World Safety Journal

In This Edition

- ☐ Workers Aged 20 Years and Younger

- ☐ Benefits of having Corporate Social Responsibility

- ☐ Back Pain

- ☐ Organizational and Safety Culture

- ☐ Relationship between Good Business Management and OSH

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Articles for inclusion in this journal will be accepted at any time; however, there can be no guarantee that the article will appear in the following journal issue.

All articles shall be written in concise English and typed with a minimum font size of 11 point. Articles should have an abstract of not more than 200 words. Articles shall be submitted as Times New Roman print and presented in the form the writer wants published. On a separate page, the author should supply the author's name, contact details, professional qualifications, current employment position, a brief bio, and a photo of the author. This should be submitted with the article.

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Occupational Lower Back Pain: A holistic view of its impact on the worker, family unit and organisation.

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Abstract

Musculoskeletal disorders (MSD) affecting the back made up the highest number of serious MSD workers' compensation claims (35%) between 2009-10 and 2013-2014 (Safe Work Australia [SWA], 2016). A higher percentage of these were classified as 'diseases' (back pain, sciatica) rather than 'injuries' at 43% and 33% respectively (SWA, 2016). For this reason, occupational lower back pain and its impact on the worker, their family and the company they work is explored further in this literature review. Potential barriers to successful return to work are also discussed. Finally, obligations of the employee, employer and insurer in New South Wales (NSW) are also presented along with barriers that may impact compliance with their various obligations under the Workplace Injury Management and Workers Compensation Act

Key words

Occupational back pain. Work-related back pain. Return to work. Family.

Methodology

A critical review of existing literature was conducted into the impact of occupational lower back pain on an individual, their family and their employer. Several databases were used. Initially, the Curtin University library catalogue was searched using various key terms including "work", "back pain" and "effect". This search yielded 2061 results, most of which referred to literature on treatment options for occupational back pain. The results were then filtered to include only 1995-2018 publication dates, those available online and listed under the topic of occupational health/diseases, yielding 281 results. Relevant articles were selected and cited in this article. The same search terms were repeated using the ProQuest database and Google Scholar. There was some difficulty identifying specific search terms for this topic that would yield the desired results, which were overcome by multiple combinations of the words "work", "work injury", "back pain", "occupational back pain", "impact" and "effect". The SafeWork NSW, NSW Legislation and Safe Work Australia websites were searched for further supporting documents, of which seven are cited here.

Discussion

Impact on the individual

Back pain is a complex condition that has the potential to impact every aspect of life, both physically and mentally (Boden, Biddle, & Spieler, 2001). The physical impact can range from insignificant to severe. The worker may be able to functional normally, while in the presence of pain or discomfort. Conversely, they may be unable to perform their usual activities of daily living, their mobility may be reduced, they may have reduced range of movement in their joints and/or reduced strength in their muscles. Movement can be affected by altered muscle activation to "splint" the affected area, or by avoiding positions or tasks that aggravate symptoms (Hodges & Smeets, 2015). The person may experience side effects of medications they are taking to manage their symptoms (Kosny, Newnam, & Collie, 2018), or eventual dependence on these medications. The worker may gain weight as a result of reduced physical activity (Keeney et al., 2013), bringing with it the gamut of health implications associated with it, both physical and psychological. Sexual relationships may be impacted by reduced general mobility and the presence of pain (Kosny et al., 2018).

In the event the worker's back pain becomes chronic in nature (lasting more than 12 weeks) or involves a lengthy claims process, the individual is likely to earn a lower income in future than their non-injured counterpart (Kosny et al., 2018). This subsequently impacts the worker's family unit also. The same authors describe the potential for an injured worker to be perceived as less desirable to future employers, leading to financial insecurity and longer periods of unemployment as a result.

The changes discussed above can affect a worker psychologically in several ways. Reduced independence or increased dependency on

others can lead to a feeling of helplessness ("someone else having to do my work"). Changing gender roles in the household due to reduced physical capacity can lead to the feeling of loss of identity within the family unit or a loss of self (Strunin & Boden, 2004). Those experiencing chronic back pain are at increased risk of developing depression and/or other mental health disorders including stress, anxiety and sleep disorders (Demyttenaere et al., 2007). The worker may experience financial stress or stress related to how colleagues or management may perceive their injury or absence from work. The stigma around back pain and having their credibility or legitimacy questioned by colleagues/family/health care providers may also be a cause of stress or concern (Froud et al., 2014). Socially, a person with back pain may become isolated due to not only absence from the workplace, but they may not be able to participate in sports or other social events. Though difficult to measure, other intangible costs to the worker exist including reduced quality of life and decreased enjoyment (Dagenais, Caro, & Halderman, 2008).

Impact on the family unit
While occupational back pain affects the individual worker directly, there is potential for the condition to indirectly, though significantly, impact on the worker's family and support unit. Strunin and Boden (2004) described several effects on the family unit including the aforementioned change in gendered household roles, feelings of inadequacy and spousal stress. The same authors discussed that while spouses are generally supportive of their partners, the condition (and its subsequent psychological effects) can cause significant strain on relationships including feelings of reduced sympathy and tolerance. Child-parent relationships can also be affected by irritable and impatient behaviour occurring as a result of experiencing ongoing pain.
The act of witnessing a family member's struggles with pain or injury can cause stress to those family members who are closely involved but could also serve to improve the strength of relationships over time with the concept of 'overcoming an obstacle' together (Kosny et al., 2018). Family members may be required to assist with transport to appointments, paperwork and other administrative tasks associated with a compensation claim.

Impact on the employer
The impact of this condition on the employer can be categorised in two ways: direct and indirect costs, which refer to both financial and other 'costs' to the organisation which will be discussed further here (SWA, 2015).
Direct costs refer to monetary exchanges occurring as a result of the condition which include workers' compensation payments to the injured worker and insurance premiums. Other potential direct costs relate to investigating an incident, legal costs or fines that may be enforced by a regulator (SWA, 2015). It is acknowledged that in the case of occupational lower back pain it is unlikely one specific incident would be identified as the cause, however the organisation maintains a responsibility to investigate the report, to identify hazards and manage risks as far as is reasonably practicable (NSW Work Health and Safety Act, 2011, s.19).

While the costs above are measurable and are most often reported on when considering the economic burden of occupational back pain there are other, arguably more significant, costs that impact on the organisation which are less tangible. Such indirect costs include productivity losses, wages for replacement staff, retraining costs, increased sick leave and impact on reputation (Schulte P, 2005). Health and Safety Executive (n.d.) outlines the importance of corporate reputation and how preventing illness/injury in the workplace can help to build and maintain a good reputation and avoid negative public opinion and reduced profits.

Return to work barriers
The interaction between individuals, their health and their return to work is complex, requiring consideration of a multifactorial model for health care and rehabilitation for return to work cases, as demonstrated in Figure 1. Comcare (2016) proposed a "biopsychosocial model" (p. 4) which considers biological, psychological and social obstacles that may be present in the return to work process. While specific examples of these barriers are detailed below, it is important to consider the effect of multiples barriers present simultaneously and the synergistic effect that this can have on the return to work process.

Figure 1. Return to work as a multi-factorial outcome. (Comcare, 2016, p. 4.)

Biological factors that can act as barriers to return to work in the context of occupational lower back pain include age, the severity of the condition and the nature of the condition (Comcare, 2016). For example, a more severe or significant pathology present would be expected to take longer to recover and return to work. Importantly, the individual's perceptions regarding their pain level and their expected recovery can be also significantly impact return to work (Comcare, 2016).

From a psychological perspective, Comcare (2016) detailed the importance of the individual's own perception of their pain levels, current health status and their expected recovery also being factors affecting return to work outcomes. High perceived pain levels or a poor perception of their general health status can negatively impact successful return to work. Another barrier to successful return to work may be the fear of reinjury experienced by the individual, and the fear-avoidance behaviour cycle that may occur (Bunzli et al., 2017). Family members may contribute to this barrier by being pessimistic about the individual returning to work too soon, or reinjuring (McCluskey et al., 2011). If the condition has progressed to a chronic nature the worker may experience symptoms of depression or anxiety due to their perceived inability to manage their pain, which may act as a barrier in itself (Patel et al., 2012).

Health care providers can also act as a return to work barrier, though usually unintentionally. Synnott et al. (2015) found that some physiotherapists have limited understanding of psychosocial factors and their role in lower back pain or may even perpetuate a patient's fears or inaccurate beliefs by continuing to provide manual therapy in place of effective two-way communication.

Workplace factors can also play a significant role in affecting the return to work process. Ahlstrom et al. (2013) discussed the impact of supportive conditions in the workplace and subsequent improved return to work outcomes. Their results indicate that a low degree of freedom at work, poor job satisfaction, poor leadership and/or not feeling welcomed back to the workplace are all potential barriers to a successful return to work program. The relationship between the employee and their supervisor/manager plays a critical role. Shaw et al. (2013) found that the attitudes of management towards the individual regarding their condition is potentially the most influential factor affecting return to work, more so than the individual's own beliefs or that of their health care providers. Co-workers' attitudes towards an individual returning to work can also impact outcomes. Dunstan et al. (2015) reviewed existing literature on the role of the co-worker in this process and found that an environment of open communication with colleagues regarding the return to work plan and engaging them in finding a solution that works for all parties was successful in overcoming this potential barrier. Comcare (2016) also commented that a lack of return to work planning, whether actual or perceived, may also make it difficult for a worker to return to work.

Obligations of the employer
Under the NSW Work Health and Safety Act (2011, s. 19) employers must ensure, so far as is reasonably practicable, the health and safety of workers and must not place workers at risk of harm while carrying out their duties. In the event of an injury or illness in the workplace, the employer is required to notify their insurer within 48 hours of becoming aware of an illness/injury via electronic, written or oral communication (Workers Compensation Regulation 2016, s. 35.1). The employer must comply with the terms of the injury management program set out by the insurer. They have an obligation to participate in and cooperate with any plan that is established. If an injured worker is deemed able to return to work in some capacity, the employer must provide suitable work, as defined by the NSW Workplace Injury Management and Workers Compensation Act (1998). The employer must establish a return to work program in line with the insurer's injury management program.

Obligations of the insurer
The insurer must establish and maintain an injury management program and have this

lodged with the State Insurance Regulatory Authority of the NSW Government. The insurer must also take steps to ensure that the employer is made aware of their obligations under the Workplace Injury Management and Workers Compensation Act. If the insurer is notified of a significant injury to a worker they must, within three business days, contact the worker, employer and if practicable to do so, the worker's treating doctor. The insurer must establish an injury management program in consultation with the employer, doctor and worker and must communicate to each party their obligations within the program. The insurer is to pay the cost of medical treatment nominated by the treating doctor but may recoup these costs should another employer or insurer accept liability for the injury/condition.

Obligations of the worker
The NSW Work Health and Safety Act (2011) states that all workers must take reasonable care for their own safety while not adversely affecting the health and safety of others, in addition to following all reasonable procedures and instructions from their employer. If a worker is injured in the workplace, in accordance with the NSW Workplace Injury Management and Workers Compensation Act (1998) that worker must notify their employer of their injury or condition as soon as possible after it occurs. The worker must nominate their treating doctor and must provide consent for that doctor to provide relevant information to the insurer. The injured worker then must participate in and cooperate with the establishment of an injury management plan and must comply with their obligations under that injury management program. Once a worker has been deemed fit to return to work in some capacity by their treating doctor, the worker must make reasonable efforts to return to work in cooperation with the insurer and employer, which may be to alternative duties or an alternative workplace.

