most likely involve administration tasks or tasks that are lighter and do not require the injured worker to lift or reach over shoulder height initially to minimize aggravation of the condition.

Along with work health and safety policies, the employee has an obligation to ensure that the workplace has a workplace rehabilitation policy and procedures. These procedures must be reviewed every three years (Workers' Compensation and Rehabilitation Act 2003, QLD). This policy will document the specific steps required for when someone has a workplace injury and also assist with the rehabilitation process. This will also include the rights and responsibilities of all parties. Workers' have rights and responsibilities during the claims process. Workers' are required to cooperate with WorkCover, their employer and their doctors.

A barrier in regards to a successful return to work is decreased communication between all parties. Workers' need to advise all parties if their condition or treatment changes to ensure correct rehabilitation and that suitable duties remain within the workers functional restrictions. Workers' also need to provide up to date worker's compensation medical certificates to assist WorkCover and their employer to provide suitable duties for their return to work. In addition, workers' need to ensure all information provided to WorkCover is true and not misleading. This includes if the worker begins other work or is being paid by other means (for example Centrelink). Workers' are required to participate in rehabilitation programs if required. Penalties can apply if Workers do not comply with the requirements under the Act [Workers' Compensation and

Rehabilitation Act 2003, Queensland (QLD)].

The insurer is responsible in setting premiums payable under the policy. In addition, an insurer must take the steps it considers practicable to secure the rehabilitation and early return to suitable duties of workers who have an entitlement to compensation (Workers' Compensation and Rehabilitation Act 2003, QLD). This may require a referral to an accredited return to work program. The insurer is required to ensure that the return to work plan is developed and monitored in consultation with the injured worker, employer and treating registered persons (generally the GP) (Workers' Compensation and Rehabilitation Act 2003, QLD). As mentioned previously, without communication and consultation, it is difficult to ensure that a return to work program is safe and also proceeding correctly.

The insurer is also responsible to ensure fees or costs of rehabilitation that the insurer accepts as reasonable, having regard to the worker's injury are paid (Workers' Compensation and Rehabilitation Act 2003, QLD). Treatment that could occur for RCS may include Orthopaedic Specialist review and possible surgery, physiotherapy treatment and other allied health treatment and assistance with return to work programs from a rehabilitation provider.

Barriers in Carrying Out Legal Obligations

As already discussed above, the employer, employee and insurer have a number of legal obligations under the Workers' Compensation and Rehabilitation Act 2003 (QLD). Barriers may present themselves and make it difficult for these parties to carry out their legal obligations. For an employer, there are copious amounts of obligations in which they must legally obey. To know, understand and remain up to date with all legislation including the Acts, Regulations and Standards; it is near an impossible task. Under the Act, however, it is the responsibility of the employer to know

their responsibilities and to ensure that they are fulfilling their legal obligations (Reed, 2010).

Under the Workers' Compensation and Rehabilitation Act 2003 (QLD), the employer is required to ensure that there are rehabilitation procedures and policy in place. Although a policy and procedures are in place, it does not always mean that they are followed. It is the employers' responsibility to ensure that these procedures are followed, however, the employer may not be able to ensure all procedures are followed accurately on all occasions. In addition, the employer may have made the best effort to ensure that the policy and procedures cover all circumstances, it is unreasonable to assume that all circumstances would be documented.

A return to work coordinator is also required for companies that pay a certain amount of wages as advised above. In the Act, the return to work coordinator does not require specific qualifications for the role. Kenny (1995) indicated that a barrier in returning to work was that the return to work coordinator did not understand their role or the requirements under the Act and thus could not provide accurate advice or develop a return to work plan for the injured worker. Specific qualifications may need to be considered to ensure that qualified return to work coordinators are provided with up to date information in regards to requirements under the Act.

Workers are required to ensure accurate and timely communication to the Insurer and Employer. However, workers' may be reluctant to advise the employer and insurer accurate information. For example, the worker may be very keen to return to work due to strong work ethic or promotional opportunities. Therefore, they may be reluctant to advise the insurer and employer (and even their GP) how functionally impaired they are and will try and work through the pain. This may result in further injury. On the other hand, the worker may be proceeding with legal pathways. The worker potentially is being advised to remain off work as long as

possible to gain the best possible payout.

