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Occupational Safety Management Framework for Healthcare and Social Assistance Service Providers

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<p>This thesis focuses on improving safety management for healthcare and social assistance service providers who deliver healthcare for patients and client in Healthcare and Social centers and homes. The quality of these provided services is dependent heavily on attitudes and well-being of its care workers and staff. Therefore, healthcare and social assistant workers' (HCSA) safety is crucial to the quality of patient care, though it remains a challenge in countries of various levels of development. The purpose of this study is to investigate and improve HCSA workers' safety management and safety culture in Invalidiitto Järvenpää healthcare center and nursing homes.</p> <p>To reach this objective this study, first, finds out the current state of safety and its effects on the ability of Case organization healthcare and social assistants workers to carry out their duties. In parallel, the study searches for best practice from existing best practice and literature. Based on the findings, the study draws out a safety management framework to improve the current state of safety at work and enhance the safety awareness and culture of Järvenpää's HCSA workers and managers.</p> <p>Methods: Safety attitude questionnaire were used for collecting information's. 72 were distributed to healthcare workers and social assistants at work present during the distribution period and collected after three weeks. After completion of data collection, in keeping up with the analytic technique of the originators of the SAQ calculation of safety attitude for each of the safety factors listed.</p> <p>Results: 72 questionnaires were distributed and 72 questionnaires were returned giving it a 100 percent response rate. Data's were analyzed using descriptive statistical percentages and frequencies. Results showed that healthcare is a stressful profession and that the perceived personal safety of its workers constructs strong environmental, social, physical and biological stressor which plays an important role in the constant accident and mishaps that takes place in this area of healthcare.</p> <p>Conclusion: Future research should be directed to the construct of perceived personal safety arising from healthcare and care homes working environment. Also it worth's studying on how stress/burnout and other unsafe practice/hazards could be alleviated or prevented with proper safety process and management.</p>	
Keywords	occupational safety, safety management framework, social assistants

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1 Introduction

This study investigates safety management in Invalidiliitto ry healthcare center and housing units in Järvenpää, Finland in order to provide improvement suggestions.

1.1 Background of the Study

Every government and employer owes it as a duty to provide its employees a healthy work environment and this is also applicable to workers in the healthcare sector (Cooper 2000). Some healthcare and social care workers have been plagued with illness often resulting from occupation dangers and perils, some have physical danger at work, many experience musculoskeletal pains, while some are subject to sickness, psychological disturbance and even abuse etc. (Marciano et al. 2002).

These unsafe conditions in healthcare sector often lead to unpremeditated mistakes, which in turn leads to danger also to residents/clients living in these places, and this have spawned a new debate on client /residents safety campaigned (Meiesaar and Valtonen 2003: 56-67). What is less spoken about is the threat and danger that some factors cause to the worker who works and cares for the clients on a daily basis (Koppel 2005).

Residential nursing homes are often considered to be a less dangerous place to work in the health care sector. But the fact is that, in addition to the danger typical of any other work place, workers in nursing homes are more often exposed to physical threat, ergonomic injuries, psychosocial, chemical and other hazards (EL-Jardali et al. 2005: 40-48) There are an estimated 59 million healthcare workers around the world, about 11% of the world total workforce (Cooper 200: 111-136) and about 17.1 million healthcare workers in the European union, which accounts for 8% of all job in the EU (European agency for labor September 2009). The healthcare and social assistant worker sector accounts for about 60% of workers in the healthcare industries and it is also projected to increase more than any other industrial sector (Cox and Flin 1998: 189-201). About 80% of HCSAW workers are women, a greater percentage than in any other industrial sector, which nearly doubles that figure for all industrial sectors combined (Cooper 2000: 93-106) which ranging from direct care provider to other allied healthcare professionals (Hughes and Lapane 2006: 281-286).

Importantly, almost all countries of the European countries and other parts of the world are facing a serious lack of active healthcare workers (Burnett 1996, Burnett et al. 2003). Furthermore, healthcare workers tend to retire earlier than workers in other sectors of the economy because of work related stress and other occupational health risk and safety factors (Goldschmidt et al. 2000). Without healthy and motivated workers in the HCSAW sector of healthcare, the public health goals of many countries cannot be met (Brickell & Carla; 2011). Therefore, considering this critical shortage of health personnel caused by the low turnover and early retirement in many European countries, the protection and promotion of occupational health and safety of healthcare workers should certainly be a high priority (Ministry of welfare, Riga 2007).

The WHO defines Healthcare workers safety as the reduction of risk and prevention of unnecessary harm associated with or in administering care and services to patients. The World Health Organization reports that Millions of patient globally suffers from injuries, disabilities or even death due to medical errors, trip and fall, and other unsafe positions and practices. The reported also indicates that, an adverse event rate of about 10 percent (WHO; 2009, 21:2-8), which would mean that one in every ten patient seeking or receiving healthcare services, suffers an adverse experience as a result of healthcare workers errors, which may be due to work related stress, burn out, injuries, mental stress, musculoskeletal disorder in the back or joints, etc.

Case Organization

The case organization of this study is Invalidiliitto ry, a healthcare and social assistant provider organization which operates in Finland and was established in 1938. This organization operates as a healthcare/social foundation which cater for patients and persons with physical disabilities, and provides rehabilitation for mentally unstable and drug/alcohol addiction clients. It also provides educational service and support for this range of patients. The case organization employs 94 employees, which comprise nurses 39, physiotherapists and occupational therapist 7, care-givers and social assistants 26 and other non-healthcare professionals 22. These workers provide care for residents living in this center.

The case organization has 7 units. The units are management /administration unit, Educational unit, housing unit, physiotherapy/ physical therapy unit, severely handicapped patients unit, rehabilitation unit and finally cleaning and maintenance unit. This study was conducted in its Järvenpää city housing care units center, and the findings can be

considered to inform safety practice within this organization and other primary healthcare providers sector.

1.2 Objectives, Scope and Structure of This Thesis

The objective of the study is to investigate assess and improve the current safety management practices and culture in the case organization, evaluated from the perspective of their healthcare and social assistant's workers. To reach this objective, the following specific objectives should be addressed:

1. To investigate and assess the attitudes and perceptions of healthcare and social assistants workers as for the current safety management.
2. To explore the factors related to the current workers' safety culture in case organization.
3. To develop a proposed framework for improved safety process and management for the case organization.

The outcome of this study is an improvement proposal that focuses on safety management enhancement in the case organization. This will make an important first step towards improved safety and safety culture in the organization. The scope of the study focuses mainly on safety management issues and excludes job satisfaction.

The findings of this study will be beneficial to healthcare workers, managers, healthcare policy makers and future researchers in terms of understanding and improving worker and patient's safety in healthcare organizations. This research will also help in minimizing the knowledge deficit that may exist with regards to workers safety in case organization.

This thesis is written in 7 sections. Section 2 covers methods and material. Section 3 presents the results of the current state analysis. Section 4 discusses the findings from best practice. Section 5 covers merging of findings from current state analysis and best practice. Section 6 covers Building occupational safety process for case organization. Section 7 covers the conclusion aspect of the study.

2 Method and Material

This section describes the method and material used in this study. It's also discusses the reliability and validity plan to enhance the quality of this research

2.1 Research Approach and Design of This Study

This study utilizes a case study as its research approach. Case study Figure 1 below shows research design of this thesis.

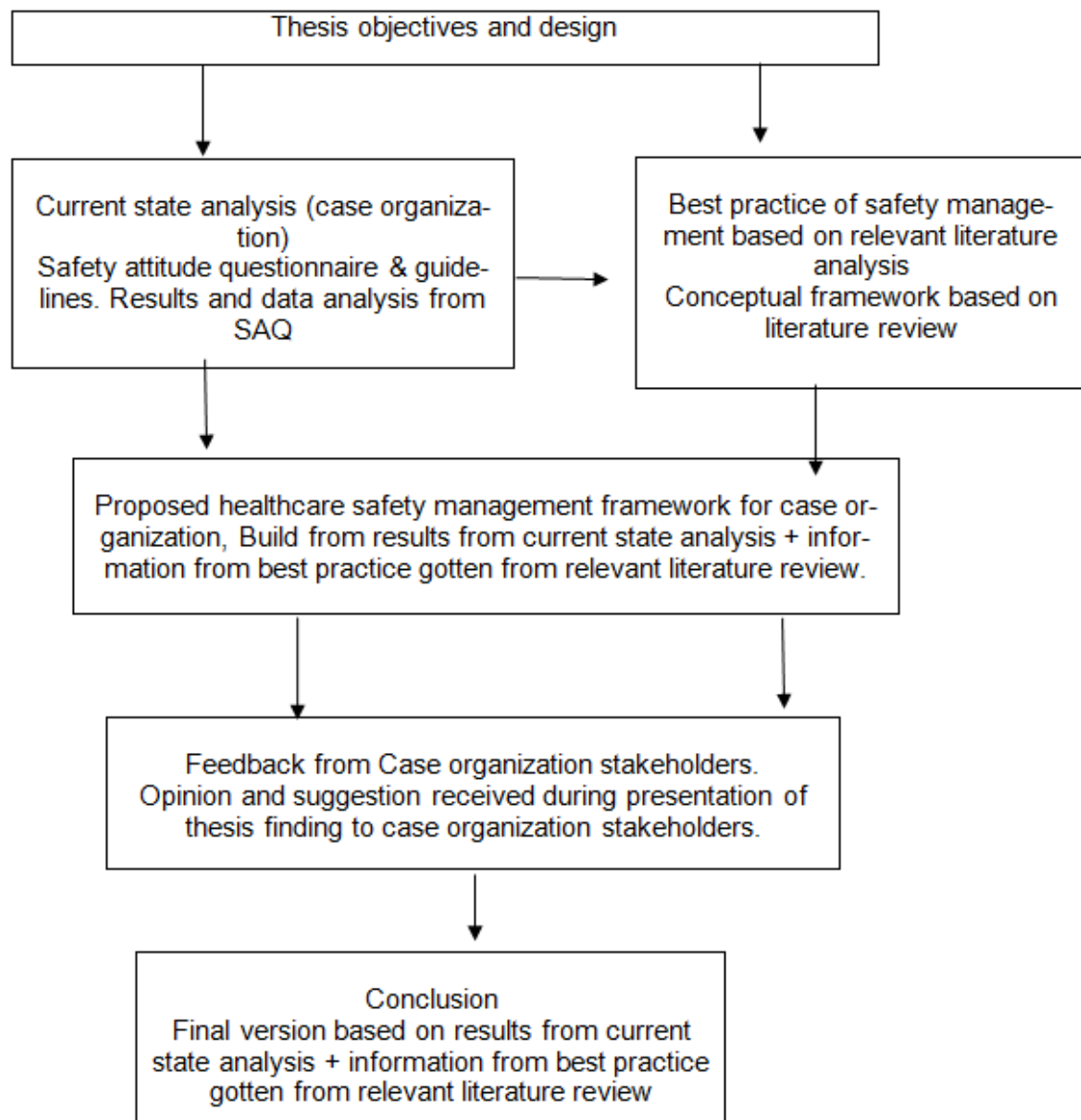


Figure 1. Research design of this thesis

As seen from Figure 1, the research design includes the following steps. The thesis started with step 1. Objectives and design of study. Step 2. a current state analysis of the case organization, this analysis involved the use of safety attitude questionnaires which was developed by agency for health care research and quality (AHRQ). The safety attitude questionnaire were divided and the result were analyzed. Step 3. Best practices of safety management based on literature reviews and analysis were also carried out. Step 4. Based on the safety attitude questionnaire result and also ideas and inputs from the best practice from literature review, a proposed occupational safety management framework suggested and developed. Step 5. Result and proposal was presented to case organization and feedback was also received from case organization which helps in developing the final conceptual framework for this study as the title implies. Step 6. This focuses on a comprehensive conclusion for this study

2.2 Data Collection and Analysis

Data for this study was collected from Safety attitude questionnaires distributed to workers during distribution period of this thesis and also from feedback received from case organization during the presentation of research result stage

Data Source – Safety Attitude Questionnaire (SAQ)

In this study, the Safety Attitude Questionnaire (SAQ) was used which was developed by the agency for health care research and quality (AHRQ). It is a self-administered questionnaire in which each participant was given a printed copy with a cover letter explaining the purpose of the study.

The Safety Attitudes Questionnaire (SAQ) (Sexton et al. 2006) is a 60-item survey tool modified from a questionnaire used in commercial aviation (Flight management attitude questionnaire). In 2005, a study comparing health care safety attitude/ perception/ climate/ safety culture appeared to be the most robust psychometrically (Colla et al. 2005). Later on, SAQ has been successfully used in healthcare centers and clinics for understanding safety culture and attitude (Vogus and Sutcliffe 2005). SAQ elicits attitudes through evaluating such factors as communication and punitive response to error, frequency of event reporting, working conditions, stress recognition, and others.

SAQ is also internationally recognized and certified by the agency for healthcare research and quality (AHRQ).

In this study, the survey consists of 8 sections, each containing 3 to 8 survey questions, on 5 occupational safety dimensions and a safety management section, totaling 49 items. The responses are assessed on 1-5 scale (strongly agree/disagree/disagree) or frequency (never, rarely and most of the time/always). There were also two parts with open-ended questions which ask participants to grade the risks, patient /worker safety, concerns and fears, and job satisfaction. One question asks participants about their position and duration of work in the organization. The demographic variables were also asked including the age, gender, job experience and educational level for purpose of the study.

The study used questionnaire distributed to healthcare and social assistant workers of all categories, and the timing for distribution of questionnaire aimed to ensure the fullest representation of HCSAW presently employed in the case organization. Altogether, SAQ was distributed to 72 participants, out of which 72 participants responded. It made the participation ratio reach 100%. While analyzing the data, all returned questionnaires were examined for missing or incomplete data. There were no significant data either missing or incomplete data, including any of the demographic or multiple choice questions. All the questions on the frequencies on the M-SAQ were completed and 14 questionnaires on the open ended section were left blank out of the returned questionnaires.

Procedure

To ensure a proper representation of healthcare and social assistant's workers, those who consented to take part in the study, were selected from frontline workers to include the widest possible representation, including practical nurses, occupational therapist, social workers and care givers. For the purpose of this study, both trained and untrained healthcare professional were included in this study as 30% of HCSAW are social assistants and caregivers, may not be a trained healthcare personnel.

Permission and written approval was sought from the executive director of the center to administer the questionnaire to all workers present at work during the period of distribution of the questionnaires. The questionnaires was given along with a consent form to

each workers, the consent letter addresses the purpose of the research, direction for completing the questionnaire and also about confidentiality. To ensure confidentiality, the participants were told not to include their names on the questionnaires; this was to increase the likelihood that workers would feel safe reporting their personal perception about safety without any hindrance. Questionnaire was collected by the researcher after two weeks as the earlier consent form made it clear it will be collected after two week during distribution

After completion of data collection, in keeping up with the analytic technique of the originators of the SAQ calculation of safety attitude for each of the seven safety factors (overall safety climate perception, safety management and processes, working conditions, safety culture, frequency of event reporting, stress recognition, communication and punitive response to error). Statistical package for social sciences (SPSS 14.0) was used to analyze survey questionnaire data's converting results from categorical to continuous variables as follows: strongly disagree = 0; disagree = 25; neutral = 50; agree = 75; and strongly agree = 100. SPSS 14.0 computer program where use to determine and measure frequencies and central tendencies, some items were positively, negatively and reversely scored so that a higher score always represented a more positive attitude or each respondent, a mean score of ≥ 75 for the items in a particular factor denoted a "positive safety attitude" for that factor. Internal consistency-reliability was estimated using Cronbach's alpha. Survey data were analyzed using SPSS®, version 14.0. other appropriate statistical tastes were used to summarize and describe items interpretation and psychometric analysis of the modified survey M-SAQ instrument.