Barriers to carrying out legislative obligations
An employer can experience several barriers to complying with their legislative obligations, some may be intentional, others more likely the result of a lack of understanding or due to other operational issues. Financial barriers for large and small businesses may mean an employer fails to report an injury or support a worker through the workers' compensation process.

They may wish to avoid insurance premium increases, fines from regulators or costs of additional staff, retraining and recruitment. The nature of their business may mean that suitable work, or 'light duties' are not practicable to provide, and consequently the worker may have some work capacity and be sitting at home for long periods.

A lack of understanding of their obligations as an employer could result in non-compliance that they are not even aware of. For a small business with no experience in workplace injuries, a new manager, or an organisation lacking staff with the required knowledge, an employer could force a worker to stay off work until full work capacity is reached, when indeed they are required to provide suitable work. Whether or not an insurer adequately addresses this barrier through education and information likely depends on the relationship that exists between the parties.

The existing relationship between employee and employer can impact compliance from either party. If a worker has a poor relationship with their manager, they may be less motivated to actively participate in the return to work process, and vice versa. Fear of job insecurity or consequences of reporting may lead to a worker not fulfilling their obligation to report an incident in a timely fashion or at all. If a worker has low job satisfaction already and is now receiving compensation for an injury while staying home, this could become another barrier to their return. A large insurer with multiple clients and a high workload may not have the time to spend on educating and supporting every employer. There may be delays in effectively communicating with key stakeholders, including treating doctors, who may not respond to requests or engage with the return to work process.

Conclusion
Occupational lower back pain is a common condition affecting workers across many industries. This condition can affect the individual in various ways physically, psychologically and socially. The family unit and individual's organisation are inevitably affected in some way, though to variable degrees. Under work health and safety legislation, employers play an integral role in preventing back pain proactively in the workplace, but also in supporting an individual who may sustain an

injury/condition of this type. Workers must also take reasonable care to ensure their own safety at work and if injured, must actively participate in the injury management process if a successful return to work outcome is to be achieved. It is critical that a holistic approach to the return to work process is adopted by all parties to achieve the best outcome for the individual worker, their family and the organisation in which they are employed.

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Relationship Between Good Business Management and Occupational Safety and Health

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Abstract

This article highlights if there is a business case for investing money and resources on occupational safety and health interventions, and how factors of business management including safety culture, leadership commitment and employee engagement can improve safety and business performance outcomes.

Key words

Safety performance. Business case. Costs, benefits. Safety culture. Leadership commitment. Worker engagement.

Introduction

There is a strong relationship between good business management and occupational safety and health (OSH), both dependently affecting one another. The main aim of OSH is to identify and minimise risks at the workplace (Institute for Safety and Health Management, 2015). It is important to remember that no matter the size of the business, managing and protecting the safety of workers is very important (European Agency for Safety and Health at Work, 2007). It is a legal and social responsibility of the employer to manage the safety of all components of the business (Commerce, 2007). It is said that workers are the greatest asset of a business, so by having good business management and OSH systems in place it will result in economic and social benefits (European Agency for Safety and Health at Work, 2011). The key principles of good business management include safety culture of the business, leadership commitment and employee engagement (European Agency for Safety and Health at Work, 2011). This article highlights these key factors and how they can affect the relationship between good business management and OSH.

Methods

To start the research to determine the relationship between good business management and OSH, a literature search was conducted using Science Direct, Google and Curtin Library. Initially a search on Google was conducted using the sentence "relationship between good business management and OSH" and about 5,480,000 results came up. Links to Occupational Safety and Health Administration, Institute for Safety and Health Management, Comcare, Safe Work Australia, Commerce WA and European Agency for Safety and Health at Work appeared. A selection of only relevant credible sources was used and appropriate years between 2008 to 2018 were only selected. A similar search was conducted but "benefits of OSH to the business" was searched and a total of 758,000 searches appeared.

A second search was conducted on Science Direct, and the key words that were used in the search tool were safety and business management. A total of 93,375 searches came up, but when shortened to publications between 2008 and 2018, it was refined to 55,516 results. It was further refined to review articles and research articles, with a total of 38,981 articles available. A third search was conducted on Science Direct, and the key words that were used in the search tool were safety leadership and business. A total of 22,506 searches were available, but when refined

for the years between 2008-2018 and review articles and research article, a total of 8,627 articles were available. A similar search was conducted on Science Direct, and the key words that were used in the search tool were employee engagement and safety. A total of 8,464 results were available, but when refined for the years 2008 to 2018, a total of 7,157 articles were available. If articles were not accessible on the Science Direct website, the article was reviewed using the Curtin Library database.

A total of 20 publications are included in this article. Choice was based on the benefits described, safety culture, leadership commitment, employee engagement described and how the information in the publication related to good business and safety performance. Eleven of the included publications are government publications, seven are professional organisation publications and two are journal articles.

Business case for OSH interventions

Organisations fail to recognise that the benefits of investing in OSH, are not only associated with minimising incidents and risks in the workforce, but also benefits to the business in terms of improved business performance and profitability (Safe Work Australia, 2014). In reference to the 2012-13 financial year, the total economic cost associated to work related injuries in Australia was roughly $61.8 billion dollars, where 5% of this total cost is borne by the employer (Safe Work Australia, 2015). The direct and indirect costs associated with worker's compensations claims and return to work include medical costs and return to work costs, which can amount to more than $1.1 billion annually (Safe Work Australia, 2014). If businesses invest in OSH interventions, there is evidence that it can benefit businesses in term of reducing these costs associated with loss of time and productivity (Institute for Safety and Health

Management, 2015). According to a study conducted by Price Waterhouse Coopers in 2008, a car manufacture made gross savings of 11 million, from a 1% reduction in absenteeism (British Safety Council, 2014). Money which is saved can be reinvested into resources and operations to further benefit the business (Institute for Safety and Health Management, 2015).

With good OSH implementation, the company can benefit as it enhances and protects brand value/image and demonstrates that they are socially responsible for their employees and stakeholders (Institute for Safety and Health Management, 2015). If employees are happy, it will enhance employee commitment and motivation to do well in the business and overall attract talented workers (European Agency for Safety and Health at Work, 2007). Research shows that 61% workers said yes when asked if they work harder when they know their employer cares for their health and safety (British Safety Council, 2014). There is a strong business case for investing on safety, keeping all workers safe resulting in cost reductions and other economic benefits to the business (Safe Work Australia, 2014).

Safety culture

Safety Culture is characterised by the "way we do things around here' (Institute of Occupational Safety and Health, 2015). It is an organisational culture that places high priority on safety beliefs, attitude and values which are demonstrated through policies and procedures in the workplace, overall influencing actions performed by workers (Institute of Occupational Safety and Health, 2015). It also refers to the extent in which individuals or groups will commit to the responsibility for safety in the workplace (Worksafe Queensland, 2013). If there is a positive attitude towards safety, starting with management,

employees are more likely to buy in with the safety culture of the business (Arezes & Miquel, 2003). It is evident that a business with a poor safety culture, will have the same attitude towards their business processes and procedures resulting in poorer quality of goods and services (Institute of Occupational Safety and Health, 2015).

A positive safety culture has key characteristics, these include safe work practices for effectively controlling risks, tendency and attitudes towards risk management, and finally being able to learn from incidents and safety performance data for continuous improvement (Institute of Occupational Safety and Health, 2015). In terms of safe work practice, they must comply with law and best practice (Worksafe Queensland, 2013). This creates a culture where organisations know what is occurring in the workplace and can analyse incidents and safety performance for future growth (Institute of Occupational Safety and Health, 2015). A positive safety culture results in better OSH and business performance for an organisation (Worksafe Queensland, 2013).

It is a legal responsibility for businesses to implement effective OSH procedures and policies to manage health and safety risks in the workplace (Commerce, 2007). Policies are documented objectives and principles that guide and assist health and safety decisions within a business (Weekes, 2017). Policies and procedures are a part of the business's OSH management system which assist in establishing safe systems of work (Weekes, 2017). This includes hazard identification, risk assessment and control, consultation, training programs, and ongoing and reviewing of management policies and procedures (Commerce, 2007). It demonstrates that the business is addressing its health and safety obligations and allows stakeholders to see that the business is committed to protecting the health and safety of all workers (Weekes, 2017). It allows employees to follow a set of rules and gives a guide to what behaviour is acceptable or not (Weekes, 2017). With correct implementation, it will save time and money as existing procedures and will allow a response to corrective actions much more quickly and efficiently (Weekes, 2017). It also allows the clarification of responsibilities within the business and allows workers to understand their own safety responsibilities (Weekes, 2017).

Through OSH management systems and processes such as hazard identification and risk assessment, it allows businesses to identify and assess the risks associated with the organisation's work environment (Worksafe Victoria, 2006). Allowing efficient allocation of resources to manage health and safety risks as well as manage business challenges such as costs associated with injuries and absenteeism (Worksafe Victoria, 2006). This can include hiring qualified personnel to advise on OSH matters as well as a budget for OSH training (Worksafe Victoria, 2006). With the implementation of safety procedures, policies and management systems evidence shows, improving the safety culture of a business can result in positive safety outcomes.

Leadership commitment

Leadership plays an important role in a successful safety culture of a business (Fernandez-Muniz, Montes-Peon, & Vazquez-Ordas, 2007). Strong and active leadership must be in display, showing visible commitment to the improvement of health and safety, safe practices and culture (Department of Commerce, 2018). To demonstrate their commitment to safety, leadership should make it clear the importance of safety by making OSH one of their core values and being able to communicate this to their employees

(Worksafe Queensland, 2013). Engaged leadership can also result in clarifications with identifying and implementing solutions to particular hazards in the workplace (Worksafe Queensland, 2011). Strong leaders should be able to influence their employees to undertake safe work behaviours and continuously promote safety improvements throughout their business (Fernandez-Muniz et al., 2007).

A positive safety culture starts from the commitment by leadership (Department of Commerce, 2018). The employer has the primary responsibility and duty of care to protect the health and safety of workers in the organisation, and should demonstrate this through their commitment to safety by establishing a safe working environment (Department of Industry, Innovation and Science, 2018). This can be achieved by developing and implementing OSH policies and safe work practices including provision of training and education while simultaneously providing opportunities for improvements and staff contributions (Worksafe Queensland, 2011). It is important for leadership to value employee contributions and encourage workers to get involved in the decision-making process for safe work practices (European Agency for Safety and Health at Work, 2012).