The insurer is obligated to ensure a return to work plan is in place as early as possible and is safe for the Worker. However, the Insurer may not have the appropriate skills to develop a return to work plan. The insurer is then obligated to refer to a rehabilitation provider to assist with this task. However, the insurer may be so busy with other tasks that the referral to a rehabilitation provider does not occur.

Conclusions

Workers who have been diagnosed with RCS often experience pain, decreased strength and lack of movement which results in limitations to complete self-care and household tasks, hobbies and return to work. The family may also experience financial stress, change in roles and psychological symptoms as a result. In addition, the employer has direct and indirect costs to the business including loss of productivity, cost of equipment, loss of worker morale and negative perception from the public. Although there are a number of effects all parties feel from worker developing RCS, it is clear that a successful return to work requires an early, collaborative approach between the injured worker, employer and health professionals in regards to RCS (Shaw et al, 2008). Shaw et al (2008) showed if the injured worker was monitored and unsafe behavior corrected, new employees were provided with safety training, company leaders took an active role in attending to safe behavior and were actively involved in health and safety, modified duties were available and used and the employer participated in identifying those modified duties and other employees were educated on the use of modified duties, it was more likely a successful return to work outcome would be achieved. Organizational culture for a safe and supportive workplace following a workplace injury was also shown to be necessary (Shaw et al, 2008).

A review of RCS and how this impacts the worker, employer and family, barriers for their return to work, and specific legal obligations for the employer, employee and insurer under the Workers'

Compensation and Rehabilitation Act 2003 (QLD) have been discussed.

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Occupational Asthma: A Critical Literature Review

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Abstract

Occupational asthma is a common and possibly under-recognized condition with the potential for far-reaching physical, financial and psychosocial effects on the worker, family and employer. A literature review was performed to examine these effects, the roles of the various stakeholders in the Workers' Compensation process, and the barriers to prompt fulfilment of these roles. The aim of the Workers' Compensation process in this setting is to provide a workplace and its employees with support and resources to allow both restructuring of the workplace to prevent occupational exposures, and re-training or placement of employees where required. Ideally this would occur efficiently and without significant medical, psychosocial or financial impact on the employee and his or her family. There is some evidence that this does not always occur, and more research is warranted to define and reduce the barriers present in the Western Australian system.

Keywords occupational asthma; workers' compensation

Introduction

Asthma is a common, chronic respiratory condition characterized by reactive airways and reversible airway obstruction, affecting 1 in 10 Australians (Australian Centre for Asthma Monitoring, 2011). About half of asthma cases are diagnosed in adulthood, and up to 15% of those are caused by occupational exposure to airway irritants (Australian Institute of Health and Welfare, 2008).

Occupational asthma is defined as new-onset asthma precipitated by exposure to occupational substances, and may be an allergic or irritant reaction to an agent (Australian Institute of Health and Welfare, 2008). It is distinct from work-precipitated asthma, which occurs when a worker with pre-existing asthma experiences exacerbations due to work exposures (Sim, Abramson, & Radi, 2005). The symptoms of asthma are episodic shortness of breath, wheeze, chest tightness and cough (National Asthma Council Australia, 2015). Occupational asthma can be difficult to distinguish from other causes of asthma, but the worker may notice the relationship to workplace irritants, or the improvement of symptoms during weekends and holidays (Friedman-Jimenez, Harrison, & Honghong, 2015). Occupational asthma has a low mortality, but can cause significant symptoms with associated impact on quality of life

(Australian Institute of Health and Welfare, 2008).

Asthma can be treated medically but prolonged or recurrent exposure to irritants is known to cause long-term respiratory impairment. The only completely effective avenue for management is prevention, by avoiding exposure to the relevant agent (National Asthma Council Australia, 2015). It has been demonstrated in meta-analysis that reduction (rather than elimination) of exposure is not sufficient to relieve symptoms (Vandenplas, Toren, & Blanc, 2003).

Eliminating exposure requires alteration of the workplace to prevent contact with the agent, substitution of the agent, or removal of the worker from the environment. There are extensive guidelines available for management of occupational asthma, with a strong focus on early diagnosis and complete avoidance of allergens (G. Moscato, Pala, Barnig, De Blay, Del Giacco, Folletti, Heffler, Maestrelli, Pauli, Perfetti, Quirce, Sastre, Siracusa, Walusiak-Skorupa, & van Wjik, 2012; Nicholson, Cullinan, Taylor, Burge, & Boyle, 2005; S. M. Tarlo, Balmes, Balkissoon, Beach, Beckett, Bernstein, Blanc, Brooks, Cowl, Daroowalla, Harber, Lemiere, Liss, Pacheco, Redlich, Rowe, & Heitzer, 2008). Measures such as personal protective equipment are considered secondary and there is some evidence that in many cases equipment such as masks are ineffective in preventing asthma

symptoms (Smith & Bernstein, 2009; Trivedi, Apala, & Iyer, 2016; Vandenplas, 2011)A.