Descriptive statistical percentages, averages and frequencies were used to analyze the questionnaire item. The questionnaires items were arrange according to safety attitude, culture and perceptions dimensions each items were intended to measure. For each item, two lowest response categories were combined (Strongly Disagree/Disagree or Never/Rarely) and the two highest response categories were combined (Strongly agree/Agree or Most of the time/Always). The midpoint of the scales was reported as a separate category (Neither or Sometimes).

Calculation and Interpretation of Results

SAQ (Sorra & Nieva, 2004) defined safety culture areas of strength as those questionnaire sections where overall mean positive result response to question in that section was 70%, or more indicating that the respondent answered strongly agree/agree or most of the time/always and, 70% or more indicating strongly disagree/disagree or never for negatively worded question. Therefore, according to this methodology, all individual questions with each sections can be considered areas of strength where the positive result response is 70% or greater. In this study, following this logic of analysis, only the Organizational factors influencing perception of safety meet the SAQ international benchmark for safety for areas of *strength*.

SAQ (Sorra & Nieva, 2004) define safety areas *requiring attention and improvement* as those questions in questionnaire section for the overall survey mean of about 50% or more answered *negatively* .i.e. *strongly disagree/disagree* or *“neither”*, to positively worded questions, or 50% more agreed *strongly agreed/agree* with a negatively worded question.

Therefore, in this study, all factors or individual items with positive response rate between 50%-75% *do not fit* the SAQ criteria for either areas of strength or as those in need of improvement. SAQ recommended that these factors and items be evaluated by the organization individually, with respect to other dimensions or items to decide what actions needed to be taken to enhance it. This logic of analysis is also followed in this study.

The SAQ questionnaires items were placed into dimensions of safety management, perception and culture items identified from the original SAQ survey (Soora & Neiva 2004). An average was calculated for the number of positive responses for each item. In addition, a dimension-level positive response frequency rate was calculated for each dimension. The recommended guidelines for interpreting safety Attitude questionnaire was modified for the purpose of this study. In this study, SAQ was modified to measure safety management culture by assessing healthcare and social assistant staff perceptions in the case organization. The SAQ measured all eight safety variables, with the overall perceptions of safety and frequency of event reporting.

The number of positive responses (strongly agree/agree or most of the time/always) and percent positive response rate were calculated for positively worded items for each section. For reverse worded items, where disagreement indicated a positive response (strongly disagree/disagree or never/rarely), the frequency of positive responses and percent were also calculated. A section-level percent positive response rate was then calculated by adding together percent positive response rates for each item in the section and dividing by the number of items in that section.

Descriptive statistics, frequencies, and percentages, were used to analyze all survey items as well as background information of all respondents as a whole (i.e., how long they have worked as a nurse/ assistant before and how long they have worked in their current unit). Section (F), the open-ended comment section, was used to analyze HCSAW comments about the most important and frequently occurring factor affecting their safety in their various units, why participants thought this was the most frequently occurring factor, and also any suggestion on how to improve on the problem.

2.3 Ethical Considerations and Reliability

Reliability implies the repetition and consistency of result from a study. In this study, the reliability indicate the method applied to sending and returning of survey questionnaires may affect how respondent will view confidentiality of their response and this impact the overall survey response rate

Ethical considerations, in this study, can be related to Permission and written approval letters was sought and gotten from the executive director of the center for this study. The questionnaires was given along with a consent form to each workers, the consent letter addresses the purpose of the research and confidentiality. To ensure confidentiality, the participants were told not to include their names on the questionnaires; this was to increase the likelihood that workers would feel safe reporting their personal perceptions about safety without any hindrance. Analysis of the M-SAQ was conducted against the original international benchmark for safety domains in SAQ for reliability.

3 Current State Analysis of Personnel Management in Case Organization

This section discusses key findings from current state analysis of case organization and also results from the safety attitude questionnaires received.

3.1 Key Findings from the current state analysis

The current state analysis for this study was conducted using: a) the safety attitude questionnaire, b) Feedbacks from management. Participant observations by the researcher, all focused on the current safety practices and management, from healthcare and social assistant workers' perspective, conducted in the case organization at the time of this research.

3.2 Results from the Safety Attitude Questionnaire

The purpose of the Safety Attitude Questionnaire (SAQ) was to investigate Healthcare and social assistants' workers safety management and safety perception in Invalidiliitto ry, Järvenpää healthcare center and nursing homes. The SAQ in this study measured worker safety culture using a modified version of the safety attitude questionnaire developed by leading healthcare researcher Bryan Sexton, Bob Henrich, Eric Thomas and with funding from agency for healthcare research and quality, and also from the Robert Wood Johnson foundation. The questionnaire measured healthcare workers and social assistants' overall perceptions of safety, frequency of event reporting, working environment and conditions, safety climate, communication and punitive response to error, risk evaluation and management, organizational factors and safety process and management.

The study collected 72 responses from practical nurses, social assistants, caregivers, personal assistants, occupational therapists, physiotherapists and registered nurses working in rehabilitation (drug users/ alcoholics, mentally unbalanced) units, development disability patients units and severely disabled people units in Invalidiliitto ry healthcare center and nursing homes in Järvenpää.

Table 1 below shows social demographic characteristic of participants from each units of the case organization.

Socio-demographic characteristics of respondents

		N	Percentage
Gender	Male	16	22.2%
	Female	56	77.8%
Age	19-34	32	44.5%
	35-49	25	34.7%
	50-69	15	20.8%
Marital status	Single	24	33.3%
	Married	33	45.8%
	Divorced	15	20.8%
Duration of work	0-1	18	25%
	1-5	30	41.7%
	5 and above	24	33.3%
Level of education	Nonprofessional certificate-social assistants	26	36.1%
	Diploma – practical nurses	39	54.2%
	Degree (university) - Physiotherapist, Occupational therapist	7	9.7%
Job title	Workers	65	90.3%
	Supervisors / managers	7	9.7%

Table 1 above summarizes the social –demographic characteristics regarding the respondent.

a) Basic demographic information

The results of the Demographic section of SAQ show that a large majority of the respondents were female (77.8%). The minimum age of respondent was 19 and the maximum 63 and most respondent were between age 19 and 34 (44.5%). The results also showed that majority of the respondent (41.7%) have over 1 year job experience, and more than half of the respondents were practical nurses (54.2%). Finally, almost all of the respondents were workers (90.3%) with a (9.7%) rate of supervisors and nursing managers.

In the study, SAQ asked the participants, among other questions, about their educational levels. Majority had either a 3-year diploma in practical nursing, or a 4-year Bachelor degree in social work, or other vocational qualifications as personal assistants and social assistants. The age ranged from 18-56 years of age, with about 95% female. Additionally, majority of their workers were from Finland and others were from Estonia, Russia, Somali or other origin.

The basic demography helps refine this research, has been inclusive of every categories of workers present in every organization of this type. It present a clear age difference and variation, marital status of worker, sex, experience on the job and level of educational qualification .But more importantly, it shows a collation of different people with work culture working together as a team, i.e. This is important as there is a huge shortage in this sector and demands for foreign workers has brought professionals from other parts of the world to work in developed countries. This absolutely gives a clear and unbiased picture of the nature of workers found in case organization.

b) Overall Perception of Occupational Safety Management

The SAQ had 8 safety management and perception section: Occupational safety dimensions; Ergonomics, Chemical, Psychosocial, Biological and Physical dimensions, communications / punitive response to error and overall safety perception/management. Furthermore, two variables including overall safety perception and frequency of event reporting were also measured. The results from SAQ were corroborated and backed by the results from interviews and participant observations.

The following areas and dimension were revealed as areas which need improvement. They scored the lowest and were also recognized as the areas for improvement in the interviews (in order of priority):

Area1. Ergonomic & chemical safety

The following areas scored the lowest against the SAQ benchmark:

Ergonomics safety	48%
Chemical safety	39%

The response rates from the International benchmark for safety domains cut-off mark were 68% and 71% respectively. But from the study result, the low results (48% for Ergonomic and 39% for chemical dimension) could be an indicator of the workers' experience of, for example, pain which they do not have before starting their work (72% of respondents agreed to this in this study). This finding is consistent with the results showing the workers' fatigue and body pains which accounted for 72% of workers sick leave and injuries (Zhang et al. 2002: 297).

The results from the interviews also confirm these findings. For example, this is how one of the interviewees describes his feelings: (OR one incident at work, or his experience over many years, etc. Thus, the results from this study indicate that managers at the case organization need to pay more attention to ergonomic dimension, including tools and equipment, and ensure the needed training of workers on the usage and handling of the technical aid and tools.

Area 2. Biological Safety

- Biological, 50%

The response rate percentage for this section was (52%) lower than the International benchmark for safety domains (70%) but a bit higher than areas needing serious attention. The entire question in this section where lower than the estimated percentage could only indicate a need for improvement in safety of biological dimension for both workers and patients. i. e, staff do feel they are compelled to work with client even

though there are chances of contacting infection from a particular patient, because it is only morally right and humanly correct that they help the patient

The result from this dimension also indicates that workers feel they weren't giving accurate training or constant training on how to prevent and protect themselves. In most cases, some workers do not feel free to ask for guidance from more experience workers, because in doing so maybe be judge by others as not been professional enough, which could result in blame and potential for shame and low self-esteem at work with are also in related literature to error reporting (Cohen, 200: Hughes, & Lappan, 2006: Kaap, 2003)

Areas of strength

- Psychosocial safety 61%
- Physical safety 63%
- Frequency of event reporting 68%
- Communication and punitive response to error 62%
- Overall safety perception management 63 %

Results from these dimensions were the most consistent with data from International benchmark for safety domains using the SAQ survey. It shows psychosocial dimension was 61%, Physical dimension was 63%, Frequency of event reporting 68% and Communication and punitive response to error 62%. Overall safety perception management 63 %had the highest positive response rate. The positive response rate from the International benchmark for safety domains cut-off mark was 70% while the positive response rate from this study was 63% just 7% below the 70% mark.

This results and findings in this section, seem to be consistent with other researchers that reports good safety perception management from workers and bosses are a relatively important issues among workers(Bailey, Rudman, Garrett, Peden, Thomas &Brown, 2006), and that knowing what to expect from fellow colleague or managers is very important in enhancing safety at work.

A good example, aviation safety researchers found that staff who had flown together for several years made fewer errors than people who have flown same airline for such a time and to them, good safety management is an essential factor in maintaining and sustaining safety (Mohr & Young, 2004; Thomas, Sexton & Hendrich 2003; Baker, Gustafson, Beaubien, Salas, & Barach, 2005; Wheelan, Burchill & Tilin, 2003; Kaissi, Johnson & Kirschbaun, 2003; Rufferty, Ball & Aiken 2001). Overall, researchers on healthcare safety have suggested that effective safety management can contribute to reducing errors and mistakes, higher levels of job satisfaction, increase both workers and patients safety, increase productivity and decrease stress levels (Rudman, Bailey, Garrett, Peden, Thomas & Brown, 2006; Kalish, Curley & Stefanov, 2005).

4 BEST PRACTICE OF OCCUPATIONAL SAFETY AND MANAGEMENT

This section discusses and revives best practice from literature concerning occupation safety and management. It also entails scrutiny of major occupational hazards and bases for a conceptual framework proposal.

4.1 Overview of healthcare and social assistant workers organizations

The Healthcare and social assistance sectors comprises establishments and organizations providing healthcare and social assistance for individual who are not able or self-dependent (Haggerty, 2001). This sector includes both health care (Registered Nurse) and social assistants (Nonprofessionals). The organizations within this sector are organized in a sequence starting with those establishments delivering pure medical care solely. The middle is those firms delivering care and social assistance, and ending with those providing only social assistance (Hogg, et al, 2006).

Furthermore, services provided by organizations in this category are provided by trained professionals and untrained professionals, depending on the level of care they are providing (Hogg & Rowan, 2007).

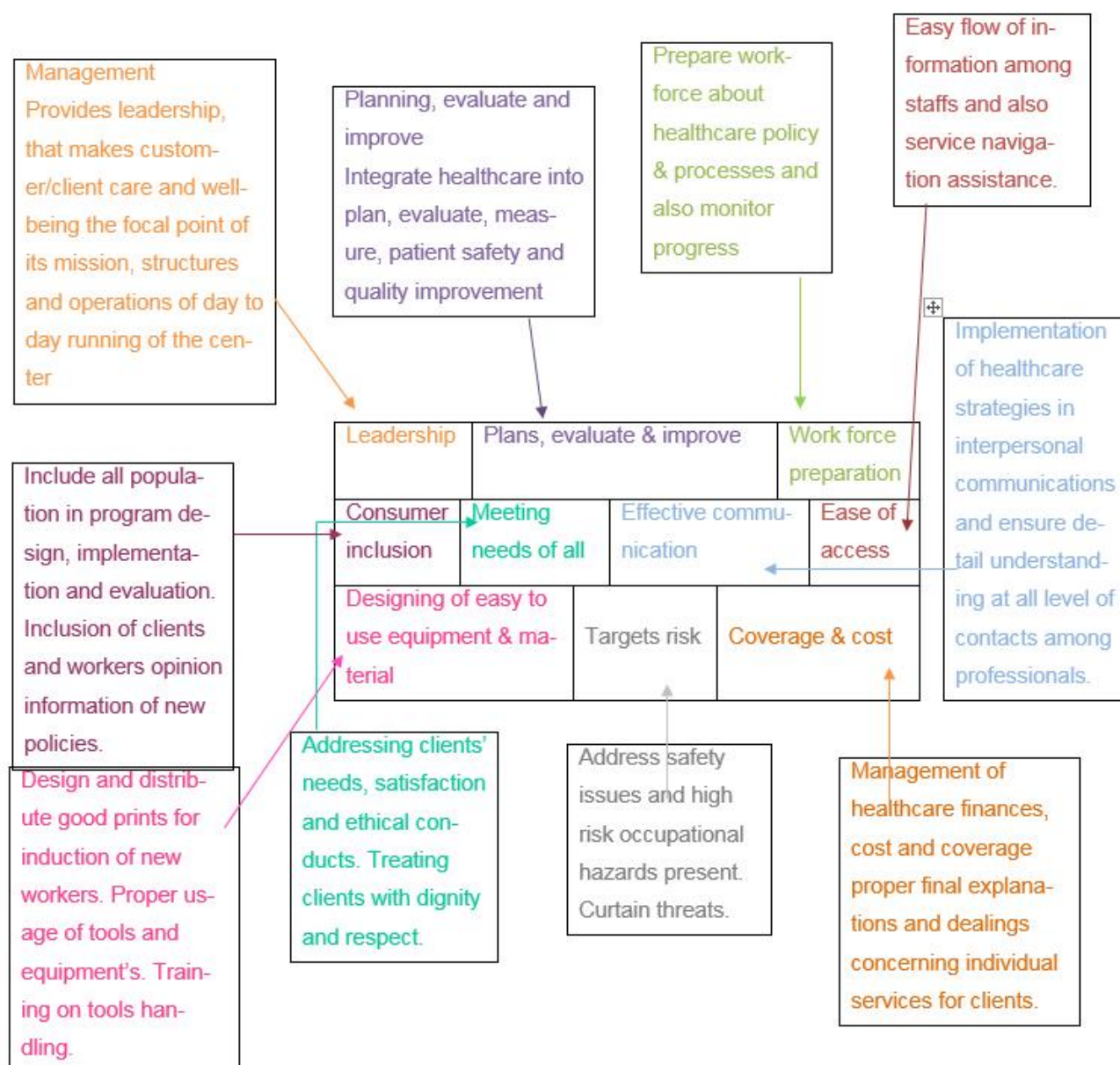


Figure 2 summarizes healthcare and care home organizational process Illustrations (V.J. & Makin, P.J. 1994).

As seen in figure 2, the above diagram describes the entire process of a healthcare organization roles, process and entire management spectrum and work designed.

Therefore HCSAW philosophy recognizes that healthcare and social services sector occur with a particular physical environment and their economic, healthcare, social and cultural context that shapes the social determinant of health for an individual, their families, groups and community (Sorra & Nieva 2004). Each sector or discipline within the

HCSAW contribute to health and care services delivered within a model, both in unique sense, and through collaborative interdisciplinary practice (Cox, T et al 1991). The term healthcare and social assistance is believed to date back to about 1920, when Dawson report was released in the United Kingdom (Haggerty, 2001), the white paper report mentioned "healthcare and social assistance care centers" was intended to become a hub for regionalized out patient service center in that county (V.J. & Makin, P.J. 1994).