Management teams lead by example, achieved through meeting their safety obligations by following OSH standards and regulations at all time (European Agency for Safety and Health at Work, 2011). It is important that leadership know different roles in the business, and are able to identify high-risk activities and workers who are most at risk (European Agency for Safety and Health at Work, 2011). Having specific duties and responsibilities to respond to these high-risk activities and manage health and safety risks while simultaneously monitoring and reviewing proactively is very important (European

Agency for Safety and Health at Work, 2011). Management presence in the workplace is important to meet and improve safety performance as it allows workers to bring up safety concerns, as well as empower the workforce to make decisions regarding the development of safety policies and procedures (Fernandez-Muniz et al., 2007). This can be done through regular visits of work areas or informal meetings (European Agency for Safety and Health at Work, 2011). Asking questions regarding worker's health and safety concerns and suggestions for improvements (European Agency for Safety and Health at Work, 2011). This can demonstrate to employees that you personally care and are interested in their working environment and safety (Fernandez-Muniz et al., 2007). While also educating, and providing information regarding employee responsibilities such as how to protect their own safety and others (Fernandez-Muniz et al., 2007).

There is high evidence that when there is strong leadership commitment to health and safety in the business, it results in higher safety and business performance for an organisation. If managers place high importance on safety, workers will know that they do and are motivated to work harder and follow safety procedures (Fernandez-Muniz et al., 2007). This can result in increased employee dedication to the business resulting in increased productivity, as well as reduced injuries and incidents (Institute for Safety and Health Management, 2015). Management should not only commit investing for profit, but should also invest on the safety of workers (European Agency for Safety and Health at Work, 2011). This means investing on human and financial resources for the management of health and safety in the business (Worksafe Victoria, 2006). For example, hiring safety advisors and human resources professionals to draw up policies and safety management plans for the

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business (Worksafe Victoria, 2006). Strong leadership commitment is an integral part of a good business management allowing to influence employees to undertake safe behaviours and promote the business's vision on OSH, through policies and procedures (Institute of Occupational Safety and Health, 2015).

Employee engagement

For successful business management, it is important to have two-way communication between workers and leadership/management groups. This two way process includes an effective upward communication, where employees are listened to and their concerns are addressed (European Agency for Safety and Health at Work, 2013). At the same time employees should take responsibility and follow health and safety rules that are set by their employer and business (European Agency for Safety and Health at Work, 2013). There should be an engagement where workers are encouraged to take part in health and safety decision making, as employees are an important asset of a business (Worksafe Queensland, 2011). Employees have industry insight and have a wealth of knowledge regarding current processes and by gathering input from them can be valuable in the development of policies and interventions to prevent future incidents (European Agency for Safety and Health at Work, 2013). Employers should be given relevant safety information such as safety data sheets, injury illness data, and results to exposure monitoring when asked for (Occupational Safety and Health Administration, 2018).

For the business to be successful workers must comply with regulations and safe work procedures at all times. Employee behaviour is crucial to avoid injuries and incidents in the workplace, as human factor plays a critical role in safety performance (Fernandez-Muniz et al., 2007). There is

strong evidence that employee engagement can increase worker's satisfaction, motivation and reduce absenteeism (Fernandez-Muniz et al., 2007). Workers will believe their managers and leadership value their opinions and contributions, which will make employees more committed to the organisation's safety goals (Safe Work Australia, 2017). Employee engagement will overall reduce the "us" and "them" mentality by increasing trust between management and employees and will allow workers to buy in with the safety culture of the business resulting in positive attitudes towards safety (Worksafe Queensland, 2013). This means demonstrating and conducting work tasks more safely and making continuous suggestions for improving work tasks and procedures.

Employee participation can be beneficial in the planning stage of particular work tasks and procedures, as workers who have experience and detailed knowledge are more likely to identify concerns and risks and be able to provide practical solutions (European Agency for Safety and Health at Work, 2013). Specific examples of how workers can get involved include, actively participating in meetings, team talks and training sessions while asking questions, raising issues and suggestions for improvements (European Agency for Safety and Health at Work, 2013). Also by volunteering in health and safety training activities to test and trial new procedures and technologies (European Agency for Safety and Health at Work, 2013). A positive safety culture depends on good information, this means workers must be encouraged to report incidents and mistakes that can jeopardise the health and safety of not only themselves but others (Institute of Occupational Safety and Health, 2015). There should be a "no blame" culture where mistakes are not penalised but good safety behaviour is rewarded, removing barriers and fear to

speak up (Occupational Safety and Health Administration, 2018). Being able to involve employees in safety decisions and valuing their contributions, will therefore improve safety and business performance (Safe Work Australia, 2017).

Conclusion

There is a strong relationship between good business management and OSH, both dependently affecting one another. The key factors of a good business management include safety culture, leadership commitment and employee engagement, resulting in the improvement of safety performance. There is direct evidence that these factors positively generate economic and business value, seen through reduced costs, higher productivity and profitability, which organisations fail to recognise. Workers are said to be the greatest asset of a business, so there is a business case for investing resources and money on OSH interventions to protect the health and safety of workers.

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Workers Aged 20 Years And Younger

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Abstract

Young workers, being those aged 20 years and younger, have a unique risk profile for
workplace safety with several factors increasing their vulnerability to safety risks. Yet they
should not be seen as a burden to be avoided and can bring many benefits to the
workplace. This article analyses published literature associated with the safety of young
workers, considering the causal factors for their risk of workplace injury, the effectiveness
of existing training strategies, and lessons that can be learnt from other areas where young
populations are at risk.

Key words: young workers, youth, safety education, workplace safety

Introduction

Young workers are those aged 20 years and younger, generally transitioning into work through a range of pathways, with some combining work with study, or working a variety of temporary jobs (Australian Bureau of Statistics, 2004). Young people work across all industries in full-time, part-time or casual roles, including seasonal employment or apprenticeships, as well as unpaid arrangements such as work experience or volunteering (WorkSafe WA, 2017). Employment for young workers is often characterised by lower paid roles, less skilled occupations, and less job security (Australian Bureau of Statistics, 2004). Whilst young workers are particularly vulnerable at work, they should not be seen as a burden to be avoided and can bring many benefits to the workplace.

Methodology

In order to consider safety in workers aged 20 years and younger, an initial literature review search was carried out using the ProQuest, Springer Link and ScienceDirect databases. The literature was limited to full text English peer-reviewed journals published between 2008 and 2018. A search using keywords "young worker" and "safety" produced 48,110, 12,678 and 13,718 results respectively. Articles were selected based on their relativity to the subject of young workers and safety. In some instances, journals of interest found were retrieved from the Curtin University Library databases.

A search conducted on the Safe Work Australia website, and various WorkSafe websites using the keywords "young worker safety" resulted in a number of guide and toolkit publications, as well as some statistical reports. The Australian Bureau of Statistics website also presented results using the same keywords, with publications featuring a thorough analysis on Australian statistics.

Discussion

Many factors, predominantly from developmental and generational perspectives, can increase the vulnerability of young workers to safety risks. Whilst they are capable of making sound decisions and moral understanding, their developing brain means that their ability to perform complex tasks, multi-task, solve problems, and control impulses is reduced in comparison to older workers (WorkSafe Queensland, n.d.). With poorer risk perception, and an aspiration to fit in or impress others, young workers will typically shape their behaviours from co-workers and avoid asking questions or raising safety concerns (WorkSafe Queensland, n.d.). Combining an overestimation of their capabilities with a lack of work experience and a limited awareness of work-related hazards, young workers can accept jobs with poor working conditions and even dangerous tasks (WorkSafe Queensland, n.d.). They are less likely to think before acting, considering the potential consequences of their actions or behaviours. These same workers may also not yet be physically capable enough to perform their jobs comfortably and are at risk of potentially

permanent injury unless appropriate pre-employment functional testing is performed and workers are conditioned to their jobs (WorkSafe WA, 2017). With work environments and equipment designed for the majority of adult workers, the physical and ergonomic needs of young workers who may still be growing and gaining strength may not be properly met (Zierold, Welsh, & McGeeney, 2012). Generational factors come into play through typically preferred hands-on learning styles, and a better response to visually presented information as opposed to highly technical written documents (WorkSafe Queensland, n.d.).

Despite young workers posing added risks as vulnerable employees, they can provide many benefits and should not be seen as a burden to be avoided. Able to bring energy and a fresh perspective with new ideas to a workplace, many young individuals are very performance oriented and keen to take on new challenges (Chin et al., 2010). Employing young people provides employers with an opportunity to shape staff to operate in a way that the business prefers, and provides an exciting opportunity to someone at the beginning of their career, with their first workplace experiences able to influence their employment future (Fair Work Ombudsman, 2013). With the correct knowledge and guidance, astute employers can harness the unique drive and potential of young workers whilst minimising workplace risks.

Responsibilities and consequences

Like all other employees, young workers have the right to a safe workplace and to not be injured or harmed at work. They themselves have a responsibility to work safely, by taking reasonable care for their own safety and not adversely impacting on others (Occupational Safety and Health Act of Western Australia, 1984, s.20). This can be achieved through following workplace procedures and reasonable instructions, not putting themselves or others at risk, wearing personal protective equipment as required, and reporting unsafe situations and injuries. Although the manager's role is that of a boss rather than a parent, they still have an obligation to treat young workers with care. As part of an employer's duty of care, they must provide

young workers with safe work procedures and information, instruction, training and supervision so that they are able to safely perform their work (Occupational Safety and Health Act of Western Australia, 1984, s.19). They should be educated to understand their rights and responsibilities and empowered to have a confidence in speaking up about any safety concerns they might have. The skills, abilities and experience of young workers also needs to be considered when allocating them tasks (WorkSafe WA, 2017).

Any business that ignores or falls short of its obligations can face serious consequences. In 2014, a 15-year-old worker was operating a forklift on a commercial farm and was killed when it tipped over and crushed him (WorkSafe Victoria, 2016). The employer was prosecuted and fined $450,000 for failing to provide safe systems of work, appropriate training, or the right level of supervision and support (WorkSafe Victoria, 2016). This is just one instance, with 334 other young workers killed in work-related incidents in Australia between 2003 to 2016 (Safe Work Australia, 2017). In addition, 3,580 serious workers' compensation claims from young workers were accepted between 2015 and 2016, with the majority made by young males (Safe Work Australia, 2018). Industries with the highest rates of serious claims for young workers were agriculture, manufacturing, and construction (Safe Work Australia, 2018). These figures are likely underreported however, with a recent survey finding that 1 in 3 young people who experienced workplace injury or illness had not reported it to their employer (Young Workers Centre, 2016).

A common reason for this underreporting is a fear of retribution for raising safety issues, with young workers concerned that they may be seen as being troublemakers and have shifts or their jobs taken away from them (Young Workers Centre, 2016). In response to this, some young workers will respond to hazardous working conditions by remaining silent and complying with pressure to continue performing their job, hoping to avoid injury (Tucker & Turner, 2011). Sometimes, workers may quit an

unsafe job and search for a new employer who offers better working conditions (Tucker & Turner, 2011). With a more transitional nature than their older counterparts, young workers may more frequently move between jobs to further their careers or adapt to changing study commitments; or movement may be involuntary through low job insecurity (Australian Bureau of Statistics, 2004). In changing jobs they may change employer, work location, or both (Australian Bureau of Statistics, 2004). Given that rates of injury are greater for workers in their first month of a job, with short tenure a greater predictor of workplace injury than age, there may be additional risk for adolescents changing jobs more regularly (Breslin & Smith, 2006; Runyan, Schulman, Santo, Bowling, & Agans, 2009).