The prognosis of occupational asthma is poorer than that for other forms of asthma, with a significant risk of permanent reduction in respiratory function if the condition is not detected and managed early (Burge & Hoyle, 2012).

Method

A literature review was conducted to examine the effects of a diagnosis of occupational asthma on a worker, the worker's family, and the workplace. The barriers to returning to work were also examined. The various roles and responsibilities of the worker, employer and insurer were researched in the context of occupational asthma covered under the Western Australian Workers' Compensation Act (Government of Western Australia, 1981) and the barriers to fulfilling these responsibilities.

Initially a search of online resources was conducted looking for Australian data and worker's compensation guidelines. The websites of WorkCover Western Australia, Australian Institute of Health and Welfare, National Asthma Council of Australia, Safe Work Australia, Australian Lung Foundation and American Thoracic Society were examined and their respective guidelines read.

A search on Medline (via Pubmed) from 1990 – 2016 was conducted. Search terms were entered from three groups:

1. "Asthma"
2. Terms restricting the search to occupational asthma including "work", "occupation" "occupational disease", "workers' compensation" and related terms
3. Terms chosen to select the effects of occupational asthma, including "disability", "socioeconomic" "consequences" and related phrases.

Abstracts and articles were scanned for relevance and then read in more detail and the key words and references scanned to determine the need for further literature searches. For the final section of the review, Western Australian Workers' Compensation laws were researched via the WorkCover WA website (WorkCover Western Australia, 2016) and the Workers'

Compensation Act (Government of Western Australia, 1981), which were available online. From the publications reviewed 36 of the most relevant publications on the topics were included and are comprised of 28 are journal articles, 6 government publications, one book and one law.

Effects of Occupational Asthma on the Worker

Occupational asthma is a chronic disease with high morbidity, which can have significant health and economic impacts on the worker in the short and long term, and cause psychosocial and relationship issues at work and home (Australian Institute of Health and Welfare, 2008).

The physical effects of occupational asthma can cause significant and chronic symptoms, affecting the worker's function in all aspects of life (Australian Centre for Asthma Monitoring, 2011). The mental health effects of both the underlying chronic illness, involvement in the Workers' Compensation process and loss of employment, function and income are far-reaching. Many workers report low mood or anxiety, stress, and strain on family relationships (Lax & Klein, 2008).

Recovery from occupational asthma and prompt return to work depend initially on early diagnosis and identification of occupational risk factors. Failure of early diagnosis has been identified as a common issue and a factor causing delayed return to work in these workers (Zoeckler, Cibula, Morley, & Lax, 2013). There is concerning evidence that, despite the poorer prognosis, both workers and health professionals are slower to manage occupational asthma than other forms of asthma (Burge & Hoyle, 2012), perhaps because they are aware of the financial and social implications for the worker.

Favorable outcomes in occupational asthma depend upon early and accurate diagnosis, and elimination of exposure (G. Moscato et al., 2012; Stoughton, Prematta, & Craig, 2008). Unfortunately this can prevent timely return to work while the employer examines options for workplace modifications, redeployment or potentially redundancy (Vandenplas et al., 2003).

According to questionnaire-based

research, workers with asthma perceive that their asthma has short- and long-term adverse outcomes, including time off due to illness, missed promotions, reduction in duties or changing jobs (Mancuso, Rincon, & Charlson, 2003). There is further evidence that occupational asthma has adverse socioeconomic outcomes for the worker (Larbanois, Jamart, Delwiche, & Vandenplas, 2002). The direct socioeconomic effects of occupational asthma in terms of early retirement, unemployment or loss of income are no worse than those for a worker with symptomatic asthma unrelated to their occupation (Larbanois et al., 2002). The difference, however, is that occupational asthma is preventable by avoiding exposure, and if this can be addressed then outcomes could potentially improve.