HCSA Organizations gain prominence in Europe during World War I, as hospitals were overwhelmed with incoming wounded soldiers and people, and at the same time recovering patients occupying places in the hospitals (Hogg, 2001), outpatient care centers and home services became automatically a new specialization in healthcare, as recovering and recuperating patients could be sent to these centers, where nurses and primary workers could attend to their needs and care, while they recover (Hudson, P.T., 2001). Ever since, the WHO has emphasized the need for this sector of health care to be granted optimum recognition and mobilization of its knowledge toward enhancing productivity and quality care (WHO, 1989).

Occupational Safety and Its Management in Healthcare

Occupational safety and management in healthcare could be described as an area that involves safety, health and wellbeing of workers committed to a particular job or employment. Therefore it is important to understand safety management of healthcare and social assistant workers, their opinions and thoughts about their work, and general safety culture in which they work (IOM, 2000). The potential for enhancing and using safety management culture research, should provide an empirical measure of a concept that may help to guide proactive strategies (Kuo, Borycki, Kushniruk, & LEE 2010), to decrease reported high rate of sick leave due to unsafe conditions and practices, lack of workers motivation, risk of violence, decrease errors and other unsafe incidents to workers and patients in the work environment (Mardon, 2008).

Therefore, to achieve safe and quality care for patients, workers safety issues are definitely a challenge for any healthcare organizations in general (Carino, 1998). In order to effectively improve all these aspects of healthcare quality and safety issues, it is believed that establishing a culture of workers/patients safety policies within the organization is the best strategy (Carino, 1998, MacDonald and Coote, 2001). This belief has led to a growing interest in HCSAW safety culture among policy makers, healthcare

managers, practitioners and researchers. A study conducted in the United States 2008 showed a positive correlation between workers safety culture and improve patients care quality/ satisfaction (Mardon, 2008)

Therefore, evaluating safety culture or the underlying values and norms in a healthcare organization, will provide a context for action and improvement for primary healthcare organizations (Cooper, 200; Helmreich, 2000)

4.2 Major Occupational Healthcare Safety Dimensions

Zohar (1980) was the first to measure what he termed *a climate for safety* in 400 subjects from four different types of organizations. He developed an eight dimensional model which included the importance of safety training; management attitudes towards safety; effects of safe conduct on promotion; level of risk at the work place; effects of required work pace on safety; status of safety officer; effects of safe conduct on social status; and status of the safety committee. The questionnaire contained forty items to measure the organizational climate for safety. It was distributed to workers in a stratified sample of twenty factories. The purpose of the questionnaire was to measure the workers' perceptions, attitudes, and values. It was not the intent to measure any accident rates and incident frequency rates.

Zohar (1980) found that management commitment to safety was the major factor affecting the success of safety programs. He recommended that a genuine change in management attitude and increased commitment be pre-requisites for any successful attempt at improving the safety level in industrial organizations (Zohar, 1980). Since Zohar's initial work, a number of studies have been conducted. When Brown and Holmes (1986) used the same questionnaire on a sample of American production workers they found only three safety climate factors: management concern, management activity and risk perception. Dedobbeleer and Beland (1991) tried to validate the three safety climate factors of Brown and Holmes (1986) on American construction workers but found the two factors of management commitment and worker involvement more appropriate than the three factors cited by Dedobbeleer and Beland (1991).

Coyle, Sleeman, and Adams (1995) administered Zohar's safety climate questionnaire to Australians in two different clerical and service organizations with a total sample of 880 (340 in the first organization, and 540 in the second). The researchers developed a

survey questionnaire of 30-32 items based on a seven dimensional model which included maintenance and management, company policy, accountability, training and management attitudes, work environment, policy/procedures, and personal authority. They found that their survey for measurement of safety climate was not stable across the two organizations. Varonen and Mattila (2000), however, used the same safety climate variable structures used by Coyle, Sleeman, and Adams (1995) and Zohar (1980) to measure safety climate and found the safety climate structure was relatively stable among Finnish workers in one organization.

Later studies have attempted to replicate Zohar's factor structure but with limited success, usually reducing it to two or three factors. Most recently Phillips, Cooper, Sutherland and Makin (1993) reduced Zohar's dimensions to two factors made up of management attitudes and actions together with perceived levels of risk, work pace, the status of the safety advisor and committee, the importance of safety training, and the effects of safe conduct on promotion.

Figure 3 below shows a major depiction of common factors affecting occupational hazards presents in healthcare organizations

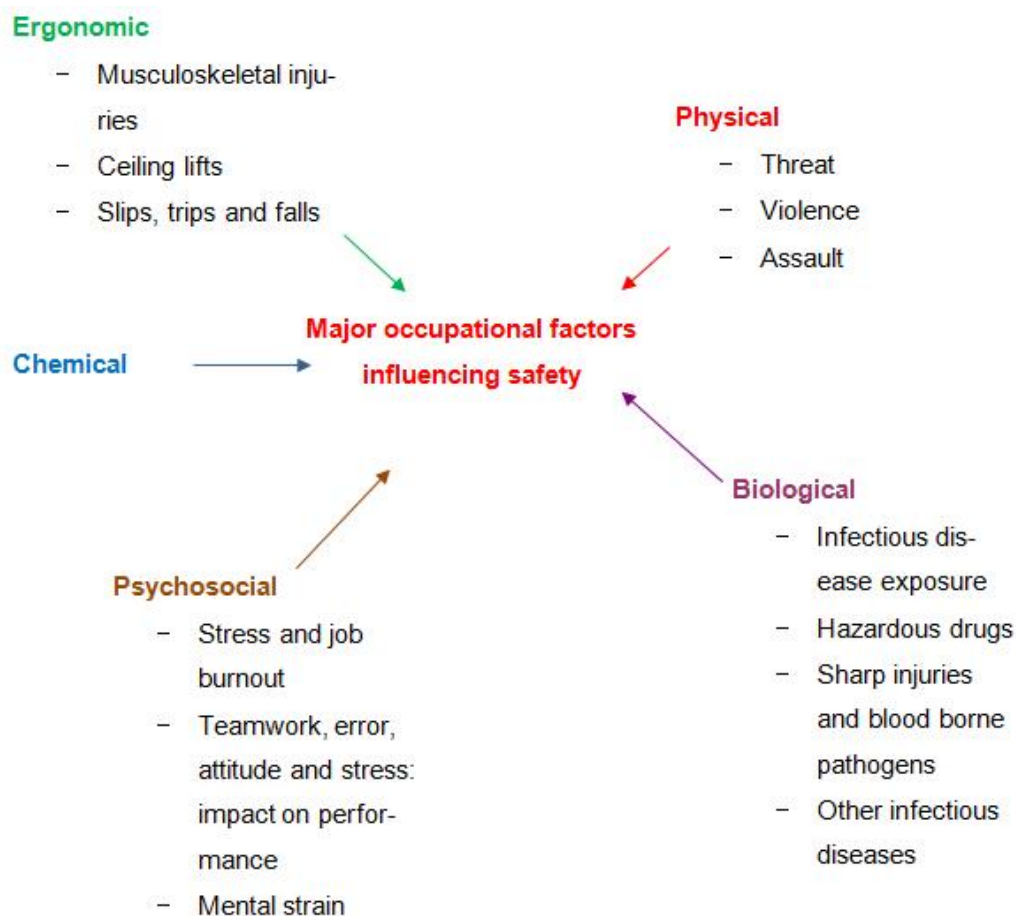


Fig 3 shows the major occupational hazards for workers in healthcare and care homes organizations

Occupational health and safety issues are an ever imposing challenges face by both supervisors and manager of healthcare organization (Hughes, Clark, & Mark, 2009), work impairment, injuries and illness cause pains and increase high cost, both for those workers and their organizations and the society as a whole (Ransom, Joshi & Nash 2010). The workers in the HCSAW sector basically work to provide services to sick and those in need of assistance, and in this group practical nurses are perhaps the best studied, and it's becoming a difficult issue in recruitment and retention of practical nurses dew to occupational safety issues concerns (Smit, et al. 2008).

To understand occupational health and safety issues in healthcare and social assistant sector, we must under the most significant risk and safety issues particular to this sector (Pronocost et al. 2003), they are namely Biological, Ergonomic, Physical, Chemical, psychosocial, Environment issues.

4.3 Biological safety issues

Biological safety issues can also be referred as biological agent can constitute sickness to the human body ([INSAG,1991). Many biological agents are micro-organism, i.e. bacteria's, virus, fungi, and microscopic endoparasites such as the malaria parasite, amoeba and trypanosome ([INSAG, Cullen, 1991). Biological issues can be broadly group into the following categories Biological agents: Managing the risks in laboratories and healthcare premises.

4.3.1 Sharp injuries and blood borne pathogens

Sharp injuries and blood borne pathogen remain pressing problem in the healthcare sector. Dangerous viruses can be blood borne pathogens and this of paramount importance to manager and workers in these organizations (Harrington et al. 1999). Transmission of deadly virus like HIV , Hepatitis , EBSL and MRSA can be transmitted from patient to workers easily because of sharp tools and personal contact (Helreich et al.2000).

Unfortunately, sharp injuries continue to occur frequently, although surveillance data is fragmented (Landsbergis, P.A. 2003), it has been estimated that over 384,000 percutaneous injuries are sustained annually by hospital-based healthcare personnel (Laschinger et al. 1995). Since hospital personnel only account for less than half of healthcare personnel, the total number of percutaneous injuries in HCSA sector maybe considerably higher; only limited data is available to support an estimate that includes non-hospital –based personnel (Koehoorn, M., G.S. Lowe, K.V. Rondeau, G , 2002)

4.4 Ergonomics safety issues

Ergonomic focuses mainly on working environmental tools, items, safety devices and their control. Ergonomics can be said to relate to the science of adapting tools to workers who work with them. Fitting the jobs to workers helps reduce pain, stress and subsequently eliminate potential ergonomic discomfort or musculoskeletal disorder (msd).

4.4.1 Musculoskeletal injuries

Analytical research have persistently reveal that health are susceptible to high risks of musculoskeletal disorders, sickness and injuries when working and handling of sick patients (Hoogenden et al, 1999 ; Lagerstrom et al , 1998). Movement and transfer of patient from one position to the other affect the spinal cord and other joints in the body based on non-proper posture of workers, although more researches over the years has also proven that these same musculoskeletal hazard also affects safety of patients too (Collins, 2000).

However, while much has been done to recognized and reduce these dangers pose to both healthcare workers and patients by the development of high tech ergonomic tools and equipment's, there is still an urgent need for proper training and management of these tools and workers who use then, as to better enhance safe practices (Ronald et al, 2002; Engst et al, 2005; Miller et al, 2005; Chhokar et al, 2005;).

4.4.2 Slip, trip and fall

A good example of ergonomic hazards is slip, trip and falls accidents. These are common ergonomic problems and affect the musculoskeletal system of the body and are one of the most present dangers in healthcare and social assistant sector. According to EU-OSHA, it is responsible for about 38.6 per 10.000, 80% of all injuries in the healthcare sectors (EU-OSHA,2009). Hazards of this type can depend upon many factors; mostly it ranges from individual factors, to environment and work culture, facility or housing factors and generally workplace safety and management process (Denton, m, 2005). More studies are needed to help identify ways to effectively develop slip resistant floors, shoes and carpets to help better prevent this type of hazard (Hunter, e, 1997).

4.5 Physical Safety Issues

Conditions and situations that can physically cause harm or threatens worker safety at any given work place or environments are classified as physical safety issues, and it can be from human to mechanical factors.

4.5.1 Violence, threat and assault

Violence at work is one of the most dominant hazards that pose threat to healthcare workers (Jarrel, r.b, 1997). According to Hunter, E (1997), many not so serious case or violence at this kind of work place are manly swept under the rug or sometimes presented as part of the job hazards that cannot be removed totally.

The EU-OSHA released preventive guild lines to help alight the prevalence of these hazards and subsequent prevention programs in 1999. These guild lines presented some elements of what violence in healthcare sector represent and also the cost in incurs (Lagerstrom, m; Hagberg, m; Linde, a, & Malker, b (1999)

4.6 Chemical safety issues

The use of chemicals is also considered a major health hazards in healthcare sectors. There are chances of risks for different types of adverse effect that could potentially be fatal to healthcare workers in this environments such as work related asthma, cancer

and other respiratory diseases (Koehoom,m,g:Lowe,k v; Rondeau, g; 2002). Development of personal protective equipment's could help reduce this hazards and this could be done according to (Miller, r,,b & Yassi, a, 2005) by use of protective mask and adoption of precautionary approach in handling and eliminating of toxic chemicals at work place.

4.7 Psychosocial safety issues

A psychosocial safety issue involves certain factors that affect workers psychological response to work activities and conditions, which potentially cause mental or psychotic health problems.

4.7.1 Stress and job burnout

Work stress and fatigue in healthcare occupation is well documented and is believed to be responsible for the highest rate of care mistakes and all case of near misses (Corden cl, Dougherty tw, 1993). Many healthcare workers display many symptoms of job burnout; these symptoms are emotional tiredness, emotional stress, sense of loss personality, less or no work motivation and commitment, and most times depression. Experts believed that these situations could develop from working with patients or from fellow colleagues or organizations management's attitude (Lee RT, Ashfort BE, 1996). Work stress and job fatigue could also be related to certain conditions at work according to Slayer, (1995), work load, shifting, job assignment and role conflict , lack of job satisfaction and threat cab be responsible for job stress and work burnout. Finally, lack of management support and non –support from colleagues and supervisors could also be a contributing factor (Baldin PJ, Dodd M, young L, 1997).

4.8 Conceptual Framework from Selected Literature

This study proposes a framework assuming that several factors affect and influence safety management in healthcare and social assistance organizations. The researcher created a conceptual framework based on the findings from the current state analysis and best practice of healthcare safety management found from the relevant literature. It is shown in Figure 4

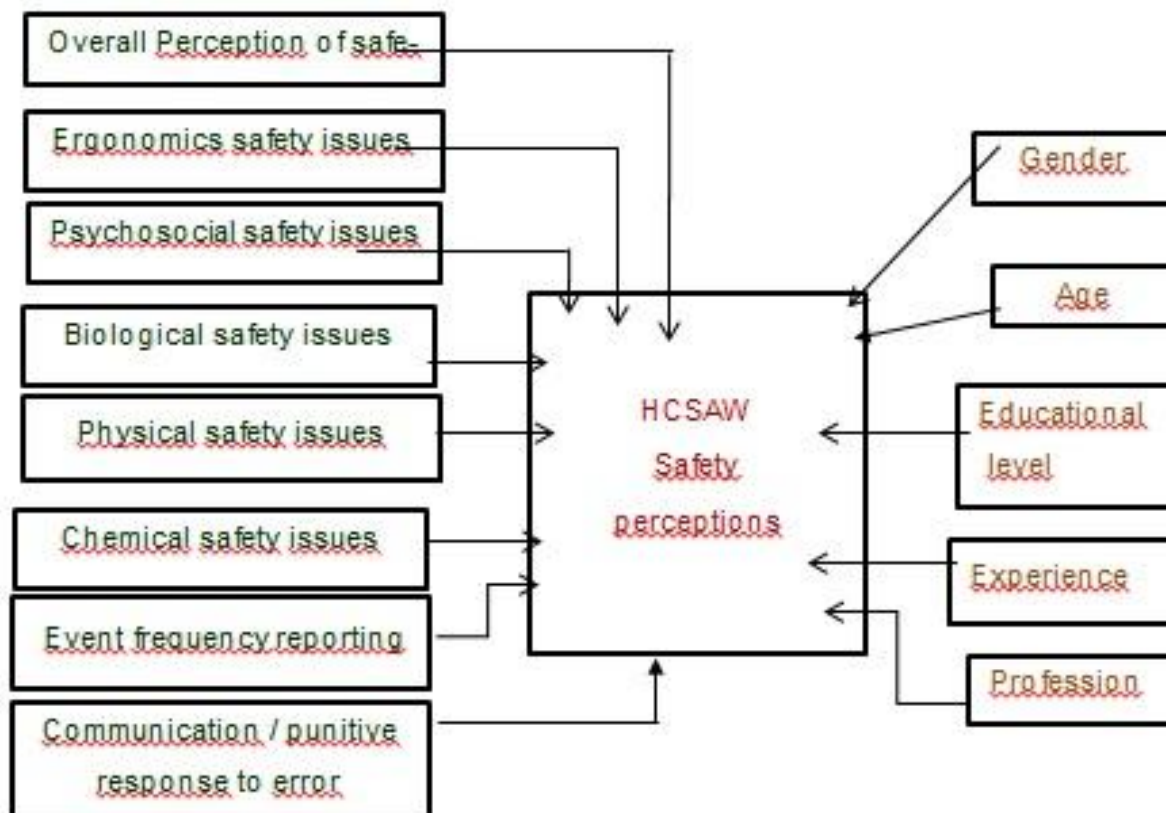


Figure 4. Conceptual framework of this study.