Workplace bullying and mental health

Young workers are particularly more vulnerable to workplace bullying, defined as "unfair and inappropriate workplace behaviour that intimidates, offends, degrades, insults or humiliates a worker" (Fair Work Ombudsman, 2013). For young people, entering the workplace also symbolises entry into adulthood, and is a time when they are already most vulnerable to mental health difficulties (Pidd, Duraisingam, Roche, & Trifonoff, 2017). Whilst employment can be a protective factor and positively influence mental health, the demanding and sometimes stressful conditions when first entering the workforce can also negatively impact a young person's mental health (Pidd et al., 2017).

Australian apprentices have been found to suffer bullying at a rate of three times the national average (Parliament of Australia Standing Committee on Education and Employment, 2012). Research by Pidd, Roche, and Kostadinov (2014) looked at these issues specifically among young apprentice chefs, which is an occupation that is known to be correlated with high levels of work stress. Their findings showed that apprentice chefs surveyed had higher levels of psychological distress and subsequent harmful coping mechanisms that included alcohol and other drugs, than other Australians of a similar age (Pidd et al., 2014).

Effectiveness of safety training

Training is an often used method in workplace safety to prevent injury, yet little is known about the effectiveness of training that young workers receive at work (Zierold et al., 2012). A study by Zierold et al. (2012) found that despite many young workers agreeing as to the importance of safety training, it was often seen as being simple 'common sense'. In some cases workplace injury is seen as 'part of the job' (Breslin, Polzer, Maceachen, Morrongiello, & Shannon, 2007). Methods of training often involve passive viewing of videos or reading of materials, followed by a test with a passing score as a prerequisite to being able to continue to work, with tests often able to be immediately retaken if not passed (Zierold et al., 2012). Often training programs will convey to young workers the importance of understanding their right to refuse unsafe work and their obligations to report unsafe situations, yet they contribute very little to help in overcoming challenges or barriers to achieving these rights and obligations, nor do they facilitate a sufficiently deep understanding of the 'why' (Chin et al., 2010).

With all workers typically receiving the same training, it is not often geared towards young worker's developmental levels or interest. Effective training must consider the differences of young workers (Zierold et al., 2012). Traditional classroom based training should be complemented by opportunities for practical experience (WorkSafe Queensland, n.d.). Young workers in the study by Zierold et al. (2012) voiced a desire for training to be more interactive with a greater dynamic connection to the job. These desires support learning research which has found that active methods allow students to retain more information than compared to passively listening to instructions (Sudhinaraset & Blum, 2010).

The lower work-related injury, illness and fatality rate of young Western Australians could be attributed to the WorkSafe WA SmartMove program, which attempts to overcome many of these issues and effectively prepare young people for the responsibility of working safely (WorkSafe WA, 2016). Young Western Australians

cannot commence a work placement until having completed the SmartMove program, which consists of classroom and workplace competencies that align to a national competency unit, contributing to the Australian Work Health and Safety Strategy 2012-2022 (Safe Work Australia, 2012; WorkSafe WA, 2016). It remains important however that this resource is adequately supplemented with resources that develop and empower students' attitudes, values, and behaviours to enable them to be active safety participants (Safe Work Australia, 2006).

Lessons from road safety
Young people also feature significantly in road tolls, with strategies such as graduated driver licensing repeatedly shown to be successful in reducing mortality and morbidity (Bailey, Woolley, & Raftery, 2015). Graduated driver licensing imposes restrictions relevant to known causal factors of crashes that are relaxed as a novice driver gains experience (Bailey et al., 2015). Consideration could be given to adopting or strengthening a similar strategy within a workplace safety context, with progressive acclimatisation to work in known higher-risk industries. Restrictions placed on young workers early in their job could be relaxed as they become more skilled (Bailey et al., 2015).

Employers have a duty under legislation to provide information, instruction training and supervision, as far as is reasonably practicable (Occupational Safety and Health Act of Western Australia, 1984, s.19). Although meeting these obligations to ensure the safety of young workers involves provision of an induction, simply handing over policies and procedures and expecting that they will then speak up about safety is not an effective strategy. Employers must instead consider young workers' specific and unique needs and comprehensively provide safe systems of work in a way they are able to properly understand (Tucker & Turner, 2011).

Information and instruction should not end after induction. To ensure young workers can complete tasks safely and without risk, extensive and ongoing training should be provided (Zierold et al., 2012). This training should be interactive and hands-on, with self-directed learning

elements from a range of sources, and processes to verify competency at performing tasks safely (WorkSafe Queensland, n.d.). A focus should exist on developing skills and experience, rather than just minimising harm (Zierold et al., 2012). Understanding the reasons as to why safety is important is vital for young workers to understand, along with a subsequent understanding of what to do in a practical sense to prevent workplace incidents (Fair Work Ombudsman, 2013).

Good leadership is crucial to keeping young workers safe. Supervision should be available at all times to respond to provide advice and respond to questions, and importantly to immediately correct any unsafe work habits (Sudhinaraset & Blum, 2010). The level of risk associated with the tasks being undertaken will determine the extent of supervision (Sudhinaraset & Blum, 2010). A positive workplace culture is also essential to provide workers with the support they need, and it should encourage young workers to speak up about safety (Chin et al., 2010). Young workers should be regularly consulted with when identifying and controlling risks, and encouraged to ask questions where they are unsure (WorkSafe WA, 2017). Providing opportunities to continually develop their risk perception and management skills can help them in making well informed decisions about risk (WorkSafe Queensland, n.d.).

Conclusion
Providing early education at the point where young people are entering the workplace for the first time, is pivotal in ensuring they can develop habits in identifying safety hazards and understand their employers' obligations to appropriately address them. Yet more work is needed to further improve the safety outcomes for this vulnerable population, with a focus on the attitudes, values, and behaviours that will enable them to be active safety participants.

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Benefits of having Corporate Social Responsibility

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Abstract

Corporate social responsibility aims to explain how an organisations' social and environmental activities benefit a society. Through CSR, organisations volunteer to be responsible for the health and safety of its stakeholders, the community and the safety of its products. The purpose of this article is to explain the benefits of corporate social responsibility and how it relates to health safety management.

Keywords

Corporate social responsibility.
Occupational health and safety.
Sustainability.

Introduction

Corporate social responsibility (CSR) is a dynamic concept that has gained popularity since the 1960s, despite its inception before then, and has become an important topic for debate for most organisations since the beginning of the 21st century (Carroll & Shabana, 2010). Various descriptions and expressions have been used to explain CSR including *corporate accountability*, *corporate citizenship* and *sustainability* (Australian Human Rights Commission, 2008) but the concept aims to define how economic, social and environmental activities of an organisation benefit a society which includes customers, employees, shareholders and stakeholders (Rahim, 2013). Corporate social responsibility aims to encourage companies to create a balance between making a profit to keep the company viable and being ethical enough to positively contribute to the immediate and future society in a sustainable manner (Maican, 2013). According to Rahim (2013, p. 44), "companies are responsible for their impact on the society and natural environment, the behaviour of the people whom they do business with and for managing its relationship with the wider community" and these roles are part of CSR. Organisations may be committed to CSR through looking after its own associates, the community and ensuring the safety of its product (Koskela, 2014). The European Commission (n.d) states that CSR provides advantages with the management of risk, reducing costs, giving the company a good standing for funding from investors, improving relationships with the community and assisting in managing employees. In the discussion below, benefits of CSR are identified and how it links to health, safety and environment are explained. Examples are provided of companies that have employed CSR in their strategies.

Methods

Databases were used to examine literature on the topic of corporate social responsibility. Searches were kept to English articles published between 2008 and 2018. A search on the ProQuest database using the phrase *corporate social responsibility* yielded 91,840 results and this included scholarly articles and government publications. Another search was conducted linking *corporate social responsibility* with *Occupational health and safety* (OSH) and this resulted in 198 articles being identified for review.

A 2nd search undertaken through the PubMed database using the key words *corporate social responsibility* yielded 307 results. Further refining using the phrase *corporate social responsibility* with the words *health* and *safety* separately produced 94 and 10 results respectively. Another search on the Science Direct database produced 29,125 results using the words 'corporate social responsibility' only but yielded 128 results when the same phrase was used with the phrase 'health and safety management'. Of these articles only 3 related directly to CSR, health and safety.

A Google search on the topic was also conducted using the words 'corporate social responsibility in Australia' and this yielded 68.5 million results. This search enabled access to websites that discussed CSR in Australia that included the Australian Human Rights Commission website which led to other information resources like the United Nations website and the report on the Annual Review of the State of CSR in Australia and New

Zealand 2017. The Curtin University library was also used to identify published literature on CSR in Australia and one book was found.

A total of 15 articles, one book, 2 professional websites, 2 government websites and one international standard are cited in the topic discussion. These publications provided the most relevant information related to the topic.

Discussion

Corporate Social Responsibility for Employees.

CSR is mainly designed to inspire corporations to include the needs of the community in its activities, but for corporations to adopt CSR it must add value to the organisation and not reduce revenue. CSR states that organisations are responsible for the welfare of their employees, including the society and this works well with health and safety which is about looking after the social, mental and physical wellbeing of employees and the community (Montero, Araque, & Rey, 2009). According to a study by Frolova and Lapina (2014), organisations that are socially responsible for their employees are able to retain their workers resulting also in the retention of experienced skills and, in the long term, reducing labour expenses. This in turn may encourage employees to be committed to their organisation and inspire them to be more dedicated to their work in serving the organisation, which has a positive effect on the performance of the whole organisation, its sustainability and reputation (Frolova & Lapina, 2014). In Western Australia there are laws that are designed to ensure organisations look after their workers especially with regards to their health and safety at the workplace. Providing a safe working place will ensure workers return safely to their lives after work. CSR initiatives also include being responsible for the welfare of employees and may include supporting further education, whilst those related to safety may include providing code of conduct for the safety of employees and contractors and some companies go further by providing other perks for the employees which may include subsidising their employees' health insurance, housing, gym memberships or enabling the access to health and wellness promoting programs among other incentives (Sprinkle & Maines, 2010).

These incentives assist in retaining workers and may also contribute positively to workers' health by encouraging healthy lifestyle choices and social inclusion.

Corporate Social Responsibility to Customers.

Customers form an important part of the society referred to in CSR and have an important impact on any organisation. They may promote an organisation's product or service according to their perceptions of how and to what extent the organisation implements its CSR initiatives especially with regards to health, safety and environmental issues (Wei, Kim, Miao, Behnke, & Almanza, 2018). An article by Amatulli, De Angelis, Korschun, and Romani (2018) supports this view by indicating that even luxury clients increase their consumption depending on how an organisation presents its CSR initiatives, especially those related to the certification of the organisation in manufacturing luxury goods, using legally acceptable or environmentally friendly materials and initiatives used in socially supporting the community. The following diagram, taken from a study by Wei et al. (2018), shows how CSR initiatives (claims), for example eco-friendly packaging, influence customer perceptions (inferences) and the perceived attitude that the company is concerned about the environment. This study concluded that customers were more willing to commit to a product where an organisation had transparent CSR policies and showed commitment to these policies. This would be beneficial in increasing customer loyalty, the company's reputation and revenue.
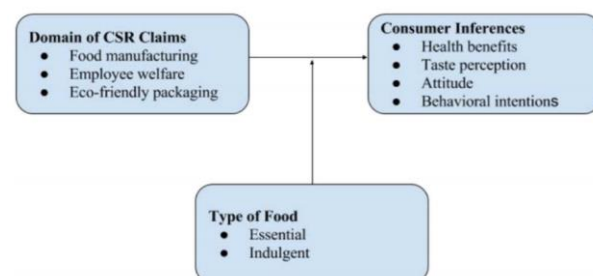

Figure 1. Corporate Social Responsibility Inferences. (Adapted from Wei, Kim, Miao, Behnke, & Almanza, 2018, p.186-201).