There is little evidence that occupational asthma reduces employment rates (Larbanois et al., 2002), but it has been shown to increase disability in terms of symptoms at work, time away from work or changing job roles to avoid symptoms (Blanc, EllbjÄR, Janson, NorbÄCK, Norrman, Plaschke, & TorÉN, 1999). The economic and social risk of changing jobs may be sufficient to cause the worker to return to work despite ongoing symptoms, accepting the risk of long-term health problems (Vandenplas et al., 2003).

There is little good quality research and none describing these outcomes in Australia, but one Italian longitudinal study showed that workers who changed jobs to avoid exposure had fewer symptoms and lower health care costs but also lower income than those who remained exposed (G Moscato, Dellabianca, Perfetti, Brame, Galdi, Niniano, & Paggiaro, 1999). A study in the United Kingdom estimated that occupational asthma costs the UK £70-100 million per year with 48% of this borne by the workers, 49% by the state and 3% by the employers (Ayres, Boyd, Cowie, & Hurley, 2010). These statistics are concerning and are an area where further Australian research is needed. The Workers' Compensation process has an important role in improving these outcomes by facilitating retraining and placement of affected individuals.

Effects of Occupational Asthma on the Family

The family of a worker with occupational asthma can be severely affected financially as well as psychologically and socially. The worker may suffer from low mood or self-worth, which can affect relationships. There is potential of loss of income, as well as changing roles within the family if the primary breadwinner is unable to work. Depending on the occupation and location, a worker may need to move to a different town to work, with the resulting disruption to family. The worker's home and leisure activities may also be restricted, requiring family members to take on extra tasks and change their routines (Boden, 2005).

There is little specific research discussing the effects on families of occupational asthma, and this may be an area where future research could begin to provide solutions to some of the common issues.

Effects of Occupational Asthma on the Workplace

An American study estimated that the financial cost of an employee with asthma to an employer was 2.5 times the cost of an employee without asthma, and more for employees with a disability claim (Birnbaum, Berger, Greenberg, Holland, Auerbach, Atkins, & Wanke). This included insurance and medical expenses as well as wage replacement for days not worked. It does not include loss of productivity while at work, which has been reported by employees with asthma, particularly those with workplace-related symptoms (Balder, Lindholm, Lowhagen, Palmqvist, Plaschke, Tunsater, & Toren, 1998). In addition, the workplace may carry engineering costs in order to reduce worker exposure to the relevant agent, both for the employee known to have occupational asthma and other workers at risk. The workplace may suffer from a reduction in morale and confidence due to the possibility of other workers developing similar issues.

Return to Work Barriers

In any workers' compensation claim, return to work following is affected by a complex interplay of various factors. This includes psychosocial characteristics of the employee and other individuals involved as well as workplace factors, communication and clinical management.

(Foreman, Murphy, & Swerissen, 2006). It can be difficult to predict the barriers which are likely to arise in a specific case, but keeping some broad categories in mind can make it easier to detect issues early.

There are some problems specific to occupational asthma, and a major barrier to return to work following a diagnosis of occupational asthma is that symptoms may take months to settle, and that the most effective intervention is strict avoidance of the irritant (Smith & Bernstein, 2009). The benefits of early return to work are well known, but in many cases the nature of occupational asthma prevents return to the workplace at all, eliminating the option of returning to the pre-illness workplace on restricted hours or duties (Susan M. Tarlo, 2015).

The return to work process may require significant, potentially costly and time-consuming alterations to the workplace, accompanied by lengthy time off work for the employee. If such alterations are impossible, it may be difficult for the worker to return even on restricted duties, and it is probable that the worker will have to leave the workplace entirely (Friedman-Jimenez et al., 2015).

The employer has a duty of care to protect workers from exposure to known respiratory irritants. If the worker considers the employer to have been negligent in this duty and pursues a common law pathway, legal proceedings may become a barrier to timely return to work (WorkCover Western Australia, 2014b).