As shown in Figure 4 above, this conceptual framework uses eight dimensions to create an organizational safety management, based on HCSAW safety management and perceptions. This framework also considers demographics and professional characteristics as they are assumed to influence safety perception and management. Furthermore, the researcher added some other variables, as he assumes they influence worker safety culture in Invalidiliitto Järvenpää healthcare center and housing units. These variables were divided into three categories

Healthcare and Social Assistant worker

This is the dependent variables in this study that measure workers perceptions and opinions about their work safety and organizational safety culture. It takes on question about how they feel and responds to situations that may endanger their health in other to take care of patients. Safety attitude questionnaires (SAQ), an internationally recognized questionnaire that had been customized for service providers was used in calculating the positive and negative answers from data's received and measured using a 5 scale point

Overall perception of safety: This measure HCSAW attitude, belief, values and perceptions of safety that underlie how they deal with patient and client within their care in the organization. Patient safety perception were created for each respondent by calculating the mean percentage of positive answers from data recovered from survey questionnaires, and measure on a modified 5 Likert scale (yes, no, sometimes, once and neither).

Ergonomics safety factors: This refers to how workers view the usage of ergonomic tools and machine in carrying out their day to day activities with clients, understanding if proper training on usage of these tools and machines will enhance their performance better and if it affects their health. This was also measures using the modified 5 Likert scale.

Biological safety factors refers to how workers perception of biological factors like sickness and other blood borne pathogens affect the nature of their work and if they are safety risk and issues involved.it was measured with the same Likert 5 scales.

Physical safety factors: The physical risk and treats HCSA workers are face with every day at work, like violence, assault etc. This aspect of the SAQ question tries to understand if these physical risks are safety issues in this sector. It was also measured with a modified 45likert scale (never, rarely, often maybe and always).

Psychosocial safety issues: This refer to psychological risk and threat HCSA workers deals with at work and how it affect their ability to carry out their job, issues like stress, fatigue , burnout etc. It was measure with same modified 5 Likert scale. (Yes, no, sometimes, once and neither)

Chemical safety issues: Refers to cleaning chemical and other chemical agent used by HCSA worker in their job and how handling of these chemical constitutes risk and safety issues. It was measure using the 5 point scale. (Never, rarely, often maybe and always)

Event and error reporting: This domain refers to how often workers report all types of safety issues and mistake, hazards observation, reporting of safety mishap, latent error and near misses. It was measure with the 5 point scale. (Yes, no, sometimes, once and neither)

Communication/punitive response to error: This refer to worker free ability to report a suspected safety risk or situation without it negatively affecting the worker job and opinion about workers feeling that their mistake is been held against them. (Never, rarely, often maybe and always)

Gender: This simply refers to female and male participant in study

Age: Refers to the age of participant (<18 to 62>)

Education level: This means level of education of participant, and was group under the following, 1 year basic school degree (social or personal assistants). 3 years professional school for practical nurses (ammattikoulu) 3.5 years polytechnic (AMK) degree for occupational therapist and physiotherapist.

Experience and duration of years on the job: This refer to the number of experience and number of years on the job each participant has and it ranges from 0-1 year, 1-5 years, 5-10 years and 10years or more.

Professions of participant: Personal assistants, healthcare support workers, practical nurses, occupational therapist and two physiotherapists.

5 MERGING FINDINGS FROM BEST PRACTICE INTO CONCEPTUAL FRAMEWORK FOR THIS STUDY

This section merges the results of the current state analysis and the conceptual framework towards the building of the proposal.

5.1 Building the Conceptual Framework for This Study

Many of the practical findings and ideas considered in Section 4 of this study underpin health and safety management issues related to both worker and clients in the case organization. Therefore, a conceptual framework for safety management, merged from the discovered best practice, should involve the step for identifying hazards, assessing and controlling these risk factors, monitoring and reviewing activities to ensure that safety risk are effectively managed. Furthermore, effective consultation with workers, training and information management make the key part of the whole safety management process. From the SAQ result, we could ascertain that, certain aspect of current practices may need improvement while some other areas are well attended to in terms of safety management.

Also resources and information derived from best practice from relevant literature, we could see that certain factors are responsible for safety management risk and may compromise healthcare organizations. Therefore, the proposed healthcare framework is built on the well-grounded ideas from best practice and serves as the foundation for building the Proposal for the case organization. This conceptual framework includes the Process and the Management parts of the Occupational Safety Framework.

5.2 Building the Process for Occupational Safety Management

An example of the Process for occupational safety is shown in Figure 5 below. This approach was developed by Cooper, El-Jardali and Lagace. (2000:80) and may well suit the context and purposes of the case organization

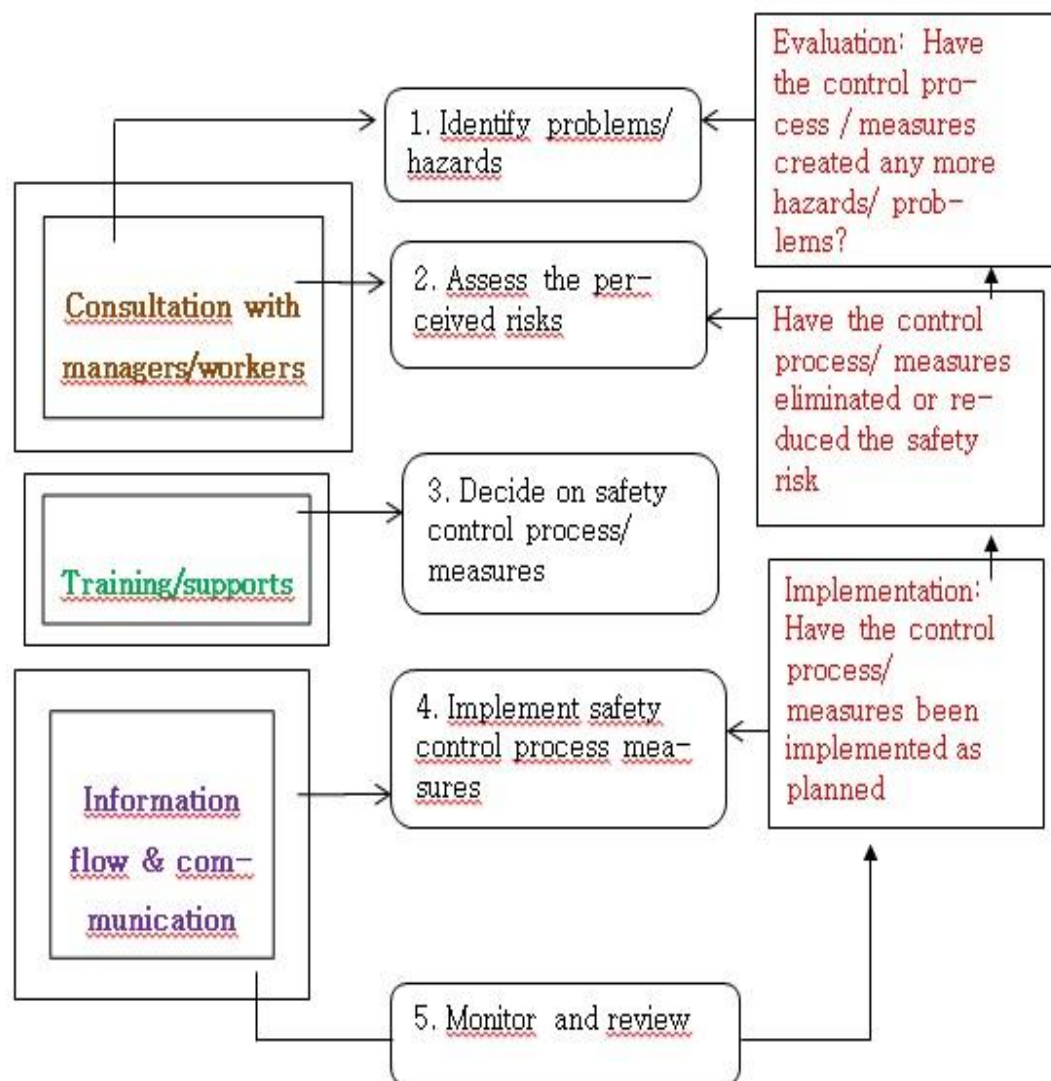


Fig 5: Overview of proposed Process for occupational safety management for healthcare and social assistant worker (Cooper, El-Jardali, Lagace, 2000 :80)

As seen from Figure 5, The Process developed by Copoper et al. 2000 consists of 5 stages described below:

Stage 1

Problems / hazards can be something or scenarios with the potentials to cause harms or inflame a situation out of control. This could be infectious diseases, violence, chemicals, manual task, actions, psychological etc. According to Cooper, M.D. (2000), the very first step should involve identifying all the possible situation or events which could harm or be problematic for workers in their workplace. More also, activities or exercises should be created to help problems and hazards identification processes, which could include workplace inspection, safety meetings with workers, record of every near misses and past accident/occurrences and consultations with both smaller managers and workers as a whole.

Stage II

Risk is the likelihood that harm might result because of the perceived problems/hazard. In assessing the perceived risk, Piirainen, Rasanen and Kivimaki. (2003) suggested we consider the likelihood of an incident occurring at a workplace and more also, the consequence of an incident/accidents occurring, as the more likely it is that an accident/incident will occur and /or the more serious the consequences, the more urgent it is the perceived risk can be controlled. The outcome of this stage is a prioritized list of risk requiring immediate attention and also for those requiring further actions.

Stage III

Lagace emphasize that safety process control measures should be based on hierarchy of control, from top management to lower control managers. Top managers/management controls include formulations/provision of funding and tools, additional policies, eliminations and substitution of certain rules and strategy that aren't working from risk assessment done in stage ii. Lower manager control includes administrative, supervision, enforcing and provision of protective safety equipment's, training and supports (provision of gloves, protective facial masks for protection against biological/infectious disease, which can be transmitted i.e. Tuberculosis, proper training and handling of ergonomic equipment etc.)

Whichever safety control process and measures is chosen, it should adequately control exposure to risk and unsafe situations and not create another problems /hazard, and most importantly, allows workers to do their work without undue distress or discomfort (El-Jardali, F. and M. Lagace. 2005).

Stage IV

Implementing safety control process measures should ensure that the safety control process measures can operate effectively by developing appropriate work procedure and routine. Varonen and Mattila (2000) however stressed on the need for sound communication flow and openness between managers and workers must be maintained to ensure proper supervision in order for the safety control process to be effective and correct usage. Maintain and supervise the new safety control process to ensure ongoing effectiveness.

Stage v

The last steps in the framework involve checking and monitoring that these who control measure have been properly implemented. Ensuring risks have been eliminated or drastically reduced. Realistically, it is impossible for all risk and unsafe situation or scenarios to be eliminated, but reducing and managing them to the barest minimum should be the ultimate goal in this study (Coyle, Sleeman, and Adams 1995). Reviews should be conducted from time to time, by either work meeting discussion or alternatively, questionnaire should be distributed to workers for new information of new risk or effectiveness of the new system in tackling safety challenges of the present (Soora & Neiva, 2004).

5.3 Conceptual Framework for Occupational Safety Management

The conceptual frame was a synopsis of ideas and fact gotten from the review of literature and also from the SAQ results from case organization.

5.3.1 Consultation

Consultations with all parties involved in the day to day working processes are essential in safety management of any organization, according to the international labor or-

ganization ILO-2001 Guidelines, a fundamental requirement in safety process, development and plans in any organization must revolve around consultations with every stakeholder in that organization. Furthermore, Reason (2002) noticed that, a proactive consultation and engagement with workers and management always assist in bridging communication flow between different segment and stages of safety processes, thereby helping in identification of real safety issues and perceived threat or risk (IOM,2002; Reason 2002).

Figure 6 below shows the role and specific duty consultation plays in occupational safety management process

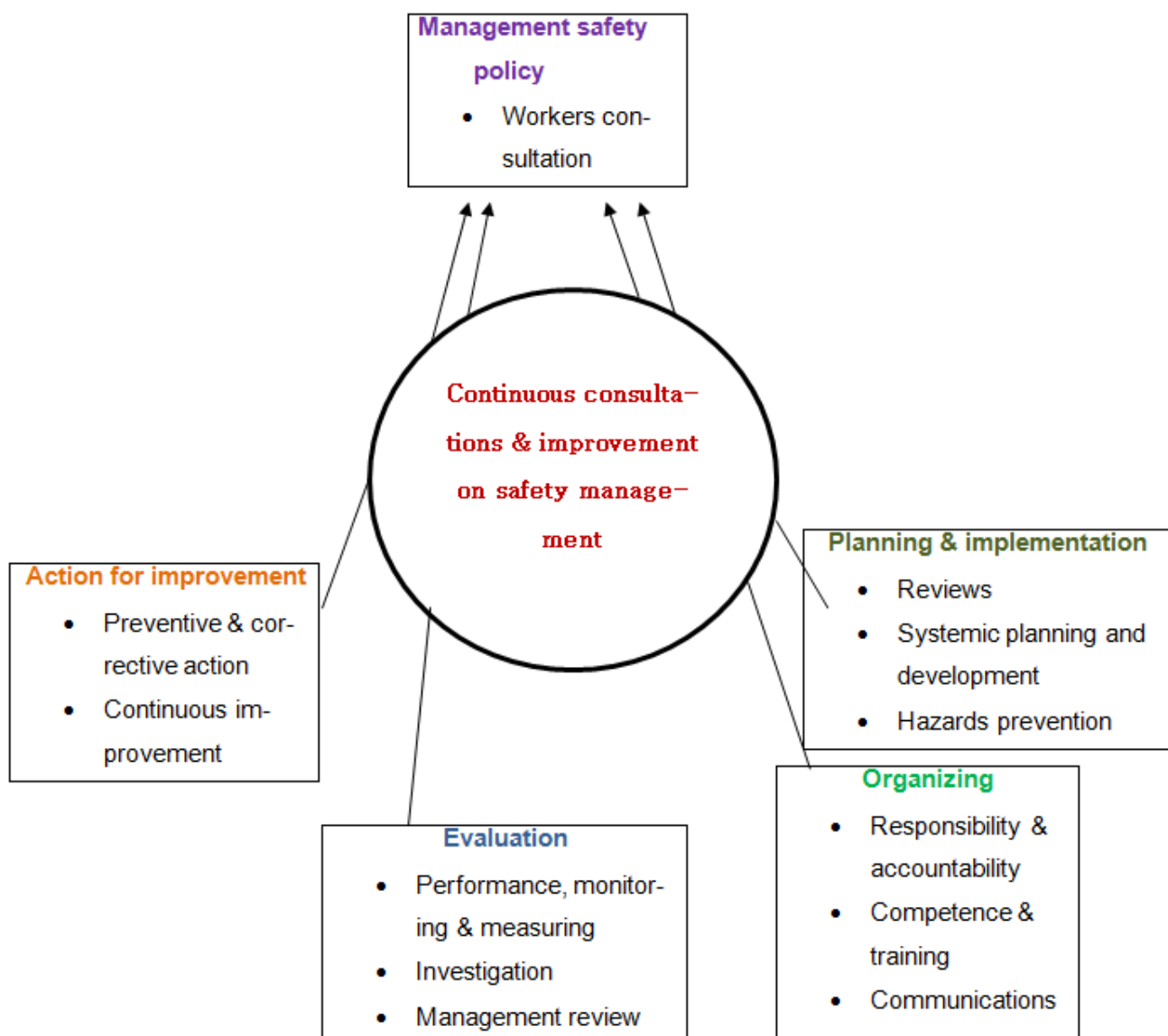


Fig 6: Consultation process for safety process and management for healthcare and social assistant worker (ILO-OSH 2001, pg. 5)

As seen from figure 6 above, occupational safety management starts with the process of consultation with healthcare and social assistant worker. An important factor in this framework is workers active participation and involvement in planning and formulation of safety regulations and policies (Coote, 1993; Lee, MacDonald & Lucas, 1990). This participation can either be through a workers representative, general discussion or even suggestion box and questionnaires.