Corporate Social Responsibility to the Community

Even though CSR is voluntary and not a

legal requirement it is essential for its strategies to be credible to show the organisation's genuine commitment for it to be accepted by the community (Alhouti, Johnson, & Holloway, 2016). The article by Alhouti et al. (2016) cites an example by McDonalds in the USA where the company was being criticized by activist groups for not showing adequate support for the Ronald McDonald House charity which it owns and ExxonMobil which seemed to honour its CSR principles by contributing money to support environmental conservation whilst on the other hand it allocated more funds to initiatives that worked against climate change. These two examples imply that the negative feedback resulted from the companies not fully committing to CSR, and according to Forte (2013) an organisation needs to show that it is committed to CSR to be accepted in a community and to attain an honourable reputation as this is important for the success of the organisation.

Commitment to CSR may encourage positive association between the organisation and the community and this may encourage the community to participate in health and safety initiatives that will assist their community and put less pressure on the organisation (Montero et al., 2009). This indicates that CSR may improve community relationships which may increase the success of the company and add to a good reputation. CSR may support compliance to health and safety legislation as any organisation that intends to maintain its social value will ensure that it is legitimate through complying with the society laws (Montero et al., 2009).

ISO 26000 was developed to provide guidance to organisations on how to successfully create strategies that will assist in managing CSR but this guidance is not mandatory and only provides advice, but it also states that CSR objectives include preventing hazards and providing protection which are essential for health and safety management and compliance with health and safety regulations (ISO, 2010). Considering the benefits that a community may attain from an organisation's CSR activities and the fact that companies are more motivated to follow advice when it is associated with the law, it may seem more reasonable to make CSR a legal requirement than leaving it to the discretion of organisations whose main purpose is to gain a profit (Granerud, 2011).

In Australia CSR initiatives may be related to human rights and are associated with discouraging discrimination and bullying at workplaces, balancing work and family life including strategies that specifically benefit the indigenous people (Australian Human Rights Commission, 2008). CSR initiatives in the food industry include creating awareness in the society of the importance of making appropriate food choices and living a healthy active lifestyles and they may also include working on health promoting programs with other stakeholders such as governments and nongovernmental organizations in promoting population health (Tempels, Verweij, & Blok, 2017).

Environmental CSR initiatives include processes that promote 'conserving energy, reducing emissions, using recycled materials, reducing packaging materials and sourcing materials from vendors located geographically close to manufacturing facilities' (Sprinkle & Maines, 2010, p. 446). These initiatives improve an organisation's process efficiency, provides high quality products to the customers and enhances the credibility of the organisation to the society, contributing to an improved business performance (Richards & Phillipson, 2017).

The United Nations sustainable development goals were developed to address crucial issues in the world that comprise of economic and gender inequality, rational use of resources, climate change, health and wellbeing including peace and justice among other objectives which are relevant to CSR (United Nations Development Programme, 2018). A research study by the Australian Centre for Corporate Social Responsibility (2017) on CSR practices in Australian and New Zealand business organisations indicates that CSR awareness in Australia has increased in recent years with more companies adopting the United Nations' sustainable development goals to create CSR initiatives and reported priorities included increasing engagement with stakeholders, controlling the impact of technology and complying to regulations whilst the benefits included increased reputation, increased brand value and improved stakeholder relationships among other benefits. About 20 Australian

organisations and businesses had been reported to have adopted the United Nations Global Impact that outlines a code of conduct advising organisations on how to manage human rights, respect workplace rights, improve environmental responsibility and deter corruption and these principles may be used to improve CSR strategies (Parliament of Australia, 2010).

Corporate Social Responsibility in Australia

There are various initiatives that companies in Australia use to commit to CSR which may include an approach where the company is depicted as environmentally friendly, community programs that engage families and working with reputable organisations to improve brand image (Richards, Thomas, Randle, & Pettigrew, 2015). A program funded by Nestle in Australia called the 'Mother and Daughter Program' is a health promotion program that trains Indigenous girls and mothers on the importance of a healthy diet and an active lifestyle (Richards et al., 2015). This is a CSR initiative as it is relevant to public health. Such programs influence customers' perceptions as they may consider that the company is concerned about their welfare, but the organisation may be promoting its product and pursuing loyalty to their product as this will increase their revenue.

Conclusions

CSR is important in managing the health and safety of employees and for society, but it seems to mainly benefit the community and employees in the short term more than the organisation providing the service. The benefits for the organisation may take some time to be realised. For example, it may take a long period and considerable effort to gain a good reputation especially if perceptions were already negative. As a result, other organisations may choose to only follow legal responsibilities, rather than adopt CSR that requires commitment beyond legal conformity and requires investing money into a venture that may take a long time to yield results. When investors put a value on the time it takes to make a profit this may be daunting. On the other hand, with advances in ethics and society expectations of socially responsible companies it may be imperative to adopt some CSR initiatives to keep a company

viable in a world that has fast become a global village.

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Organisational and Safety Culture.

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Abstract

Research Aim

To present an understanding of the meaning of the terms organisational culture in contrast to the term safety culture and to identify the potential force or forces driving these two features of an organisation.

Results

A substantial volume of literature was found to cover research into the concept of culture. A common theme emerged around the constituent elements of culture that included values, beliefs, norms, ideals and customs, to name but a few. However, there would appear to be a general lack of consensus amongst authors, about definitions for the terms of culture, organisational culture and safety culture. What authors do appear to agree on, though, is that senior management plays a pivotal role in the establishment and development of both organisational and safety culture.

Conclusions

A vast amount of research into organisational and safety culture has uncovered what their constituent elements are but has been unsuccessful in defining these concepts in a way, that is mutually acceptable and satisfactory amongst all authors. There is not the need for yet more research into finding out what these concepts comprise or what their ultimate definitions are but for the focus to shift to finding out what the driving force or forces behind them are. It is evident that a perceived lack of engagement in and commitment to safety matters from senior management will impact negatively on employee engagement and commitment and give rise to a poor safety culture, which will translate into poor safety performance. The driving force behind the level of senior management engagement in and commitment to safety matters may very well be related to their understanding of and approach to risk. This notion is believed to be deserving of closer scrutiny and offers an opportunity for research.

Key words

Culture. Shared values. Management commitment. Entrepreneurial orientation. Safety performance.

Introduction

The concept of culture, from a perspective of cultural geography, is an active, complex establishment of anthropological structures, cultivated by people in groups of varying sizes, inhabiting specific geographical areas. Each of these structures is a compilation of cultural features, like social conventions, religious dogmas, value systems and principles (Ortega-Parra & Ángel Sastre-Castillo, 2013; Spencer, 1978). By the same token, the safety culture of an organisation comprises elements like the principles, mind-sets and behaviours of its members towards safety – simply, the way they do safety-related things (Henriqson, Schuler, van Winsen, & Dekker, 2014). A review of the literature in this field, however, has revealed that it might not be all that simple and that, despite much research and much debate since the 1950s, many authors still have many different views of the concept.

Research Aim

The aim of this research was to conduct a review of the literature published on the concepts of organisational culture and safety culture, to present an understanding of the contrast in meaning of these terms and to identify the potential force or forces driving these two features of an organisation.

Methodology

To achieve the aims and objectives of this research project, a review of the published literature in the field was considered to be the most appropriate study design, as it would afford an in-depth overview of the body of knowledge regarding organisational culture and safety culture. To establish a baseline for this literature review, Google Scholar was searched with the phrase "human culture", producing 4,890,000 results. Given that the reference to human culture would be merely of an introductory nature, only six of these articles were

selected for review, based on relevancy deduced from titles of articles.

For the rest of the research, it was decided to consider only literature reviews and scholarly journals, assuming that this would ensure the following:
* Optimum retrieval of relevant publications.
* Sufficient commonality of topics.
* Reduction of the number of publications retrieved to reasonable numbers, closing the gap between the numbers of articles retrieved and the number finally selected, making the final selections more representative.

In addition, it was decided not to limit any of the database searches to a specified date range, to ensure that all available articles would be retrieved. Also, in all cases, the final requirement for citation in this report was the degree of relevancy to the research topic, which was concluded by reading article abstracts. Other inclusion criteria are described in the paragraphs below.

The ProQuest database was searched for the phrase "organisational culture AND organisational climate" and it produced 319,723 results, amongst which 217,840 were dissertations and theses, 66,238 were scholarly journals and 17,875 were reports. Search criteria full text and peer-reviewed were then selected, reducing the number of search results to 52,925, amongst which were 51,698 scholarly journals and 14 reports. Additional search criteria English language and literature reviews and scholarly journals were then selected, producing 167 search results. A total of 34 articles from this search were referenced.

The Science Direct database was also searched for the phrase "organisational culture AND organisational climate" and it produced 45,319 results, amongst which 28,087 were research articles and 3,015 were review articles. It was decided to consider only review articles and the publication type was limited to only research in organizational behaviour, reducing the number of search results to 41. A total of 14 articles from this search were referenced.

Other sources searched for relevant and cross-referenced articles include Curtin Library (two books) Taylor and Francis Online (one article), JSTOR (nine articles) and Google Scholar (two articles). The criteria applied in these instances were also peer-reviewed, review articles and English language, without application of any date range.

A total of 62 publications are referenced in this article, comprising of 57 journal articles, two reports, two books and one international standard.

Results Discussion
Human culture

It was considered important to gain some understanding of what culture meant in a human or anthropological sense, before considering it in the contexts of organisational culture and safety culture. A very brief overview of available literature was deemed sufficient for this purpose.

Kroeber and Kluckhohn (1952), in a critical review of literature on culture, identified a total of 164 definitions of the concept. Their conclusion of the review was that, although cultures were distinct, they were also similar and therefore open to comparison. On the other hand, two or more cultures could be similar in content and patterns, yet there could be dissimilarities in beliefs and values. Another dimension of this ambiguity is demonstrated by Hofstede, Hofstede, and Minkov (2010), in their perspective that, in every human being, there is an assemblage of patterns of reasoning, emotions and behaviour. The majority of these are learnt during early childhood but learning continues throughout his or her lifetime. These patterns are called mental programmes, which are sourced from the social realm in which a person grows up and experiences life. The arrays of mental programmes are as diverse as the social environments in which they are developed. These differences can and clearly do give rise to confrontations between individuals, groups and nations, while simultaneously exposing them to common problems, requiring cooperation to find solutions.