The Western Australian Workers Compensation and Injury Management Act 1981:

Obligations of the Employer

The employer has an obligation to provide Workers' Compensation insurance for all workers, including full time, part time and casual workers, including those on commission and those related to the employer. In some circumstances working directors and contractors may also be covered. (WorkCover Western Australia, 2014b)

During the injury management process the employer has a responsibility to support the worker from the time of injury

and throughout the process. The employer must have an injury management system and provide a return to work program when required, providing reasonable modifications to the workplace if indicated, identifying appropriate tasks and taking into account the restrictions in the WorkCover Progress Certificate. The employer must communicate with medical providers and the insurer when appropriate. (WorkCover Western Australia, 2015)

For the employee with occupational asthma, the employer will be required to consider ways to reduce or avoid contact with the relevant allergen (Smith & Bernstein, 2009). This multidisciplinary process will involve communication between the employer, the insurer, vocational rehabilitation providers and allied health professionals (Zoeckler et al., 2013). In the event that the employee cannot return to the original job, the employer will need to make a reasonable attempt to provide a different workplace or role (WorkCover Western Australia, 2015).

Importantly, although not required under the employee's workers' compensation claim, the employer must consider that if one person has developed occupational asthma in the workplace there is a risk of other cases occurring. In terms of financial and other costs to the affected employee, other workers, the government and society, the most important interventions are those preventing further cases of occupational asthma from developing (Trivedi et al., 2016). Workplace modifications to reduce exposure to respiratory irritants should therefore be a priority for the employer. (Kuschner, Chitkara, & Sarinas, 1998)

Obligations of the Insurer

The insurer has a financial role in collecting insurance premiums and covering workers' compensation liabilities, such as the employee's wages, medical and other costs. The insurer is also expected to help the employer and employee meet their obligations, and broadly assist with the employee's medical management and return to work process. This includes facilitating communication between the various parties, overseeing the treatment, rehabilitation and return to work process (WorkCover Western Australia, 2015).

In the case of occupational asthma, the condition is chronic and likely to result in a change in work environment (Sim et al., 2005). The insurer may be involved in retraining the worker or helping the employer make workplace modifications allowing the worker to remain in the original or a modified role. If the employee cannot remain in the current workplace, the insurer will have a responsibility in arranging settlement, and if required, representing the employer in an arbitration process (WorkCover Western Australia, 2015).

Obligations of the Employee

The primary purpose of the Workers' Compensation system is to protect the employee and dependents following occupational injury or illness, but as well as rights the employee has certain responsibilities (Government of Western Australia, 1981). The employee is required to comply with the Workers' Compensation Act, including promptly reporting the injury or illness, completing a Claim Form and then seeing a medical practitioner for a First Certificate of Capacity. The employee is also required to actively communicate with other involved parties by promptly providing documents as required and keeping the employer and insurer informed about any changes in their treatment or condition (WorkCover Western Australia, 2014a).

Once medical treatment or rehabilitation is underway, the employee must attend appointments and engage in treatment. If unable to attend an appointment, he or she must reschedule it promptly. The employee should be actively involved with the development of a suitable return to work program and participate fully in it (WorkCover Western Australia, 2014a).

Barriers to Carrying Out Obligations Under the Act

New-onset asthma may not always be readily diagnosed as an occupational disease, unless the treating doctor or the employee has a high index of suspicion (Parhar, Lemiere, & Beach, 2011). This may delay or prevent the worker entering the workers' compensation system, and affect treatment and recovery if the precipitating agent is not identified rapidly. Once a diagnosis is made, some employees choose not to make a claim

under Workers' Compensation due to concerns about future income or employment, or lack of understanding of the process (Parhar et al., 2011).

The Workers' Compensation process can be difficult to navigate, and the employee often needs support and information from experienced professionals. Poor communication or lack of education for the worker and employer can result in either party inadvertently failing to meet the relevant obligations (Shaw, McDermid, Kothari, Lindsay, Brake, Page, Argyle, Gagnon, & Knott, 2010).

External factors can affect the workers' ability to comply with their obligations. There is an increasing body of research showing that certain groups are disadvantaged in the Workers' Compensation process, including those making claims for mental health issues (Brijnath, Mazza, Singh, Kosny, Ruseckaite, & Collie, 2014), women, and linguistic minorities (Premji, 2015). Mental health issues can affect the workers' recovery and compliance with obligations even when unrelated to the claim.

Employers, particularly small businesses with few workers, may struggle to meet some of their obligations. In any Workers' Compensation claim the employer may find it difficult to replace the worker in order to maintain work flow, or to provide alternative duties. Specific to occupational asthma, the case may highlight necessary changes to the company's safety management systems. Insurance may not cover changes to the workplace and this may become an extra cost to the employer.

The insurance company should be well placed to meet the obligations above, even in complex cases, but may face problems relating to communication with the employer and the worker.