Workers consultation will provide management a unique opportunity to get ideas from frontline staffs of the organization and it has also been research proven and established in numerous studies that employee's participation in formulation of safety strategy greatly enhances the outcome effectiveness. However, no clear definition of workers consultation and participation in safety management has been identified internationally, but Gonzales (2001) defines workers consultation as a variety of process and structure which allow and sometimes encourages worker to directly or indirectly influence safety decisions in an organization.

Types of consultations

Reason (2002) identified 4 major components for achieving a sound consultation process in a safety management process and they are

- Direct/Indirect consultation means, participation through representative. A member from the workers group represent their concerns during management planning and executions of safety polices
- Informative: informative process is where workers receive safety information from management in order to acquaint themselves with the new subject matters.
- Consultative: simply means exchange of ideas and views about safety issues, this is a two way action, meaning workers influence is exerted in planning role and are also encourage to express their views and make suggestion regarding safety polices.
- Delegated: this process is based on discretion and responsibility or workers to organize and do their job without management interference.

Application of consultation in safety management

In applying consultation to safety management, Reason (2012) believes the focal point for workers inclusion should include:

- Safety and risk assessment and management
- Effective consultation and participation for worker or workers representative on matters relating to safety management. In order to implement this participation and involvement, a worker representative should be elected by workers from themselves to represent their interest in all matters relating safety and health protection at work. This representative should be consulted and involve in all matter pertaining to safety.
- Safety and threats report, protective and preventive measure and activities in case organization
- Measure and settings which adversely affect safety processes
- Information on risk assessments, training process and accidents at work
- Planning and organization of training programs.

Consultation can be seen from the above as been the bedrock for any constructive and concrete occupational safety management in any organization.

5.3.2 Training and Support

Safety training and support programs that just tells workers about regulations and procedures that should be use or applied may not always be enough to produce any significant safety management changes or enhancement.

Even a good safety management process can still be better with constant and continuous training of workers (Gellar's & Williams, 2001). Further by researches by Williams (2003) so far, it was been proven that a successful safety management must and should have full support of managers, supervisor and entire workers onboard, because good and effective training not only saves time, but money and ultimately job satisfaction for workers. Therefore managers should always endeavor to adjust workers job schedule so as to create time for workers full participation.

Figure 7 below shows Reciprocal Training and support model for workers from Smith (1999).

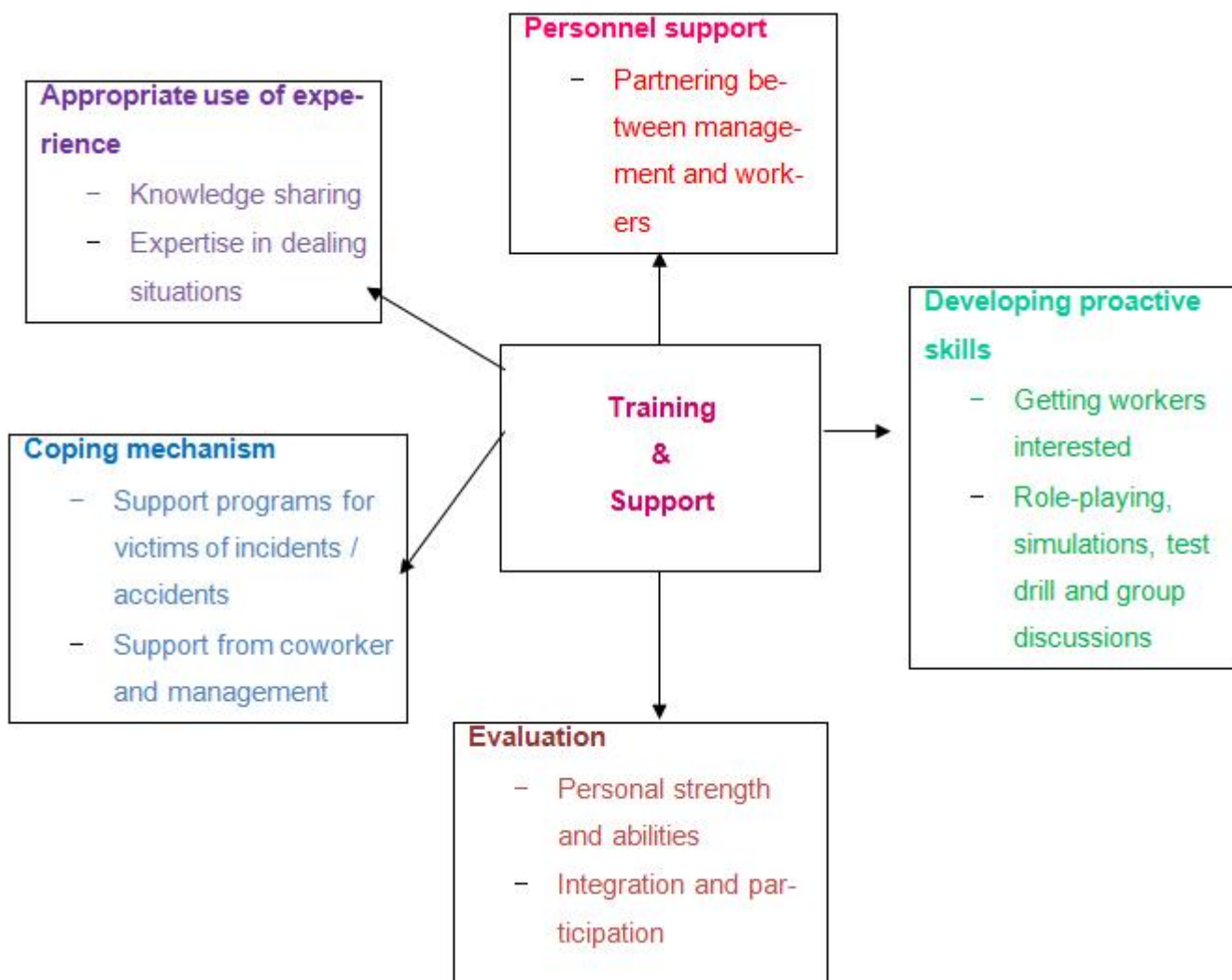


Fig 7: Training and support cycle based on safety process and management for healthcare and social assistant worker (Issues in training and development, Smith, A. 1999;4:67-74)

As seen from Figure X above, what we should see from here?

Training and support cycle

According to Smith (1998), workers safety training and support cycle should include an aggressive inclusion and practice of the following laid out goals

- Personnel support-management should partner with workers to improve training for all i.e. allowing workers do more than just coming to work training workshops and meetings, but to actively involve them in this process during programs, because each worker have their own idea and expertise on to better the current situation.
- Proactive discussions-training sessions shouldn't always be conducted by same person, as it becomes sometimes boring. Full participation and active debate about safety subject can transform the entire programs in something more beneficial for both instructors and workers alike. Furthermore, sometimes, an experienced and well informed worker can lead these safety training sections for two reason, one it give the workers a fresh face and more importantly, it give an insight from somebody actually involved in the day to day work environment and sometimes, may even bring out new safety issues neither the instructor nor manager weren't aware of initially.
- Evaluation- Evaluation should be done post –training workers performance, this can take place weeks after training section, it should take into consideration workers strength and abilities and how well these have improved. Evaluation can also be measure after longer period of time, usually months and probably years after training workshop ends.
- Coping mechanism- Understanding how to cope and support workers are undergoing stress and other psychological situation as a result of either work pressure or home problems. More also, workers training and empowerment on how to behave compassionately toward co-worker when incident occurs.
- Appropriate use of worker knowledge and experience- Older workers knowledge and experience must be appreciated and fully tapped in helping new and incoming workers in understand safety systems in place and also in safety orientation before been assigned any job. Qualified trainers should be used at these workshops and training seminars and more importantly, training workshops and programs should entail role play, simulations and test drill of every possible safety scenarios and situations.

This training and support cycle suggested by Smith (1998) can also be collaborated in this study from result derived from the SAQ i.e. Ergonomic factor 48% and chemical factor 39%, has the least point on the SAQ and according to (Sorra & Nieva, 2004), they describe any areas on the SAQ that has less than 50% as area needing serious attention This low result percent could be an indicator of the worker opinion as regards training and general support. Constant training as suggested by Smith (1998) could help update and remind workers of the need for safety consciousness and also shows signs of management support and care for its workers wellbeing .i.e., a question from the SAQ ask workers" do you presently feel bodily discomfort which you feel could have arisen from your work" 78% percent of workers responded with a strong positive attitude that, they have experienced pains which they do not have before starting work there. This is relevant and in consistent with other researcher who found out that workers responds to fatigue and body pains affect their opinion about safety support from management (Zhang, H., Wiegmann, D.A., von Thaden, T.L., Sharma, G., & Mitchell, A.A. (2002).

5.3.3 Information / Communication Flow

Information flow and communication management in any organization is always difficult to maintain effectively and it's even more complication when it has to do with safety issues, where each cases present complexity which most time threatens the safeties of both clients and health workers. Many healthcare organizations including my case organization have been trying for decade to create a more open and collaborative safety management pattern and initiative that will involve all players in the organization: i.e. workers, manager and other stakeholder. But the present economic and financial situation as a result of the recession has thus made cutting cost first priority.

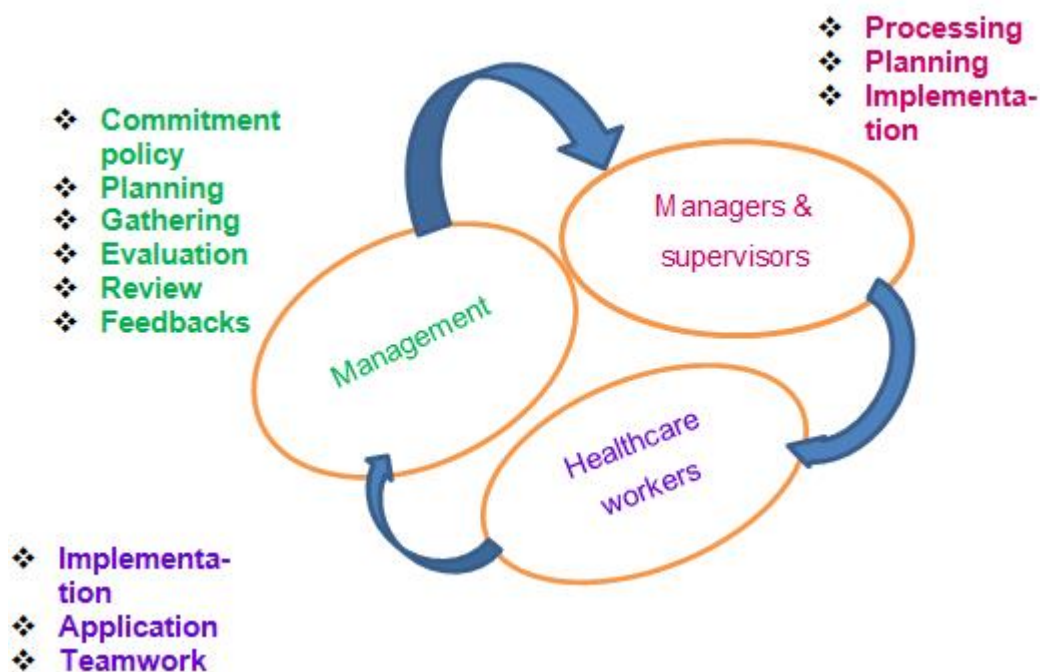


Figure 8 below shows Reciprocal communication flow model from Hoffman (1998:)

Fig 8: Information and communication flow process based on proposed framework for safety process and management for healthcare and social assistant worker (Hoffman 1998)

As seen from Figure 8 above. Communication flow create a synopsis between workers and management in creating and implementing safety strategy and processes Furthermore, from literature analysis for this study and results obtained with safety attitude questionnaires (SAQ) shows that lack of proper communication among healthcare and social assistant worker is a major cause for unsafe situation and, results in mistakes happening at work .i.e. Shift changes from day workers to night workers between healthcare workers are seriously cling to communication.

Information flow and communication management process

Hoffman (1998) developed a communication flow model for organization (Hoffman, 1998; Zohar, 1992) as shown in Fig 8.this model has three connected segments: workers, manager & supervisors and management. Each segment is represented by a specific task, but are all intertwined with each other.

Management: Preparing organizational commitment policies on safety management has to come from the very top of the organization. This involves evaluation of reports and feedback gotten from reviews of reported cases and general evaluation from managers. Also, supporting and organizing training safety programs for both managers and healthcare workers and creating of new safety strategy for the organization.

Managers and supervisor: Processing of safety information received from feedbacks and other avenue of information collection, planning and ensuring full implementation of organizational safety policies. Managers also conduct training and consultation with managers in partnership with management.

Employee: Healthcare workers and staffs in organizations like Invalidiliitto Järvenpää healthcare center and nursing home can apply these safety strategies in carrying out their daily work with clients and also responsible for firsthand information on how these new safety strategies are effecting safety practices. Effective transfer of information during shift influences safety management of both workers and clients, because incoming workers have no idea what has transpired while they were off duty, so accurate and proper information need to be communicated.

5.4 Summary of Conceptual Framework for Occupational Safety Process and Management

The summary of this conceptual framework, built from ideas and results of SAQ results analysis and also from best practices revive of literatures. There are three 3 major steps involve in this proposed framework process and are namely, 1.consultation, 2. Training and support, 3. Information flow and communication management as stated in fig 8

This structural approach as describe in fig 6, the first step is *Consultation*, which involves the active participation and inclusion of worker and managers in planning and formulating of safety policies and process with the organization. Consultation which is helpful and will enable workers contribute to and shape decision about health and safety management in the case organization must include the following, “sharing of information” sharing information’s in an accessible way, timely and easily understandable pattern “Respecting and views inclusion”, in consultation, it simply translate into considering workers opinions and views before making major safety decisions and policies.

Also encouraging workers by making their voice and suggestions heard in safety management planning and executions. And finally, communicating back to workers the decision made regarding safety issues and reasons behind those decision and outcomes are very important in the entire safety management process.

Second step is *Training and Support*. Continuous training and support should be provided for workers, supervisor and managers. New workers manual on safety practice should be created and introduced ,usage of the safety manual should involve every worker, whether new workers or old workers and even returning workers. This safety document should detail all the different hazards present in all the different units and areas of the work place. This way, all workers can familiarize themselves with the present and updated safety hazards presents in each unit. Training and support should also ensure that appropriate induction and orientation are given periodically to both new and old workers and that, supervisor and managers are also familiar with these safety hazards present in each task area and are able to provide those information to new and returning worker. These information's should be revived, revise and updated from time to time (based on feedback gotten during consultations with workers) to ensure that it is accurate and up to date. Copies of this safety manual should be provided to every worker and more importantly, new worker during induction meeting or general workers training meetings.