According to Barger (2007), the word *culture* is defined in different ways by various authors, revealing diverse expressions and viewpoints, yet they are unified by shared themes. These themes suggest an assemblage of principles, patterns and behaviours, which are founded and transferred. It would appear that, over time, all the definitions of culture are connected by expressions and impressions like believing, thinking, feeling, perceiving, acting and mutually reacting. Vom Brocke and Sinnl (2011) echoed this view and suggested that culture is an expansive and hazy notion, with a large number of definitions having been identified, yet many having the same themes. They delineated the extent of culture by making distinction between two main constituents, being the expression of culture and the bounds of the reference group. The former is explained by quoting the view of Schein (2004), that there are three observable degrees of visibility of cultural phenomena. These range from tangible, audible and visible expressions (artefacts), to ideals, tenets and norms (espoused beliefs and values) demonstrating a culture, to the deep-seated, intuitive and basic conventions (underlying assumptions) of culture – the essence of it. The scope of the reference group can include national, corporate and workgroup cultures (Baba, Falkenburg, & Hill, 1996). In all of these groups, values are expressed in observable artefacts, which can be viewed as either ungainly or useful. Figure 1 gives a graphic representation of the levels or degrees of visibility, as explained by Schein (2004).
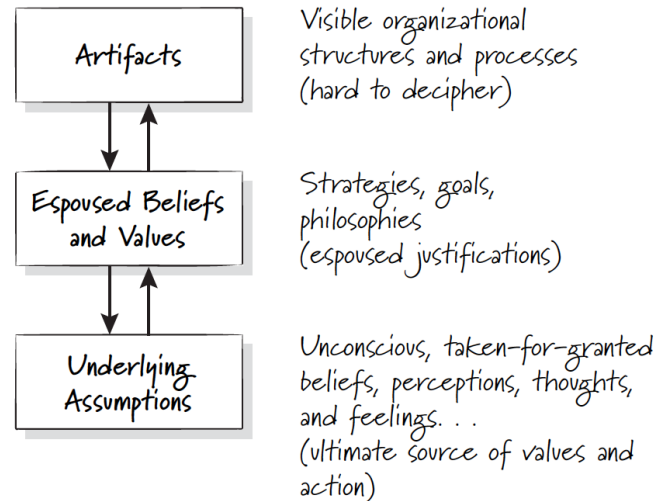

Figure 1: Levels of culture (Schein, 2004, p. 26).

Sathe (1983) suggests that there is not a single, universally accepted definition for culture and refers to the array of 164 definitions found by Kroeber and Kluckhohn (1952). He attributes this perplexity to the fact that people have diverse perspectives of reality when culture is the topic of discussion and each perspective is valuable, depending on what the aspect of interest is. The non-existence of a single, true, sacrosanct meaning for the concept, renders arguments about which perspective is correct, useless. Two broad schools of thought are identified. (1) the *cultural adaptationists*, who focus on observable characteristics of a group of people – their behavioural patterns, vernacular and use of physical items, and (2) the *ideationalists*, who focus on the mind-sets, which a group of people shares (Sathe, 1983).

It would appear from the literature referred to above that culture, in the anthropological or social context of the term, can be and has been defined in a variety of ways but there are generally common themes across all of these, connecting them in some way or another. Fundamentally, every culture includes, amongst others, the beliefs, values, rituals, principles and behaviours shared by the people forming part of it and these elements are learnt from early childhood and developed into adulthood. Even though cultural differences can cause conflict between individuals or groups of people, they also create shared problems,

which may require the same individuals or groups to cooperate, to find resolution to the commonly experienced problem.

Organisational culture

In a critical review of literature on organisational culture, Lewis (1996a) found that four topics have dominated research around the complexion of organisational culture. The first revolves around whether culture is straightforward, perceptible behaviour or fundamental, common assumptions. Quoting Sathe (1983); Schein (2004), Lewis (1996b) suggests that culture appears to be defined as a mixture of a modes and meanings by the majority of authors. The second topic revolves around whether culture is an adjustable or core representation of an organisation (Smircich, 1983). Authors focusing on resolution to this issue appear to view culture as a variable, exposed to both internal and external influences, which the organisation could purposefully manage from within. The third topic is about the influence of culture on an organisation. Authors who argue in favour of culture having an influence on organisational effectiveness would rather see culture as an adjustable factor. Most of these authors also claim that the culture of an organisation is implied by replicated behaviour amongst groups of employees (Sathe, 1983). The fourth topic focuses on the mode of creation and transmission of culture. Specifically, on whether behaviour gives rise to mutual feelings, or vice versa. The majority of authors deem mutual feelings to be the product of principles of behaviour, initially. However, these principles need to be fortified through challenges to change mind-sets, to ensure that people will maintain the preferred behaviour, even in the absence of external validation thereof (Sathe, 1983).

Ortega-Parra and Ángel Sastre-Castillo (2013) confirm that, as in the case of human culture, there are numerous definitions of corporate culture. They continue to deduce that this culture originates from the philosophy of the organisational founders. It then develops and grows with passing time, through a combination of experiences, social developments and changes in managerial principles and standards, right up to and including the present day. Their view is that the real issue with culture does not revolve around how it is defined but rather, around how its utility is inferred. They found two seemingly contrasting approaches. Quoting Smircich (1983), they infer the purists to assume that culture is a process, which develops from a set of deep-seated principles and views, and quoting Schwartz and Davis (1981), they deduce the pragmatists to believe that culture is an instrument, which can be used to inspire dedication to fulfilment of organisational targets.

In a synthetic review of the impact of OCTAPACE culture on employee job satisfaction, Mathur and Kumar (2016) suggest that organisational culture constitutes the shared behaviour of the people, who work in an organisation and the significance of their conduct. It affects their interactions with one another, both as individuals and in various groupings, as well as with clients and stakeholders of the organisation. It includes elements like beliefs, values, ethics, principles and attitudes, amongst others. The OCTAPACE instrument consists of 40 items, which reveal the character of an organisation in terms of eight values: Openness, Confrontation, Trust, Authenticity, Proaction, Autonomy, Collaboration and Experimentation. Organisational cultures adopting these values would be more successful in attaining high levels of employee engagement, teamwork, job fulfilment, freely flowing communication and organisational growth.

Studying the psychometric characteristics of value-based culture elements, used to measure performance in terms of the value-based total performance excellence model (VBTPEM), Ab Hamid et al. (2013) identified six core values. They consider the adoption of these values as being of critical importance, if achievement of organisational excellence were the desired outcome:

Table 1: Core values of culture and value-based indicators [modified after Ab Hamid et al. (2013, p. 502)].

Core	Value-based Indicators
Citizenship	The extent to which staff would contribute their ideas, time and efforts voluntarily and exhibit loyalty, engagement and cohesion at all levels in the organisation
Consultation	The extent to which others are consulted for their views and important issues are discussed, in reaching consensus and making important decisions
Caring	The extent to which a culture of caring and clear policies on staff welfare and development exist in the organisation
Trust	The extent to which mutual trust exists between staff members in executing tasks and taking responsibility
Respect	The extent to which ideas of staff members are respected, irrespective of rank or position and to which mutual respect exists between staff at all levels of the organisation
Quality	The extent to which staff understand and internalise a quality culture and support quality programmes and continuous improvement in the organisation

Guiso, Sapienza, and Zingales (2006, p.2) defined culture as "those customary beliefs and values that ethnic, religious and social groups transmit fairly unchanged from generation to generation." They argue that their definition may not be comprehensive, but it highlights the aspects of culture, which might influence economic aftermaths. It also limits the possible avenues of influence to only two aspects, namely beliefs and values, allowing for a methodology to determine a causative result between culture and economic consequences. They proposed a three-step methodology: (1) demonstrate how culture influences beliefs and preferences directly, (2) demonstrate the direct influence of economic consequences and (3) separate the cultural aspect of beliefs and preferences by using their cultural bases as instruments. By tracking the influence of culture through the economic conduits, which it is presumed to impact, this approach will minimise the risk of false correspondences. Somewhat contrary to this view, Martinez, Beaulieu, Gibbons, Pronovost, and Wang (2015) viewed organisational culture as being a product of economic activity to some extent, rather than a causal factor of it. This raised a curiosity about how management could influence organisational culture and how the latter, in turn, could influence performance? They found, firstly, an increasing amount of literature on the impact of wide-ranging, sluggish aspects of culture on economic activities of similar dimensions, like trends in international trade or attributes of political and legal establishments (Tabellini, 2010). Secondly, with regards to intra-organisational economic activity, they found a large volume of research on the potential infiltration of an organisation by an antecedent, external culture (Bloom, Sadun, & Van Reenen, 2012). According to Tabellini (2010), economic development would appear to be supported by two qualities of culture: firstly, there is social wealth, portrayed by the variables of trust (in others) and respect (having high regard for the value of children exhibiting tolerance and respect towards others). Secondly, there is assurance in the individual, portrayed by the variables of control (feeling in control of oneself) and obedience (placing high regard on obedience of own children). These qualities of culture can affect economic growth either directly, or indirectly, by virtue of the way in which institutions of the day operate.

Operational excellence would appear to be closely related to the reputation of an organisation, specifically the reputation of senior management, in the view of the employees. Hall (1993) points out that this reputation takes many years to accomplish,

through consistent exhibition of exceptional proficiency. This resource is fragile, it requires time to create, it cannot be purchased, and it is easily spoilt. In a study of the contribution of an intangible resource, like reputation, to organisational performance of small and medium enterprises (SME) in Spain, López and Iglesias (2010) found, amongst others, that the reputation of an enterprise comprises a few important components. Amongst these are historical performance, product or service quality, feedback from the financial and social milieu in which business is conducted and organisational culture. The latter in particular, is constituted by the evidence of a participative style of management, emphasis on stringent quality management and strategic approach. Authors supporting the argument for a clear connection between the reputation and culture of organisations include Weigelt and Camerer (1988) and Cremer (1986). They both underline the importance for senior management to uphold a reputation of harnessing and directing organisational culture successfully. Only then will they earn the trust of employees and consequently be able to nurture efficient performance. Hall (1993) also suggests that managers desiring to optimise production and obtain commitment from their employees, need to consistently work on their reputation for being unbiased and fair in their application of cultural rules.

The managers and employees of an enterprise jointly own the responsibility of upholding the value systems and beliefs, which they share and agree upon. The strength and unity of the organisational culture are directly proportional to the level of commitment to this agreement, which lends it the capacity to influence performance (Arogyaswamy & Byles, 1987). It was also found by Hall (1993) that one of the key duties of senior management is to ensure that every employee is influenced, prepared and positioned to be an advocate as well as a curator of the reputation of his employer. Hofstede, Neuijen, Ohayv, and Sanders (1990), in a study of organisational cultures in 20 departments, across 10 organisations in Denmark and the Netherlands, concluded that organisational cultures are indisputably sculpted by the tenets of the founders and leaders but these cultures influence employees by means of common practices. In other words, the tenets of senior management become the practices of their subordinates.