Conclusion

Asthma is considered to be a treatable disease, but when triggered by an occupational exposure the diagnosis can have significant financial and psychosocial effects on the worker, their family and the employer. Managing occupational asthma, particularly while navigating the Workers' Compensation process, has specific challenges for all

parties involved. Understanding these issues can help medical practitioners, occupational health and safety workers and managers address problems early and improve outcomes.

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Safety Leadership: A Review of Management Trends

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Abstract

This paper examines a variety of theorist management approaches and discuss their use in a contemporary occupational health and safety focused environment. Further, the characteristics and management techniques needed to effectively engage and motivate “Generation Y” workers will be explored, given this group’s significant representation in the modern workforce. Finally it will discuss leadership behaviors from an OHS management perspective with a focus on how such behaviors can build or erode trust within the workforce.

Key words OHS, safety leadership, management, Generation Y.

Introduction

The purpose of this paper is to examine theoretical approaches related to management with respect to health and safety in an occupational environment. Over the years a variety of theories and methodologies have been developed and applied, with numerous still holding relevance in today’s modern society.

Leadership is critical in the occupational health and safety (OHS) field. Regardless of how well developed and effective a management system is within an organization, leaders are still required to drive and lead a culture (King, 2013). Beyond this however, safety management must align, motivate and inspire personnel, providing them with clear expectations and direction (Guldenmund, 2010). In doing so, genuine management commitment can be conveyed to the workforce and assist in driving positive OHS outcomes.

This paper examines a variety of theorist management approaches and discusses their use in a contemporary occupational safety and health focused environment. Further, the characteristics and management techniques needed to effectively engage and motivate “Generation Y” workers will be explored, given this group’s significant representation in the modern workforce. Finally it discusses leadership behaviors from an occupational safety and health management perspective with a focus on how such behaviors can build or erode

trust within the workforce.

Theorist Approaches

As in any field, there are a variety of approaches to management. In this paper four such theoretical approaches to management are discussed based on their continued development and application over time and further, their specific and notable relevance to the management of occupational safety and health in a contemporary management environment.

Problem Solving / Scientific Approach

In 1911, Frederick Taylor began communicating his theories on management. Having observed workers performing at sub-standard levels, as well as considerable perceived waste, he began considering the employer-employee relationship and further, the associated organizational problems and their related inefficiencies. Through his examination of work practices, Taylor identified that a more structured and scientific approach towards the management of workers was needed and that such an approach would be of significant benefit to all those involved in work (Taneja, Pryor, & Toombs, 2011).

As such Taylor championed the maximization of work output, which significantly addressed areas of industrial efficiency and encouraged work measurement. He promoted the control of organizational behavior, in an effort to improve productivity, as well as facilitated the standardization of processes and practices. His principles extended to the training, management and supervision of individual workers and activities. In doing so, Taylor advocated the provision of feedback to the worker on their progress

and performance, again to improve the work relationship but also to manage work allocation and thus overall efficiency (Taneja, Pryor, & Toombs, 2011).

Taylor's principles of scientific management have provided the management fraternity with a more scientific and structured approach to effective workplace management practices. Within a contemporary occupational safety and health environment, such scientific management principles have lent themselves greatly towards a quality management approach to business and management overall, a strategy seen in a wide range of industries, particularly from an occupational safety and health perspective. (Wren, 2011). This is particularly notable in the occupational safety and health field with respect to the key focus areas of consultation, training and supervision.

Administrative Approach

Henri Fayol developed in the 1940's, a concept around administrative management focused on five critical functions. These functions included forecasting and planning, organizing, coordination, command and control. Many interested parties at the time considered this to be the first complete management theory and thus the beginning of a sound authoritarian management model (Parker & Ritson, 2005).

Fayol's management approach provides for the examination of future situations and the development of strategies to address such change and progress. It further instils responsibilities and levels of management authority as well as defining and coordinating work activities, linking them to resources. Beyond this, Fayol's theory outlines an execution phase, combined with monitoring and review processes. Fayol suggests that these processes should be implemented according to 14 predetermined principles describing in greater details how each is to be applied (Fells, 2000).

Over time Fayol's management theories have proven themselves to be robust and timeless. The methodology is appropriate for both more tactical or strategic management and through its "contingency approach" provides a contemporary context. Through this theoretical

approach, Fayol has created and highlighted a critical link between an organization and the manager, as an individual, being a management concept that is essential in today's fast paced management context (McLean, 2011).