Third step is *Information flow and Communication management*. Information flow and communication management is an integral part of safety management in any organization. Information and communication flow between management and workers and also between workers and coworker is a very pivotal part of the running of day to day activities within the organization. Importantly, information about safety hazards should always be communicated early on, so as to give workers or workers representative enough time to consider and discuss this information's before feedback is provided. Information should always be communicated in such a way that it can easily be understood by all stakeholders, it should be clear and simple language and also the literacy needs and cultural or linguistic diverse background and interdisciplinary status (different professionals) of workers should be considered during safety policies change or introduction in daily communication and information flow cycles.

6 BUILDING OCCUPATIONAL SAFETY PROCESS AND FRAMEWORK FEEDBACK FROM CASE ORGANIZATION KEY STAKEHOLDERS

This section discusses the final phase of this study framework, which is largely based on finding from SAQ result, literature analysis and finally feedback received from case organization.

6.1 Initial Proposal of Occupational Safety Process and management for Case Organization

The conceptual framework for this study was first propose based on results analysis of safety attitude questionnaire delivered to healthcare and social assistant workers from case organization and also from ideas derived from revives of literatures.

6.2 Feedback to Initial Proposal from Case Organization

The feedback to the Initial proposal presented above was collected in two rounds of discussions: first, with the colleagues since the study represent their perspective and incorporates their opinions, visions and needs; and second, with the management of the case organization, in order to collect their view and incorporate them into building a common vision of the Process and Framework.

Feedback from stakeholders

The meetings with the management the Care homes unit's *manager* of the case organization and the researcher were held A brief presentation of the findings and results were presented by the researcher and further discussion and deliberation was held on major points in on the research namely, results from SAQ results and also on the conceptual framework proposed for the case organization.

Case organization current safety analysis

The Care home unit manager of the case organization explained their current safety strategy and also their organizations safety management policies and processes as seen below in Fig 9

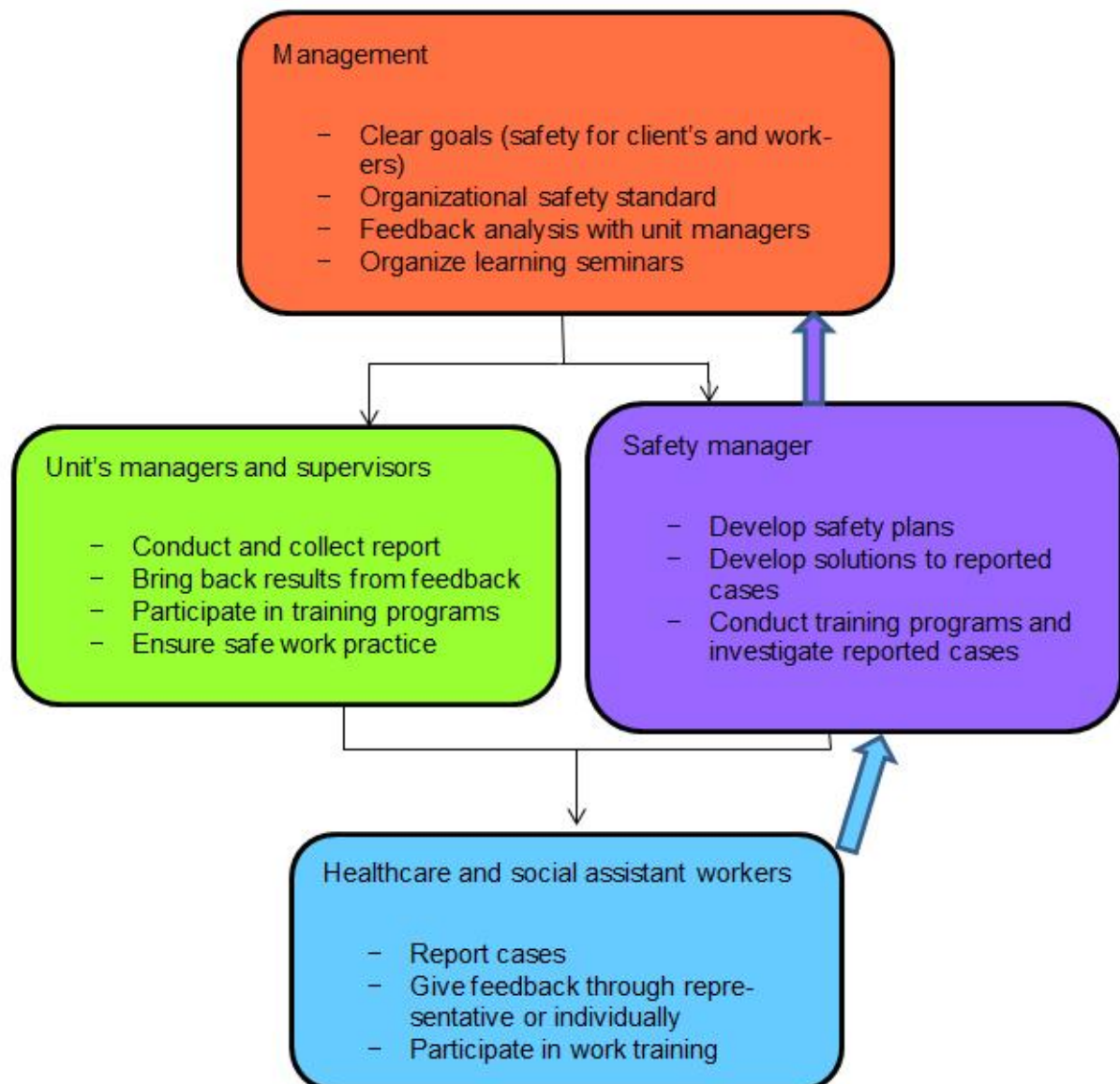


Fig 9: case organization safety management process

Furthermore, she elaborated that the management of her organization considers and takes safety for everyone (workers and client) very seriously and that, they even have a safety manager whose sole responsibility is safety coordination, and developing safe working environment for all. According to her, a full breakdown of safety process orientation is given to new workers before they begin their first day work with organization and also, at least once a year safety training session is held in which worker participate and the safety manager normally head such meeting. Moreover, she stressed and explains their incidents reporting and feedback coordination process as seen in fig 10 below.

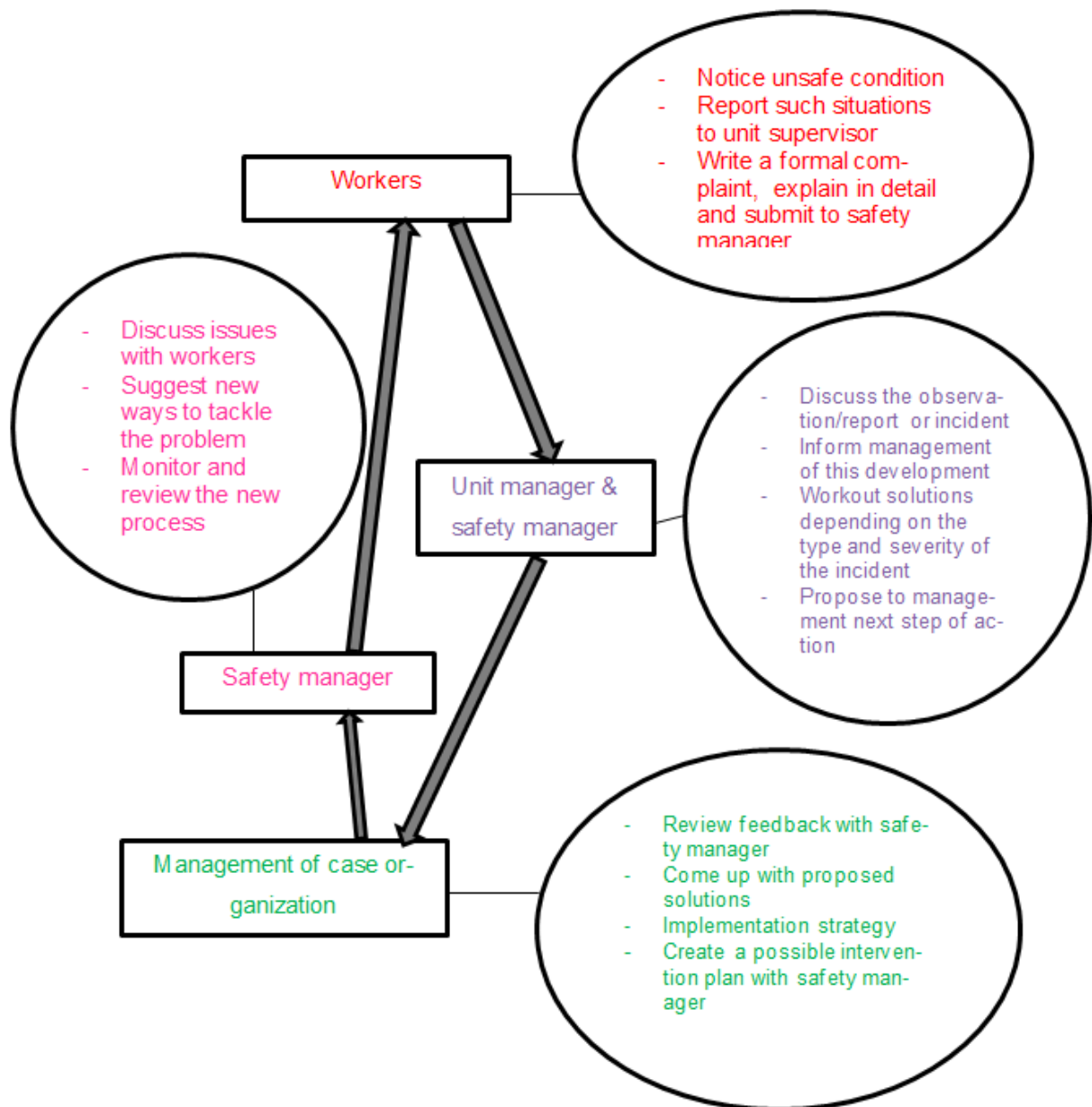


Fig 10: Case organization hazard incidents reporting and control cycle

6.3 Key Synergies of findings between current state safety practice of case organization, SAQ results and proposed framework

The feedback discussion also focused on the following occupational safety hazards namely:

Ergonomic: On ergonomic factors, the housing manager stated that their organization employ the use of physiotherapist in training of nurses and social assistants on equipment usage and handling (Lifting equipment's and also ergonomic positions) when a new equipment arrives as they always do. Further trainings are passed on to new and returning working by the nurses and social assistant earlier trained by the physiotherapist.

On the SAQ results and proposed conceptual framework, she would propose to management to consider a more periodic ergonomic training course for workers, since the SAQ results showed that they were below the recommended standard. A more proactive approach in consultation of worker often on ergonomic tool and equipment uses and applications would also be considered.

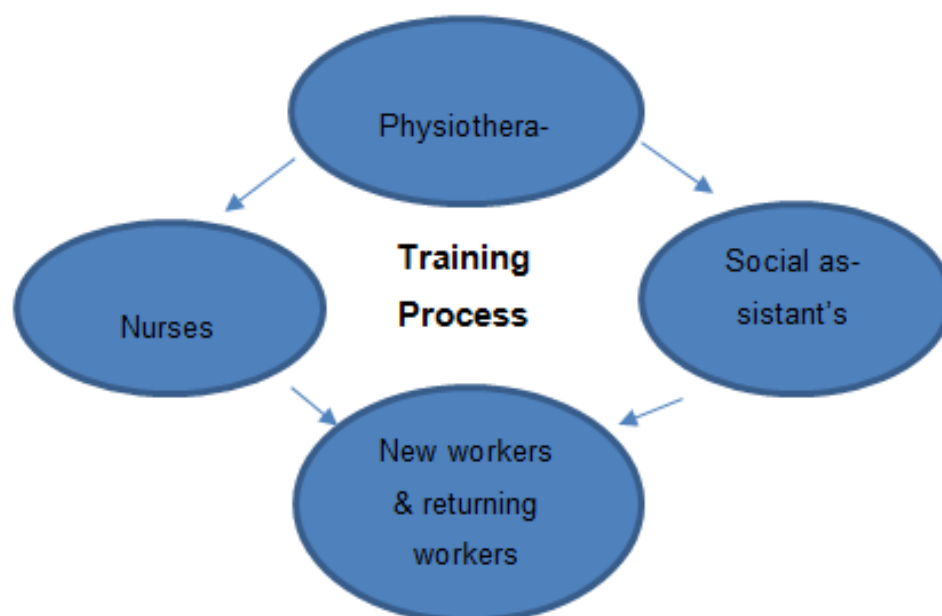


Fig 11: case organization ergonomic training and orientation process

Physical: The housing unit manager also explained that, there are sometimes cases of physical attack and verbal abuse by client to workers and that her organization has a zero tolerance for such behavior however, these behaviors are sometimes inevitable. Workers are encouraged to report and when such report is made, safety manager investigate the case and also consult the affected staff and client separately to clarify the situation.

On the SA results and also conceptual framework proposed, she emphasize that more needs to be done on workers training as suggested by the framework, so that workers can be more vigilant and observant in certain situation, so as to be able to avoid unsafe situation like physical or violent attack before they become incidents, although she point out it doesn't always work that way. On support for workers, she said a new support system is currently been developed at the moment, but the old system in place was when situation of occurs, depending on the type and severity, the worker involved is normally given some days off from work to recuperate even though it may not physical injuries.

Chemical: the housing unit manager, also said they don't use much, as reflected in the SAQ results on chemical issues having the lowest points. Their cleaners are contracted and they handle much of the chemical issues there.

Psychosocial: Case organization has a good model for handling such cases as reflected from the SAQ results. These include psychological therapy for workers, good working environment and sometimes, provision of free extra-curricular activities for worker (vapaa-ajan harrastus setelit). Work shift are well organize so worker can have time for family and friends. On SAQ result and proposed framework, she said the support is already there and working well, but it could be better.

Biological: Her organization employs the strategy of prevention and professionalism, although not all staffs or worker are professional she said as in the case of many social assistants, who may not any knowledge on infection and disease transmission prevention. However, trainings are provided as best several times in a year. The use of disinfectants is actively encourages for all staffs and also disinfectants are place on most corners of the housing units so worker can make use of them.

Furthermore, seasonal sickness like flu which is transferable, workers are encouraged to use facial masks and so take sick leaves if they have symptoms of flu so as to curtail the transmission to others. More serious and contagious diseases like stomach flu, infected clients are somehow isolated and infected workers take sick leave, in order to curtail the spread; however, workers still work with them, but more precautions are taken. Hand washing is compulsory and mandatory for all workers.

On SAQ results and conceptual framework suggested, she thinks communication is a major issue when it comes to biological factors as proposed in the framework, effective information flow and active communication process can help workers to coordinate events and happenings within their units as illness from biological dimension and ergonomic dimension account for the highest reason for sick leave from workers.

6.4 Final Proposal for Occupational Safety Framework and Process

The final framework takes into consideration facts and points taken from the feedback analysis of case organization and also from the conceptual framework proposed. This final framework takes a more practical and less theoretical look at safety management and how it could be enhanced for case organization. Fig 12 below summarizes the final framework.

Organizational leadership (management)

Involvement of management leaderships in safety coordination and management would mean establishment of clear safety policies for the entire organization. Therefore, establishment of an active workers consultation and involvement at all levels of decision making that deals with overall safety of workers. Enforce assignment of responsibilities and authorities from the top management down to lower cadre of workers. Ensure effective accountability for managers and supervisors at all levels of the organization as regards safety management and process. Finally, creation of concrete safety training programs, evaluation and monitoring.

Worker's involvement (consultation)

Workers should be encouraged to take active parts in safety meeting, seminars and workshops conducted by the organization. There should be routine observation and conduct on units or work areas, routine conduct, analysis of safety hazard along each step of work process and always, emphasis should be maintained on safe work practice at all times.