It would appear that some authors refer to organisational culture as entrepreneurial culture or entrepreneurial orientation. For instance, in a study aimed at understanding the operational resources required for new service development (NSD) in the services sector, Storey and Hughes (2013) found that the organisational culture required for directing the creation of new services is different from that required to promote greater success. NSD requires an externally-focused entrepreneurial culture, which aims to create value by exploring opportunities existing outside the organisational boundaries. This is a progressive and aggressive culture, which focuses on adapting to changing market conditions and accepting risks. Achieving an increased success rate, on the other hand, requires an internally-focused learning culture, which aims to generate value from entrenched and proven organisational activities. The cause-and-effect relationships stemming from these activities are known and this represents a competitive advantage, which is maintained over the longer term through continuous improvement. Understanding of previous and present projects is used to enhance NSD programmes, which prevents repetition of errors and improves the success rate of new services. Another perspective of entrepreneurial culture or orientation is offered by Lumpkin and Dess (1996), who propose that an entrepreneurial orientation (EO) is typified by five fundamental features: a tendency to perform independently, a preparedness to modernise and accept risks, a propensity to behave aggressively towards rivals and proactive utilisation of opportunities presenting in the market. Lumpkin and Dess (2001) also claim that aggressive behaviour towards rivals and being proactive are marked features of EO and represent two separate modes in which organisations perceive and act upon the commercial environment. Proactiveness is a

measure of how an organisation responds to opportunities in the market. An organisation with a high propensity for proactiveness can foresee changes in market preferences and be quick to respond to them. Aggressive behaviour towards rivals, on the other hand, is a measure of how an organisation responds to threats posed by its competitors. A firm aggressive stance towards competition gives the organisation the edge to be a decisive participant in the field and to protect or expand its position.

Tajeddini and Mueller (2012) applied this framework to the watch-making industry in Switzerland to determine the level of engagement in EO and found a mixture of results. By virtue of the reserved nature of Swiss culture and traditions, the organisational values of executives inhibit proactive behaviour, are risk-averse and avoid aggressive competition. From a positive perspective, though, these executives embrace values supporting self-sufficiency and originality, suggesting the resurrection of an industry, which has matured.

As in the case of human culture, it is apparent from the literature reviewed on organisational culture, that there is no clear definition of this concept, either. What is clear, though, is that similar constituent elements emerge, like values, beliefs, principles, behaviours and attitudes. It is interesting that some authors seem to take a more contemporary approach to clarifying organisational culture and view it in an entrepreneurial context, which introduces different terminology. Fundamentally, however, it still describes some of the elements constituting the culture of an organisation.

Organisational Climate

According to Chatman and O'Reilly (2016), organisational research into culture commenced in the 20th century, during the late seventies and early eighties. However, psychologists with an industrial-organisational focus were already concentrating on the idea of organisational climate. The latter is classically defined as "shared perceptions of and the meaning attached to the policies, practices and procedures employees experience and the behaviours they observe getting rewarded, and that are supported and expected" (Schneider, Ehrhart, & Macey, 2013, p. 362). The appraisal of organisational climate focuses on how employees perceive elements of their work circumstances, like the ability to make decisions, support from management and composition of their workgroup. A *strong* climate is characterised by general accord amongst group members (Chatman & O'Reilly, 2016).

Research into organisational climate has generally had a separate focus on climate at the organisational level and climate at the workgroup level. Zohar and Luria (2005) conducted a multi-level test, spread across both organisational and workgroup levels. They found indications of global alignment between these two levels, with organisational climate forecasting workgroup climate, which, in turn, forecasts role behaviour. Also, where procedural consistency produced a strong organisational climate, it predicted a strong workgroup climate, seemingly through producing a position of strength for supervisors, with regards to workplace priorities.

Schwartz and Davis (1981) make mention of the fact that many corporate organisations conduct climate surveys to *take the temperature* within the organisation, however, climate and culture are not the same thing. Climate measures whether the experience of working for an organisation actually is what people expected it to be. It can highlight the origins of low morale, like lack of clarity in respect of organisational goals, unhappiness about remuneration, lack of career prospects and unfair promotional practices. Any effort made to address these dissatisfactions improves morale and motivates people to improve their performance. Conversely, culture is a framework of the mutual principles and expectations of the members of an organisation. Whereas climate measures the extent to which expectations are being met, culture focuses on the very nature of these expectations. In fact,

climate actually measures the match between personal values of each employee and the prevalent culture. When employees accept and adopt the prevalent culture, a "good" climate results but when they do not, the outcome is a "poor" climate and the effect on motivation and performance is negative.

A strong organisational climate is likely to be one in which employees, in their workgroups, identify very strongly with the values of their organisation. This will inevitably motivate them and solicit their loyalty to their employer. Blader, Patil, and Packer (2017) presented a framework of the consequences, which such identification of employees with their organisations bring about in their work behaviour. They draw attention to two discrete inclinations in motivation, fundamental to organisational identification: affiliative motivational orientation incites identification and conformance and consistently gives rise to orthodox work behaviour. On the other hand, organisational-welfare motivational orientation urges employees to pursue organisational goals, rather than their own and may produce aberrant work behaviour, which disrupts the status quo to progress organisational well-being. Roberts (2006) pointed out that studies by several other authors have confirmed that personalities contribute to the sculpting of experiences people have with organisations during their lifetimes. Similarly, several studies have confirmed that experiences in organisations apparently have the capacity to incite personality changes over time. It is impossible, though, to determine the precise direction of the cause-and-effect relationship between personality and organisation. The only conclusion is that personality changes are related to work experiences, resulting in two possible understandings: firstly, people may want to have different experiences or accomplish more at work, as a result of changes in their personalities. Secondly, changes in personalities may actually be triggered by life experiences. The systematic trend emerging from the person-organisation relationship is therefore that the personal characteristics, which attracted people to particular work experiences, are the same

personal characteristics, which those work experiences caused to change.

In a review of research and theories regarding organisational climate, James and Jones (1974) considered three methodologies applied by researchers to hypothesise about and quantify the concept: (1) the multiple measurement-organisational attribute approach, (2) the perceptual measurement-organisational attribute approach and (3) the perceptual measurement-individual attribute approach. Their view was that researchers were more involved with measuring the concept of organisational climate, than actually understanding it. Measurement should really only become a concern of significance once the limitations have been outlined clearly. They recommended that climate should firstly be considered as an organisational attribute, as opposed to an individual one. The term organisational climate would then include the first two approaches. Secondly, given the emphasis placed on the intervention of psychological processes, the term "psychological climate" should pertain to the perceptual measurement-individual attribute approach. The benefit of discerning between organisational and psychological climates is that it offers additional clarity for defining and measuring climate.

According to Haslam, Postmes, and Ellemers (2003), when a specific organisational identity, as defined by a specific set of values and principles, becomes significant to a specific group of people, it will influence the mind-set of those people and convert this mind-set into shared outcomes, like plans, ideals, products and services. This increases the likelihood of individuals in a group developing mutual understandings and producing mutual outcomes, which surpass the expectancies regarding the potential of individual members of the group. A shared organisational identity, or the lack thereof, means the difference between a team of champions and a champion team.

It is apparent from the articles reviewed that the perceptions and experiences people have, whether as individuals or in

workgroups, of working in an organisation, will have a very strong influence on their outputs and ultimately, on organisational productivity and efficiency. If these perceptions and experiences are positive and mutual, a strong and robust organisational climate will prevail but if the converse is the case, the organisational climate may be insipid and fragile.

Safety culture

The term *safety culture* was first introduced by the International Nuclear Safety Advisory Group (INSAG), in a summary report of the accident review, which took place after the Chernobyl nuclear disaster on 26th April 1986. INSAG viewed the core of safety culture as the methods by which both individuals and organisations closely scrutinize safety and defined it as "that assembly of characteristics and attitudes in organizations and individuals which establishes that, as an overriding priority, nuclear plant safety issues receive the attention warranted by their significance". In addition to the definition, two broad components of safety culture were identified: First, the responsibility of the management hierarchy to provide a framework within which effective safety management can occur and second, the mind-set of employees at all levels of the organisation towards the framework and the potential benefits offered by it (INSAG, 1991, pp. 4-5).

The association between corporate safety culture and safety performance was examined by Wadsworth and Smith (2009). One of their findings was that corporate safety culture, although related to it, was independent from safety performance. Mearns and Flin (1999) argued that "safety culture" and "safety climate" are used interchangeably but even though they are related concepts, they are very different and should be treated accordingly. The former is a reflection of underlying elements of organisational culture, intrinsic to the societal culture in which it operates, e.g. principles, values, traditions and beliefs. The latter expresses the beliefs, behaviours and perceptions of the members of the organisation, relating to safety (Denison, 1996). Organisational culture involves tacit

and reasonably modest habits, attitudes, principles, norms and beliefs, which can distinguish any specific organisation or any particular part of it (Waring, 2015, p. 257). Guldenmund (2010) in (Swuste, Frijters, & Guldenmund, 2012) considered safety culture and safety climate to be manifestations of an organisational culture, revolving around safety matters. Organisational culture and organisational climate are, however, individual versions of a single phenomenon, as opposed to individual organisational phenomena. Culture concentrates on organisational past and perspective, while climate concentrates on organisational present and its effect on the workforce.

According to Harrison (1972) in Clarke (1999), the philosophies and principles, specifically relevant to health and safety affairs, constitute a subcategory of organisational culture referred to as *safety culture*. Schein (1992) is also quoted in Clarke (1999) as suggesting that the safety behaviour in an organisation will be determined by perceptions of the mind-set and conduct of senior management towards employee safety and welfare. Adopting the safety culture approach to minimising accidents therefore underlines the influence of social dynamics on organisations as a whole but also on the work health and safety awareness, observations and conduct of employees individually.

Safety culture therefore needs to be defined in such a way, that both management and employees can articulate precisely what the meaning of the safety culture is and what the required actions are, to trigger and develop this safety culture. Safety and productivity cannot be regarded as mutually exclusive, though. Rather, development of a safety culture through accentuating employee protection, impacts business development positively. The safety culture cannot be developed by simply allocating monetary resources to workplace safety, however. A safety culture is not something that can be bought with money. Allocation of funding must coincide with demonstrated support from senior management (Dunlap, 2011).

Cox and Flin (1998) considered some of the important issues relating to the concept of safety culture, its character, quantification and functionality. They referred to the definition suggested by the Human Factors Working Group of the Advisory Committee on Safety in Nuclear Installations (ACSNI) as one of the most popular versions of a definition of safety culture: "The safety culture of an organisation is the product of individual and group values, attitudes, perceptions, competencies, and patterns of behaviour that determine the commitment to, and the style and proficiency of, an organisation's health and safety management" (Health & Safety Executive (HSE), 2005, p. 3). They found, however, that in the literature, there was no accord in defining it and despite distinctive differences in their origins, the terms safety culture and safety climate are often substituted by authors.

Hopkins (2006) points out that the concept of safety culture has been written about extensively, yet there is still no consensus about the precise meaning of it. A vital equivocality, which needs to be taken cognisance of, is that some authors view every organisation as having a safety culture with some degree of strength or weakness. At the same time, other authors argue that a safety culture can only be found in organisations with a predominating dedication to safety. Under the latter premise, very few organisations will qualify. The perplexity regarding the concept of safety culture is underlined by the mere fact that this paradox has not yet been settled. A slightly different view is taken by Edwards, Davey, and Armstrong (2015), who found that the approach more commonly adopted, is a prescriptive one, seeking a strong safety culture, quantifiable by observations of the traits, principles and manners exhibited by management. Safety performance could be improved by a strong safety culture, if these measurements were adjusted by means of increased endeavours by management, like enhancing safety through more advanced training. The other approach is an anthropological one, which views culture as mutual values, beliefs and attitudes and it is commonly found in

definitions of safety culture. However not much research, actually applying this approach to study safety culture, has been published.