The administrative approach to management is common in today's environment and lends itself well to occupational safety and health management specifically. Fayol's methodologies make allowances for flexibility, realizing that management is almost never rigid, an idea that most OHS Manager's would whole heartedly share. Further to this, the idea of proportionality in management as championed by Fayol is directly relevant to the nature of occupational safety and health management generally (Schimmoeller, 2012).

Behavioral Approach

The behavioral approach to management was notably defined by Australian Elton Mayo and promoted management theories centered on people and the field we now refer to as human relations. The central points of Mayo's behavioral approach refer to the importance of the work group, worker recognition and security and recognizing complaints as a signs of a system disturbance or breakdown (Ionescu & Negrusa, 2013).

Mayo's contention is that work is a team activity and that the culture, values and attitudes of the team, will subsequently affect the work. In essence the social aspects of work must be addressed in any effective management theory. Beyond this Mayo described that workers were more interested in job security and recognition for their work, far more than the physical conditions that their work was conducted in or likewise exposed them to. Finally, Mayo also raised the idea that complaints could be identified as "red-flags" in relation to wider or more systemic dissatisfaction by workers (Ionescu & Negrusa, 2013).

Whilst not always openly demonstrated, Mayo's principles of behavioral management have formed the basis of the human resource and industrial relations movement which we experience today. In terms of OHS management, behavioral based safety and the concept around

groups and individuals being the building blocks of organizations are common place in the contemporary environment, in which they still hold true (Bruce & Nyland, 2011).

Systematic Approach

W. Edwards Deming strongly influenced the systematic approach to management, with his particular ideas in the area referred to as the Deming Management Model (DMM). This management model outlined 14 key principles, of which the themes of systems focused thinking, organizational development, management responsibility and worker freedom can clearly be seen to be critical areas of interest (Singh, Dean and Chee-Chuong, 2013). In essence Deming promoted a coordinated and systematic approach towards the management of all areas of an organization and its associated resources. Deming's development of the Plan-Do-Check-Act (PDCA) methodology is a cyclical principle focused around the full systems approach to an activity or management as a whole (Estreich, 2015). Such principles along with the DMM in general promoted effective planning, execution, review, monitoring and action management phases. In short he outlined a continuous improvement cycle, seeking improved resource usage and allocation, as well as improved efficiencies in all areas of operation (Petersen, 1999).

In today's occupational safety and health Management environment, Deming's theoretical approach to management can be seen in the total quality management (TQM) movement and particularly the ISO9001 quality management standard. The PDCA methodology as applied in this standard has also been adopted in related management system standards internationally such as OHSAS 18001, AS/NZS 4801 and ISO14001, demonstrating the concepts robust and effective nature (Singh, Dean, & Chee-Chuong, 2013).

"Generation Y" Workers

"Generation Y" is a colloquial name given to persons born in the general range of between 1980 and 2000 (Meier, & Crocker, 2010). Brown, et al. (2009) describe some of the characteristics of generation Y persons as being more accepting and open to the concept of

multi-culturism and diversity, particularly in the workforce. It was noted that a sense of entitlement is observed from workers in this category both from a financial, material and emotional standpoint, however volunteerism is embraced more so than other generations, strengthening this group's underlying social and group focus. Throughout this generation of workers a greater understanding, competency and willingness to adopt technology and associated advancements is also notably observed (Brown et al., 2009).

In terms of occupational safety and health management, the characteristics of generation Y workers have a unique effect and subsequently pose a variety of challenges in the work environment. Attitudinally, generation Y workers are generally quite open to change and are flexible and innovative in their approach to traditional work. Further to this their stronger desire for continual learning and their greater uptake of educational opportunities further presents them as model workers, particularly with respect to occupational safety and health compliance (Brown et al., 2009). Conversely, however this can also have a negative effect with many generation Y workers expecting training and development opportunities at a much greater rate than other work groups, whilst at the same time questioning and challenging the flexibility of work in terms of resource arrangements but also operationally and strategically (Brown et al., 2009).

In order to retain and engage generation Y workers, it is imperative that like any occupational safety and health message, it is communicated effectively to the target audience. Generation Y are no different. Further to this an OHS manager can further engage this segment of the workforce through challenging its members in their approach to work and whilst encouraging systems and consistency, allowing for individual expression and individuality as a whole as much as is reasonably possible. Through avoiding micro-management behaviors managers can foster creativity, inspiration and overall positive occupational safety and health outcomes from this workforce group (Meier, & Crocker, 2010).