Active participations in developing, and revising safety rules and regulations and also, active involvement as trainer for new and returning workers. Workers should be encourage to report all near-miss accident and partake in investigation process and finally, Involvement in finding solution to correct hard cause by unsafe practice

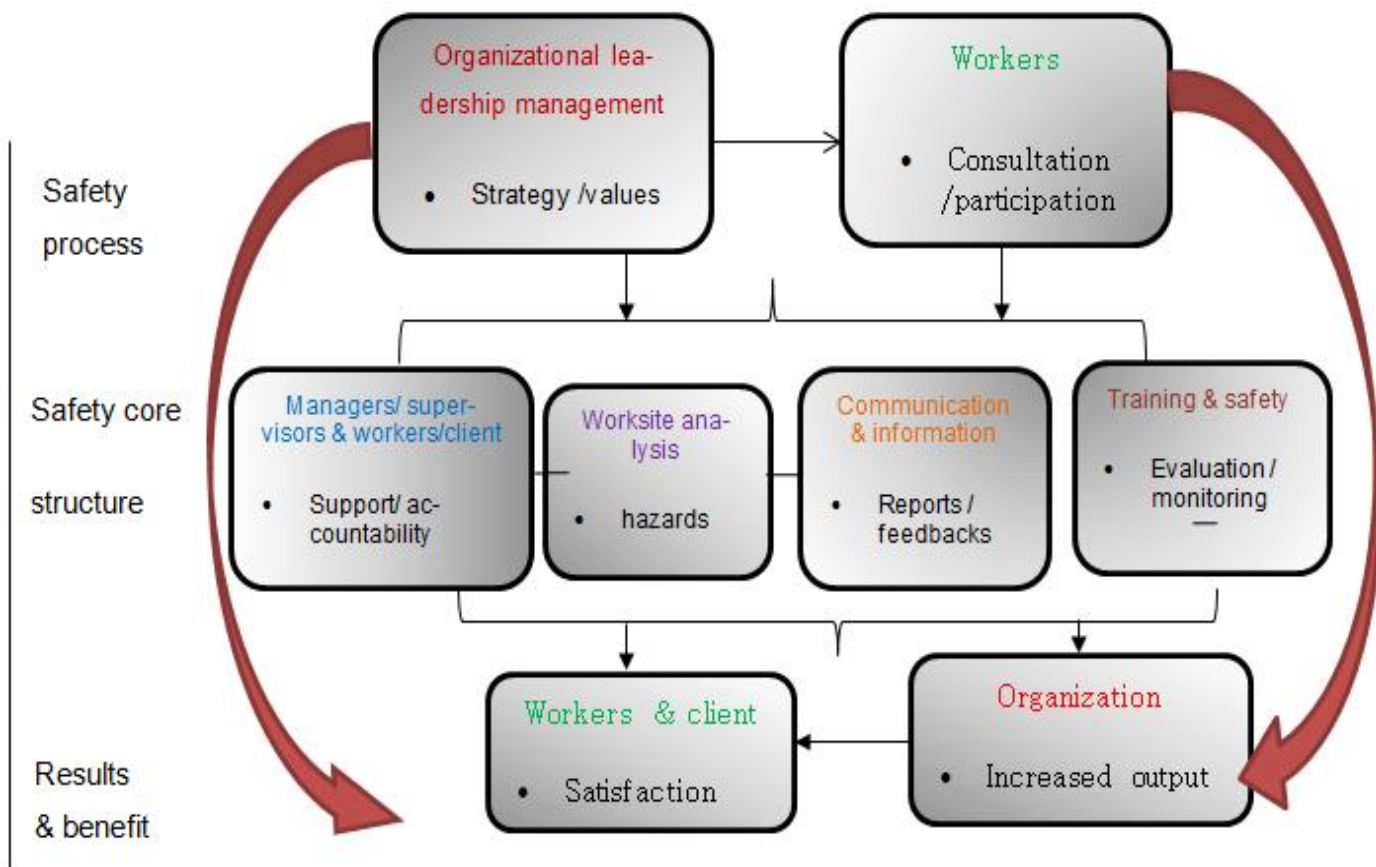


Fig 12: A proposed final conceptual framework for safety management for case organization

Workplace Analysis (Occupational hazards)

Workplace hazards evaluation should be periodic and extensive; there should also be workplace health and safety surveys periodically where proper evaluation and proper analysis of accidents, near-misses reports and also reports of dangerous situation or risk level behavior are evaluated. Analysis and evaluation of potential hazards issues in new start-up units, new tools or equipment's, material or process should be address comprehensively.

Communication and Information Management

Communication openness about hazard and risk present in work areas should be communicated appropriately to management and workers alike and proper feedback management **and** reporting system for free flow or events reporting and also communication of feedbacks. Incidents and conflict resolution approach and communicating errors and near –misses must be address in a timely manner so as to pass a message of management concerns to workers. Information obtained through incident investigation should always be updated and revived and use in training programs

Prevention and Control

Work shift should be designed to eradicate and reduce vulnerability to hazards i.e., more than one worker should be assigned to client with aggressive tendencies. Proper training on usage of hand gloves and mask in case of infections transmission **and also** usage of personal protective equipment like safety shoes

Safety and Health Training

Safety and training should involve identification of training needs and periodic safety trainings and orientations for both old and new workers. Evaluation of training module and its effectiveness should be carried out every once in a while in order to validate their effectiveness.

Benefits

Safety focus	Healthcare workers	Clients/ patients	Organizations management
Ergonomics	Increase in job satisfaction and retention. *Decrease in musculoskeletal injuries *Fewer injuries and sick leave and also reduction in restricted work	Increase in safety, fewer or near absent in falls. *improved outcomes	Increase workers retention and clients/patient satisfaction. *decrease in sick leaves. *
Biological	Reduction in infection and transmission rates from client to workers ,vice versa	Less infection and transmission rate from worker to clients, vice versa	Increase in safety practices. *Fewer sick leaves and also lesser
Physical	Reduction in attacks, injuries and violence at work. *Improved skilled and teamwork	Less injuries and incidence. *less use of restraint and reduced provocations	Improved safety culture
Psychosocial	Decrease burnout and stress, reduction in fatigue and mental strain	increase in satisfaction	improve worker-client and organization cooperation
Communication and information	Improve communication and teamwork *lesser injuries and accident preventions *Improvement in early detection of unsafe situation	fewer hazards and near misses	Improved safety atmosphere

Worksite analysis	safe work environment *Help in quicker response in decreasing unhealthy situations	Improved safety and increase satisfaction	Create and improve intervention opportunities before the occur *raw information and data
Health safety and training	Increase in job morale *increased in quality of work life *increased cooperation between workers *increase performance and professionalism Increase quality of life *increase satisfaction and reduction in violence/frustration		Increase compliance and conformity with organization safety standards *improved efficiency *Decreased morals and absenteeism *lesser work related illnesses

7 Conclusions

The results of this research work suggest that Invalidiliitto Järvenpää healthcare center and nursing homes has some specific improved areas of safety for workers, however they are still areas for improvement with regard to health and social assistance workers perception of safety management on multiple areas. In addition, SAQ's survey for this research may serve as a beginning measure of safety culture in other healthcare center and nursing homes in other parts of Finland, given the consistencies and similarities between areas surveyed in this research. The closeness in difference between this study result and the Original SAQ may reflect the progress the Finnish health ministry and healthcare policies makers in Finland have fought hard to make healthcare workers safety priority a serious concern.

7.1 Summary

This thesis objective focuses primarily on improving Occupational safety management for Healthcare and Social Assistant service providers. This was achieved by building a proposed safety framework that will enhance safety management systems in place in the case organization. This healthcare center and homes are dependent heavily on safety management process, attitudes and orientations of its care workers and staffs. Therefore, healthcare and social assistant workers (HCSA) safety concern are crucial to the quality of patient care and remains a challenge to countries at all levels of development. However, there is still a popular acknowledgment in the importance of establishing and maintaining a high standard safety culture for patients/clients in these primary care organizations, as against that of its workers. The purpose of this study was to investigate safety management and workers opinions about of safety culture in Invalidiliitto Järvenpää healthcare center and nursing homes. To find if safety concerns affects their ability to carry out their duties with client, and finally, to create a safety framework to better enhance safety awareness and culture for HCSA workers and managers in the case organization.

Safety attitude questionnaire were used for collecting information's, 72 questionnaires were distributed to healthcare workers and social assistants at work present during the distribution period and collected after three weeks. After completion of data collection, in keeping up with the analytic technique of the originators of the SAQ calculation of safety attitude for each of the safety factors.

A survey questionnaire was sent to healthcare and social assistant worker in Järvenpää Invalidiliitto health care center and nursing homes in Järvenpää-Finland. 72 questionnaires were sent to healthcare and social assistant worker, and 72 questionnaires were returned, giving it a 100percent response rate. Data were analyzed using descriptive statistical percentages and frequencies were used to analyze the questionnaire item. The questionnaires items were arranged according to safety attitude, culture and perceptions dimensions each item was intended to measure. Results showed that healthcare is a stressful profession and that the perceived personal safety of its workers constructs strong environmental, social, physical and biological stressor which plays an important role in the constant accident and mishaps that takes place in this area of healthcare.

Future research should be directed to the construct of perceived personal safety arising from healthcare and care homes working environment. Also it's worth's study on how stress/burnout and other unsafe practice/hazards could be alleviated or prevented with proper safety process and management. Moreover, it would also be worthwhile to examine if the results reported in this study herein can be replicated in other professions within the healthcare industries and/or other professions in other high risk working industries.

7.2 Next Step for Case Organization

To date, no research has been done on healthcare and social assistant's workers about safety management and safety culture in general in Invalidiliitto Järvenpää healthcare center and nursing homes in Järvenpää Finland. So the result of this study provides new insight about safety culture all together in one of Finland's leading healthcare and nursing homes service providers' organization.

The next step for Invalidiliitto oy are some of the following, some have already been implemented.

- Strengthening and further integration of worker safety concept into new workers orientation manuals is already been cooperated as part of worker continuous training programs.

- Ensure safety check and evaluations should already have been introduced and they are also making safety culture for all a top priority for both management and stakeholders.
- Expert committee should be setup to assess and create short and long-term strategies for effective implementation of workers safety culture.
- Ergonomic dimension and chemical usage had the lowest score of all the areas surveyed, this could simply mean that, even though all the safety rules and regulations are in place, but their implementation and management may not have actually been followed up properly or at best ineffective.
- Safety processes should be more pragmatic and enforced from the very top (management level) to the bottom (workers). This may require the formulation of policies, monitoring and implementing of policies to promote an all-inclusiveness (everybody) in better safety process and culture practice.

7.3 Evaluation

The report and interpretations from this study can be evaluated in the light of the following. Healthcare and social assistance workers (HCSAW) who participated in this study were all from the same organization and thus prevent generalizability to other organizations or specialties within healthcare. Furthermore, not all subscales on the SAQ were adapted and used in this study, which in a way limits description of safety management and attitude to only those areas measured by subscales.

Moreover, this was the first use of a SAQ survey in case organization and may have influenced results and response all together. Finally, further research and development as indicated by reliability results and score in some area in the SAQ may differ from others based on the number of questions in it. However, Pallant (2007) stated that Cronbach alpha values are dependent on the number of items in the scale.

7.3.1 Outcome as Compared to Thesis Objective

The goals of the thesis was to investigate and understand healthcare and social assistant worker safety management in Invalidiliitto Järvenpää healthcare center and nursing homes, and then build a conceptual safety management framework to enhance current safety practice for its workers. The final outcome shows that case organization

do have a good management process in place, but some areas of it safety process isn't performing as expected as shown in the SAQ questionnaire results

Furthermore, from the original thesis objective, workers safety management was based on occupational hazards derived from current literature analysis which included: (a) Ergonomic use, (b) Physical attack from client, (c) Chemical use, (d) Biological risks, (e) Psychosocial factor, however the final outcome shows that occupational hazards are just one part of the total safety management cycle. While the final outcome from both feedbacks gotten from case organization stakeholders and from the proposed conceptual framework show quite an elaborate picture of a safety system, which comprises of, Leadership involvement, Consultation with workers on issues (workers active involvement in the process), Worksite analysis (occupational hazards), Communication and information management and Health safety training and more.

Finally in comparing the original thesis against the final outcomes will mean looking at safety management from a broader perspective like safety core structure, process and results/benefits as the final outcome suggest and not just based on occupational factors as was used in the SAQ survey. However, this is the first such research to be carried out in the case organization as such; research in the future may be more inclusive of a broader criteria's.

This research process is been considered as the first step towards change in case organizational safety attitude and management.

7.3.2 Reliability and Validity

The trustworthiness and dependability from this qualitative research work can be defined or investigated based on its rigor and quality (Stenbacka, 2001; Davies & Dodd; Lincoln & Guba, 1985). Lincoln and Guba (1985) suggested that qualitative research should be evaluated based on research credibility criterion and persistent observation if appropriate. Gubas postulated four criteria in investigating reliability and validity in any give research and the criteria's are.

Triangulation through the use of different methods and different types of informants may possibly be different for surveys site. Triangulation often involves using different methods in research, most specifically the use of focus group as in the case of this

study. Other methods involves interviews and sometimes observations from which important research strategies are formed and most importantly a support document explaining and scrutinizing the entire process should accompany any method used . According to Guba (1989) and Hunter (1989), using different methods types is very beneficial and it also helps to reward or compensate for personal or individual limitations any of the method used may encounter during research process.

In this study, focused group method was used by distributing of safety altitude questionnaires to healthcare and social assistant workers from same organization, with similar working environment but different departments. A support document in the case of this research was a cover letter provided each member of the focused group. This cover letter or supporting document explained the study purpose and also guaranteed total privacy for member .i.e. no names were required on the questionnaire thereby providing anonymous for those who answered the questions in the SAQ.

Credibility is one fundamental issue in research for assessing and measuring the outcome, .i.e. does the research answer “How accurate are the finding or result with the situation on the ground? Guba and Lincoln argue that’s making sure findings are credible is the most important issue in guaranteeing overall research trustworthiness (E, G Guba, 1985). According to Guba (1985), usage of a well-established method in research investigation can boost trustworthiness but not total credibility.

In this study, qualitative research method was employed and a well-established questionnaire template (SAQ) was used lending credence and credibility to this research and also in conformance with Yin (1994) who suggested that lines of questions utilized in the questionnaire must be in conformity with the subject matter and also that data gathering and analysis realized, where possible should be compared with similar studies result realized from past work (R, K Yin, 1994). Again in this study, items from the original SAQ questionnaires were used as it relates to occupational safety issues and more importantly, results data’s where compared against the original benchmark in safety domain.

Familiarity with case organization should be develop as early as possible, with firm acquaintance between the researcher and case organization even before the first phase of the study begins. This can help build unique bridges of familiarity all parties involve. According to Lincoln and Guba (1981) and Erlandon et al, 1993, they recom-

mended lengthen and continuous engagement between researcher and participants in order create a relationship and partnership of solid trust.

Therefore in this study, there was already a strong case of familiarity between case organization and the researcher and this relationship helped in enhancing that relationship even farther as most of the focus group participants were direct work colleagues. However, Guba (1985) and silvermann (2000) caution against the notion where over familiarity could affect and influenced the research emotion and sense of professional judgment in carrying the originally stated assignment

Random sampling of research participants or informants enhances validity and acceptability of qualitative research. As Preece states, random sampling ensures that any unknown factors are spread equally within the sample population(R, Preece, 1994).Furthermore, random sampling may or may not be peculiar to the nature of research, for example as stated Stake in multiple scenarios where samples show same or different characteristics, repetitions and variety, researchers are required to have deeper knowledge of a bigger and more complex group understanding (R.K, Stake, 1999; pp: 236-247). However, random sampling wasn't used in this study, but every participant present during the phase of questionnaire distribution was involved, however, they were all from different departments within the same organization. Therefore, it could be validated as random sampling because participants were representing different groups of workers within same organization.

Based on reliability and validity criteria by Lincoln and Guba (1985), this study ensured the following steps:

First, *credibility* was ensured, as this research use a credible and universally recognized and acceptable method in collection and analysis of data.