Morrow, Kenneth Koves, and Barnes (2014), in a study of the relationship between safety culture and safety performance at nuclear power stations in the United States, found evidence of a positive correlation between safety culture and contemporaneous safety performance, however, even when studying a single industry in a single country, results depend largely on the method and timing of measurements of both these elements. This is coupled with the fact that there are no recognised tolerances within which a strong or weak safety culture can be represented, despite considerable argumentation by many authors over the course of many years. Further to this finding, Parker, Lawrie, and Hudson (2006), in formulating a framework to develop an organisational safety culture, found that a suitable safety culture does not simply materialise in a fully-developed state, in any organisation. Many modern-day organisations are large and of a complex nature, increasing the likelihood that the safety culture in some parts of one organisation may be under-developed in comparison to other parts of the same organisation. A suitable safety culture will therefore require time to develop – more time in some parts than in others. It is therefore important to acknowledge that safety culture will probably be variable within any organisation as a single entity.

Geller (1994) examined how behaviour and personal factors epitomise the social dynamic of workplace safety and proposed ten fundamental principles in support of the personnel practices required for a total safety culture (TSC). If these principles are accepted and adopted by employees, they can assist with activity planning, design and implementation. The principles are the following:
* The culture drives the safety process
* Factors based on person and behaviour regulate the success
* The focus should be on the process, rather than on the results

* Triggers guide and effects stimulate behaviour
* Focus on being successful, rather than on preventing failure
* Safe behaviour follows surveillance and feedback
* Behaviour- and person-based coaching enables useful feedback
* Surveillance and coaching are crucial to the process of actively caring
* Active caring for safety increases through increased sense of self-worth, fitting in and having authorisation
*Transfer safety from being a priority to becoming a value.

According to Westrum (2004), the flow of information is a crucial consideration for organisational safety, as failures in it prevail in several major accidents. It is also a typifier of organisational culture: where information flows freely, responses are swift and suitable but where it is politically stockpiled or bureaucratically blockaded, responses are delayed and therefore not likely to be appropriate. Fundamentally, the culture of a work unit is forged through the leader's response to personal obsessions. The leader communicates his/her view of important matters or preferences via actions, incentives and penalties. These preferences are imprinted on the workforce and those who align, are rewarded, while those who resist are penalised. Three typical patterns of obsession or preoccupation are discerned: Firstly, obsession with personal supremacy, desires and admiration. The second obsession is with regulations, ranks and departmental territories. In the third place, a focus on the objective itself, rather than on persons or positions. These patterns are termed pathological, bureaucratic and generative and the typology is shown in the Table 2.

Table 2: How organisations process information (Westrum, 2004, p. ii23).

Pathological	Bureaucratic	Generative
Power oriented	Rule oriented	Performance oriented
Low cooperation	Modest cooperation	High cooperation
Messengers shot	Messengers neglected	Messengers trained
Responsibilities shirked	Narrow responsibilities	Risks are shared
Bridging discouraged	Bridging tolerated	Bridging encouraged
Failure→ scapegoating	Failure→ justice	Failure→ inquiry
Novelty crushed	Novelty→ problems	Novelty implemented

According to Lentz, Lauver, and Johs-Artisensi (2010), the focus of safety culture research has mostly been on safety principles and systems designed and improved for that part of the population, which constitutes employees or workers. The focus of this research in the healthcare industry, however, has been particularly on patient safety, whilst there is an inseparable link to employee safety (Flin & Yule, 2004). A positive safety culture in the healthcare industry seemingly includes a fundamental focus on safety, devolved authority, an environment conducive to learning and dedication from upper management. The presence of these factors should bring about a reduction in accident rates, improved care for patients and regulatory compliance (Cox & Flin, 1998). This premise was demonstrated by Speroff et al. (2010), who studied the alignment between a group (teamwork) organisational culture versus a bureaucratic organisational culture and improved quality in patient care. They found a significant positive relationship between group cultures and aspects like attitude and climate, which support improved patient safety, whilst an equally significant but negative relationship prevailed between bureaucratic cultures and the same elements.

Another perspective of the relationship between culture and patient safety is demonstrated by Edmondson (1996), who explored the impact of factors like stability,

norms and work structure, both on group and organisational levels, on errors made in drug administration to patients in hospital. It was found, rather unexpectedly, that the willingness of unit members to talk about mistakes openly, had a fundamental influence on the rates of error detection. The proposition is made that leadership has an influence on error-handling methodology, giving rise to mutual perceptions of the consequences of making mistakes. These perceptions have an impact on the readiness to report errors and are likely to add to a climate of either apprehensiveness or openness, which will probably persist and influence the capacity to identify and discuss problems.

Stock and McFadden (2017) examined the association between patient safety culture and hospital performance by means of impartial metrics of performance and ancillary records of patient safety culture. They found meaningful relationships between patient safety culture and numerous aspects of hospital performance, like process quality, patient safety and patient approval. The results of their study also clearly indicate that improvements in hospital patient safety culture will result in corresponding improvements in quality, safety and satisfaction of patients. In addition, they found support for the view that aspects of culture, like open communication, teamwork and organisational learning can enhance performance results.

Conclusions
Many authors, over the course of many years, have conducted an extensive body of research into defining organisational and safety culture and identifying their ingredients. Despite all these efforts, unfortunately, there is still an apparent lack of consensus amongst authors about the definitions of these concepts. Rather than conducting more research into finding out what these concepts comprise or what their ultimate definitions should be, the focus needs to shift to identifying the force or forces driving them. By and large, authors did agree on one aspect and that is, that management engagement and commitment in matters relating to safety,

have a critical impact on employee engagement and commitment. Management cannot just throw money at safety, because a safety culture is not an item, which can be acquired through purchasing it. If employees perceive managers to be uninvolved in active promotion of safe working procedures and conditions, they will not support safety initiatives. This will result in an ineffective safety culture and poor safety performance. There is evidence to suggest a link between their understanding of and approach to risk and the level of senior management participation in organisational safety matters. It is believed that this idea deserves closer scrutiny and therefore presents an opportunity for research.

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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."

World Safety Organization Activities

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.

The WSO receives proposals from professional safety groups/societies for review and, if applicable, submits them to the United Nations for adoption.

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.

The WSO organizes and provides professional support for international and national groups of experts on all continents who are available to provide expertise and immediate help in times of emergencies.

Benefits of Membership

The WSO publishes the "WSO Consultants Directory" as a service to its Members and to the Professional Community. Only Certified Members may be listed.

The WSO collects data on the professional skills, expertise, and experience of its Members in the WSO Expertise Bank for a reference when a request is received for professional expertise, skill, or experience.

The WSO provides a network system to its Members whereby professional assistance may be requested by an individual, organization, state, or country or a personal basis. Members needing assistance may write to the WSO with a specific request, and the WSO, through its Membership and other professional resources, will try to link the requester with a person, organization, or other resource which may be of assistance.

The WSO provides all Members with a Membership Certificate for display on their office wall and with a WSO Membership Identification Card. The WSO awards a Certificate of Honorary Membership to the corporations, companies, and other entities paying the WSO Membership and/or WSO Certification fees for their employees.

Members have access to WSO Newsletters and other membership publications of the WSO on the WSO website, and may request hard copies by contacting the WSO World Management Center. Subscription fees apply to certain publications.

Members are entitled to reduced fees at seminars, conferences, and classes given by the WSO. This includes local, regional, and international programs. When Continuing Education Units (CEUs) are applicable, an appropriate certificate is issued.

Members who attend conferences, seminars, and classes receive a Certificate of Attendance from the WSO. For individuals attending courses sponsored by the WSO, a Certificate of Completion is issued upon completion of each course.

Members receive special hotel rates when attending safety programs, conferences, etc., sponsored by the WSO.

Membership

The World Safety Organization has members who are full time professionals, executives, directors, etc., working in the safety and accident prevention fields, including university professors, private consultants, expert witnesses, researchers, safety managers, directors of training, etc. They are employees of multi-national corporations, local industries, private enterprises, governments, and educational institutions. 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.

Membership Categories

Associate Membership: Individuals connected with safety and accident prevention in their work or individuals interested in the safety field, including students, interested citizens, etc. **Affiliate Membership**: Safety, hazard, risk, loss, and accident prevention practitioners working as full time practitioners in the safety field. Only Affiliate Members are eligible for the WSO Certification and Registration Programs. **Institutional Membership**: Organizations, corporations, agencies, and other entities directly or indirectly involved in safety activities and other related fields. **Sustaining/Corporate Member**: Individuals, companies, corporations, organizations or other entities and selected groups, interested in the international effort to "*Make Safety A Way Of Life...Worldwide*."
The WSO Membership Application is included on the next page and is also available on the WSO website:
http://worldsafety.org/application-for-wso-membership/ and http://worldsafety.org/quick-downloads/

Membership

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Membership Categories

✓**Associate Member:** Individuals connected with safety and accident prevention in their work or individuals interested in the safety field, including students, interested citizens, etc.

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✓**Institutional Member:** Organizations, corporations, agencies and other entities directly or indirectly involved in safety activities and other related fields.

Annual Membership fee in United States Dollars is as follows:

Application Fee	$20.00	Institutional Membership**	$195.00
Associate Membership	$65.00	Corporate Membership	$1,000.00
Affiliate Membership*	$90.00	Full time University Students.	No cost ($0)

Please circle the membership for which you are applying.

*) For your country's fee rate, please contact the World Management Centre at info@worldsafety.org.

**) For this membership, please indicate name, title, and mailing address of the authorized representative.

By submitting this application, you ore accepting that WSO will use tile information provided to perform on independent

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APPLICATION FOR WORLD SAFETY ORGANIZATION MEMBERSHIP

Please print or type:

Name (last, first, middle): _____

Complete Mailing Address (please indicate if this is a Home or Work address):

_____

Work Telephone Number:_____ Fax Number: _____

Home Telephone Number: _____ Email:_____

If you were referred by someone, please list their name(s), chapter, division, etc.:

WSO Member: _____

WSO Division/Committee:_____

WSO Chapter: _____

    Other:_____

For Affiliate Members Only

Only FULL TIME PRACTITIONERS in the safety/environmental/accident prevention and allied fields are eligible for the WSO Affiliate Membership. Briefly describe your present employment position, or enclose your CV. _____

Please specify your area of professional expertise. This information will be entered into the WSO "Bank of Professional Skills" which serves as a pool of information when a request for a consultant/information/expertise in a specific area of the profession

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World Safety Organization
Code of Ethics

Members of the WSO,
by virtue of their acceptance of membership
into the WSO,
are bound to the following Code of Ethics
regarding their activities
associated with the WSO:

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Members must be responsible for
ethical and professional conduct in relationships
with clients, employers, associates, and the public.

ക•ഏ

Members must be responsible for professional competence
in performance of all their professional activities.

ക•ഏ

Members must be responsible
for the protection of professional interest,
reputation, and good name of any deserving WSO member
or member of other professional organization
involved in safety or associate disciplines.

ക•ഏ

Members must be dedicated to professional development
of new members in the safety profession
and associated disciplines.

ക•ഏ

Members must be responsible
for their complete sincerity in professional service
to the world.

ക•ഏ

Members must be responsible for continuing improvement
and development of professional competencies
in safety and associated disciplines.

ക•ഏ

Members must be responsible
for their professional efforts to support the WSO motto:

"Making Safety a Way of Life…Worldwide."