Leadership Behaviors

Leadership in any field is essential, most importantly in order to create a vision and to inspire and guide people towards achieving this vision (Marquis, & Huston, 2012). Highly effective leadership relies on a series of core behaviors, some of which are the ability to inspire and motivate, a drive towards results, strategic focus, collaboration, leading by example, integrity and courage. The application of such values into ones leadership regime particularly in an OHS management environment, will place a leader in good stead to build trust amongst their followers (Folkman, 2010).

There are a variety of leadership behaviors observed amongst leaders, which can be categorized into broader leadership styles. Some such styles that specifically relate to OHS management are:

- Participative Leadership
- Situational Leadership
- Transformational Leadership; and
- Transactional Leadership

In terms of occupational safety and health management, Burns (2003) described transformational leaders as having the ability to raise their followers to a higher level of motivation and morality. Such a concept is particularly relevant in the OHS management space, given the requirement of contemporary occupational safety and health managers to not only create highly effective systems but to also develop, drive and refine high performing and safe workplace cultures (Bowie, 2010).

In an occupational safety and health management environment it is essential that trust is not eroded amongst workers and this can be prevented through moral and ethical leadership, which in turn creates high performance environments built on trust and integrity (Caldwell & Jeane, 2007). The application of transformational leadership strategies in particular provide the foundation for vision, commitment and empowerment, which when applied consultatively greatly assist in building trust. Alternatively a lack of integrity, combined with unreliability, promise breaking and poor ethics will ultimately damage and erode worker trust in the long run (Marquis & Huston, 2012).

Conclusion

This paper aimed to review a suite of theorist management approaches, with consideration given to their application in a contemporary environment. It explored issues such as the management of “Generation Y” workers and further discussed leadership behaviors, whilst examining how these behaviors can build or erode trust within the context of occupational safety and health management.

From this examination it can be seen that leadership is critical in creating a positive and focused health and safety culture and that such leadership needs to be enacted in such a way to be inclusive of all areas and all groups with the work environment. Generation Y workers are but one example of a specific group requiring consideration when tailoring occupational safety and health messages in the workplace and such measured consideration can ultimately provide for much more successful outcomes.

As can be seen from this paper in terms of occupational safety and health management, strong and robust leadership is required that encourages a relationship of trust and that is further focused on continuous improvement. In providing such leadership an organization will develop more efficient organizational discipline and in effect see higher levels of occupational safety and health performance (Anguillo, 2009).

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The World Safety Organization (WSO)

The WSO was founded in 1975 in Manila, The Republic of the Philippines, as a result of a gathering of over 1,000 representatives of safety professionals from all continents at the First World Safety and Accident Prevention Congress. The WSO World Management Center was established in the United States of America in 1985 to be responsible for all WSO activities, the liaison with the United Nations, the co-operation with numerous Safety Councils, professional safety/environmental (and allied areas) organizations, WSO International Chapters/Offices, Member Corporations, companies, groups, societies, etc. The WSO is a not-for-profit corporation, non-sectarian, non-political movement to “Make Safety a Way of Life...Worldwide.”

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The WSO publishes WSO Newsletters, World Safety Journal, and WSO Conference Proceedings.

The WSO provides a network program linking various areas of professional expertise needed in today's international community.

The WSO develops and accredits educational programs essential to national and international safety and establishes centers to support these programs.

The WSO presents annual awards: the James K. Williams Award, Glenn E. Hudson International Award, J. Peter Cunliffe Transportation Award, WSO Concerned Citizen, WSO Concerned Professional, WSO Concerned Company/Corporation, WSO Concerned Organization, Educational Award, WSO Chapter/National Office of the Year, and Award for Achievement in Scientific Research and Development.

The WSO provides recognition for safety publications, films, videos, and other training and media materials that meet the WSO required educational standards.

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The WSO establishes and supports divisions and committees to assist members in maintaining and updating their professional qualifications and expertise.

The WSO has Chapters and National/International Offices located throughout the world, providing contact with local communities, educational institutions, and industrial entities.

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Membership in the World Safety Organization is open to all individuals and entities involved in the safety and accident prevention field, regardless of race, color, creed, ideology, religion, social status, sex, or political beliefs.

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