Pros: 1. A recognized research questionnaire was developed and used (SAQ) in data collection 2. Anonymous was employed in the SAQ questionnaire, thus guarantying participants of privacy 3. Results and findings were discussed with case organization, feedbacks and criticism collected influenced the final outcome framework.

Cons: 1. No personal interviews were conducted with any participants, thus some information may have been left out or gain during that process 2. Not all items on the

Original SAQ were used in this research, so further research could include more categories and items on the SAQ questionnaires.

Second, Triangulation via use of different methods, different types of informants and possibly different site for survey was partly used, in that all participants were from one organization.

Pros: Different class and categories of participant were used for the research: i.e. nurses, personal and social assistant workers, physiotherapist and occupational therapist. This would have given the research a wider acceptance and credibility as different professional were involved.

Cons: All participants were from one organization, although there was interested to use other site and organization with similar clients and patients. This would have increased the results credibility of the research as organizational culture or shared similarity in same work environment would have indirectly or directly affected the SAQ result.

Third, random sampling of individual participating in the research wasn't employed in this research as only participants present at work at the time of SAQ questionnaire distribution were used.

Pros: this gives more credible results as, it present a broader scope and clear opinion of participants.

Cons: Not every participant present during questionnaire distribution period or that answers the SAQ questionnaires plays an active role in the day to day lives of clients, there making some of the result credibility weak

Fourth, familiarity with case organization help the researcher as, it was easy taking contact with the organizational head and discussing about the topic and objectives of research.

Pros: Trust was easily built as participant and management of case organization were familiar with the researcher

Cons: Familiarity could have also in a way affected the credibility of the result

7.3.3 Evaluation of Validity and Reliability of This Study

Fundamental question of evaluating validity and reliability of research work can be drawn from Reswell (2000) and Smith (2000) ideas on how to appraise research quality. Their ideas were that a research quality should be able to answer the following questions

- Is the research significant to the organization; The research was significant for the case organization, as results and feedback seem to agree with certain factors and areas the case organization has been trying to develop before i.e. areas of ergonomic and training, according to the case organization housing manager, a huge percent of all sick leave was sickness arising from ergonomically related problems. Hopefully the case organization can freely test the suggested framework approach in practice in order to enhance improvements in those areas.
- How can the study be improved; the study can be improved by expanding the items on SAQ questionnaires to include items like job satisfaction, overall safety climate perception, safety management and processes, working conditions, Stress recognition, safety culture and climate. Further research should also take involves use of interviews as well, as this may help bring about new ideas. These were some limitation for this research which the researcher thought about earlier but had to narrow the focus more on major occupational factor affecting safety management in the case organization.
- Does the outcome show any connection or correlation between research and the organization; The outcome shows significant connection between the research and the case organization because from feedback received from case organization shows area that were needing much attention, were actually known to the organization
- Does data in anyway help answer the research question; the SAQ data and results received, helps the case organization in identifying some of its safety lapses, weakness and strengths and also contributed in creating the suggested framework provided to the organization at the end of the research
- Analyses of *reliability* of internal consistency were examined for the modified safety attitude questionnaires (M-SAQ) used. Since questions were both positively and negatively directed, negatively worded questions were first reverse coded so that a higher score would show a more positive result response in all

cases. Beck and Polit (2005) recommend a minimum cronbach alpha 0.70. Developer from the agency for health research and quality survey reported that the SAQ has a strong acceptable internal consistency with Cronbach alpha coefficient for all the 12 section (49 questions) ranging from 0.63 to 0.84. In this research work, using the modified SAQ, cronbach alpha coefficients for the 9 section ranged from 0.39-0.64. the cronbach alpha coefficient for the overall survey in the research was 0.74.

As a summary, the major weakness and limitation in this research were the fact all participants were from same organization, also language was a challenge, as almost all participant didn't have English as their mother tongue however understood enough to answer the questionnaire Furthermore, the researcher personal experience and emotion as a victim of physical violence himself from same organization could have affected the outcome of the research process. However, all results and finding were presented as collected from SAQ questionnaire; therefore the suggested framework could be tested in practice by the case organization and hopefully if implemented, will improve the safety management standards in their organization.

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Appendix 1

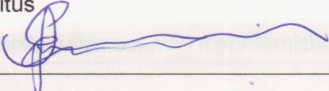
Research permit

Invalidiliiton Järvenpään koulutuskeskus		TUTKIMUSLUPAHAKEMUS		1 (3)
Hakijan tiedot	Nimi James Edorisiagbon	Henkilötunnus		
	Katuosoite	Postinumero	Postitoimipaikka	
	Puhelin	Sähköpostiosoite		
	Tutkimuslaitos, oppilaitos tai muu yhteisö Metropolia AMK	Hakijan tehtävä/virka-asema Opiskelija		
Tutkimuksen ohjaaja	Nimi Thomas Rohweder	Oppiarvo ja ammatti Master's degree in health business management (toimintaterapeutti YAMK)		
	Toimipaikka ja osoite Metropolia AMK, Bulevardi 31 00180 Helsinki			
	Puhelin +358207835539	Sähköpostiosoite thomas.rohweder@metropolia.fi		
Tutkimuksen laajuus	Tutkimuksen laajuus ov/op/sivumäärä tms. 30ov			
	Tutkimus kuuluu osaksi suorittamaani koulutusta/tutkintoa/opintoja YAMK Tutkinto (maisteri)			
Päiväys ja allekirjoitus	Paikka ja päivämäärä 21/5/2013 Vantaa	Allekirjoitus		
Esittelijä täyttää (esimies)	<input checked="" type="checkbox"/> Puollan tutkimusluvan myöntämistä	<input type="checkbox"/> En puolla tutkimusluvan myöntämistä		
	Perustelut - aihe tälle - toimi edelle annettu koulutus			
Päiväys ja esittelijän allekirjoitus	Paikka ja päivämäärä 21/5/2013	Allekirjoitus		
Päätätjä täyttää (Rehtori)	Tutkimusluvan myöntäminen			
	<input type="checkbox"/> Tutkimuslupa myönnetään		<input type="checkbox"/> Tutkimuslupaa ei myönnetä	
	Myöntämisen ehdot <input checked="" type="checkbox"/> Hakijan tulee toimittaa valmis raportti tutkimuksen valmistuttua ja esitellä tutkimuksen tulokset suullisesti <input type="checkbox"/> Muut ehdot			
Perustelut myöntämättä jättämiselle				
Päätäjän nimi Tina Meriläinen				
Päiväys ja päätäjän allekirjoitus	Paikka ja päivämäärä 22/5/2013	Allekirjoitus		
Tiedottaminen päätöksestä	<input checked="" type="checkbox"/> esittelijälle <input type="checkbox"/> rehtorille	<input checked="" type="checkbox"/> tutkimusluvan hakijalle <input type="checkbox"/> koulutusjohtajille	<input type="checkbox"/> muulle henkilölle, kenelle?	



Tutkimuksen tekijä/ -t	James Edorisiagbon
Tutkimuksen nimi	Turvallisuushallinta Terveystuotopalveluiden Tarjoajille
Tutkimuksen tausta	Opinnäytetyössäni pyrin selvittämään sitä, millaisia käsityksiä, mielipiteitä ja näkemyksiä perushoidon tuottajilla (mielenterveys-, vammais- ja kuntoutushoidon työntekijöillä) on työpaikkansa turvallisuudesta. Tämä tutkimus on saanut alkunsa siitä, että melkein kaikki aikaisempi terveydenhoitoympäristön turvallisuuskäytäntöjen tutkimus on keskittynyt pelkästään potilaan/asiakkaan turvallisuuteen eikä työntekijän omaan terveysriskeihin ja turvallisuuteen. Niinpä tämä opinnäytetyö tarkastelee ja tutkii työntekijöiden omaa näkemystä heidän henkilökohtaisesta turvallisuudestaan ja siitä, miten tämä vaikuttaa heidän kykyynsä hoitaa työnsä kunnollisesti tai ollenkaan ja jos mahdollista luoda ehdotus siitä, miten voisi paremmin edistää turvallisempaa työympäristöä heille.
Tutkimuksen tavoitteet ja tutkimusongelmat	<p>Turvallisuusasiat perusterveydenhuollon palveluorganisaatiossa on pidetty yhtenä tärkeimmistä asioista. Vaikuttaako turvallisuusasiat:</p> <ul style="list-style-type: none"> -Korkeisiin sairaspöissaolo määriin -Motivaation puutteeseen -Väkivallan riski -Virhemahdollisuuksiin -Alhaiseen tuottavuuteen /heikkolaatuiseen hoitoon? <p>Tämä tutkimus vastaa kysymyksiin löytää tasapaino turvallisuuden, laadun ja tehokkaiden palveluiden välillä ja samaan aikaan hallita työntekijöiden turvallisuutta.</p>
Tutkimuksen aikataulu	<ul style="list-style-type: none"> • Tammikuu 2013 – Tutkimuksen ehdotus ja etiikan hyväksyntä • Maaliskuu 2013 – Viimeistele tutkimusaihe ja suunnitteluprosessi • Toukokuu 2013 – Kyselylomakkeiden rakentaminen ja jakelu • Kesäkuu 2013 – Kyselylomakkeiden kerääminen • Heinäkuu 2013 – Analyysin ja raportin kirjoittaminen • Lokakuu 2013 – Opinnäytetyön palautus ja esitys

3 (3)

Invalidiliiton Järvenpään koulutuskes- kuksen rooli tutkimuksessa (vastuut, velvollisuudet ja hyöty)	Vastuut <ul style="list-style-type: none"> • Kannustaa työntekijöitä osallistumaan tutkimukseen täyttämällä kyselylomakkeen • Jakaa kyselylomakkeita työntekijöille ja kerätä ne heiltä. Velvollisuudet <ul style="list-style-type: none"> • Antaa tutkijalle avoin pääsy työntekijöihin Hyöty <ul style="list-style-type: none"> • Odotetut tulokset voidaan toivottavasti käyttää parantamaan turvallisuutta terveydenhuoltotyön tarjoajien alalla • Luoda jonkinlainen hallinnon kehys parantamaan turvallisuuden tasoa työntekijöille • Toivottavasti ehdottaa ratkaisuja huomaamatta jääneisiin turvallisuus asioihin 	
Tutkimuksen mahdollinen rahoitus, rahoittajat ja budjetti Tehdäänkö tutkimus työajalla/vapaa- ajalla	Tutkija rahoittaa tutkimuksen. Vapaa-ajalla.	
Päiväys ja allekirjoitus	Paikka ja päivämäärä 21.5.2013	Allekirjoitus 

 Liitteenä hyväksytyt/alustava tutkimussuunnitelma

Appendix 2

SAQ Cover Letter

Hyvät hoitajat,

Olen maisteri opiskelija Metropolian ammattikorkeakoulusta Helsingistä. Teen tällä hetkellä opinnäytetyötä aiheesta: turvallisuushallinta terveydenhuoltopalveluiden tarjoajille. Tämän loppunäytetyön tavoitteena on tutkia terveydenhuollon ammattilaisten ja hoitajien henkilökohtaisia mielipiteitä ja näkökulmia työpaikan turvallisuudesta.

Pyydän teitä osallistumaan tutkimukseen ja vastaamaan tähän kyselyyn. Kyselyyn vastaaminen vie noin 10-15minuuttia ajastanne. Kyselyyn vastaaminen ei sisällä mitään riskejä, vastaukset annetaan nimettöminä ja käsitellään luottamuksellisesti. Osallistumiseenne tutkimukseen auttaa parantamaan työntekijöiden turvallisuutta.

Jos olette halukas vastaamaan tähän kyselyyn niin täyttäkää lomake ja laittakaa täytetty lomake vastauslaatikkoon, jonka olen jättänyt toimistonne. Teillä on mitään kysyttävää liittyen tähän tutkimukseen ottakaa yhteyttä minuun sähköpostitse. Sähköpostini on: james.edo@suomi24.fi.

Kiitos!


Ystävällisin terveisin

James Eedorisiagbon

Tutkija

Appendix 3 SAQ Questionnaires

1



Metropolia
Bulevardi 31, 00180 Helsinki
Toimintaterapeutti (ylempi AMK)
Master of Health Care

LOPPUNÄYTETYÖ KYSELY

Turvallisuushallinta

Terveystenhoitopalveluiden Tarjoajille

Tämän loppunäytetyön tavoitteena on tutkia terveydenhuollon ammattilaisten ja hoitajien henkilökohtaisia mielipiteitä ja näkökulmia työpaikan turvallisuudesta. Mitkä ovat työntekijöiden suurimpia huolenaiheita heidän työturvallisuutensa suhteen? Tässä tutkimuksessa haluan selvittää miten terveydenhuollon työntekijät ajattelevat ja tuntevat heidän oman turvallisuuden puolesta ja vaikuttaako se heidän kykyynsä suorittaa työnsä.

Laittakaa rasti ruutuun, joka kuvaa omaa mielipidettänne, kiitos.

PERUSTIEDOT

1. Sukupuoli Nainen Mies

2. Ikä

3. Siviilisääty

4. Ammatti

5. Kuinka kauan olet ollut nykyisessä työssäsi?

0-1 1-5 5-10

6. Oletko saanut minkäänlaista turvallisuuskoulutusta, kun aloitit työsi nykyisessä työpaikassasi?

Kyllä Ei

Jos kyllä, niin kuinka kauan 1pv-1vk 1vk-2vk 2vk-1kk

7. Mikä on sinun asemasi nykyisessä työpaikassasi?

Työntekijä Vastaava ohjaaja Esimies

8. Kuinka kauan olet työskennellyt tässä ammatissa?

- 0-1v 1-5v yli 5v

TURVALLISUUS KÄSITYKSET

9. Onko asiakkaiden turvallisuutta koskaan vaarannettu vain siksi, että työt saadaan tehtyä?

- Kyllä Ei Joskus En osaa sanoa

10. Tuntuuko sinusta joskus, että esimies välittää asiakkaiden turvallisuudesta enemmän kuin työntekijöiden?

- Kyllä Ei Joskus En osaa sanoa

11. Onko sattumaa, että vakavia vaaratilanteita ei ole tapahtunut työpaikassasi?

- Kyllä Ei Ehkä En osaa sanoa

12. Meidän toimintaprosessit ja systeemit ovat hyvät estämään onnettomuuksia tapahtumasta

- Kyllä Ei Ehkä En osaa sanoa

13. Tuntuuko, että sinun on pakko työskennellä asiakkaan kanssa, vaikka asiakkaan kanssa voi olla turvallisuusongelmia?

- Kyllä Ei Joskus En osaa sanoa

14. Kuinka usein olet osallistunut työpaikkasi riskiarviointiin?

- Kerran Joskus Usein En koskaan

15. Tuntuuko sinusta, että turvallisuutesi on tärkeää johtajille?

- Kyllä Ei Ehkä En osaa sanoa

16. Onko työpaikallasi otettu työturvallisuus kulttuuri huomioon?

- Kyllä Ei Vähän En osaa sanoa

17. Arvioi työpaikkasi turvallisuus asiakkaalle (numero)

1-5

Arvioi työpaikkasi turvallisuus työntekijälle (numero)

1-5

ERGONOMIA/KEMIKAALI/BIOLOGIA/FYSIKAALI RISKIT

18. Käytättekö ergonomisia välineitä työssänne?

- Kyllä Ei Joskus En osaa sanoa

31. Uskotko saaneesi mitään sairautta tai tartuntaa asiakkaalta? Kyllä Ei

Jos kyllä, kuinka usein se tapahtuu?

Kerran Usein Joskus En osaa sanoa

32. Oletko koskaan kokenut väkivaltaa asiakkaalta työpaikallasi?

Kyllä Ei Joskus En osaa sanoa

33. Tuntuuko sinusta, että työpaikallasi mahdollisesti voi tapahtua väkivaltaa?

Kyllä Ei Ehkä En osaa sanoa

34. Onko sinun tai työkavereidesi kimppuun koskaan hyökätty tai uhattu fyysisesti?

Kyllä Ei Joskus En osaa sanoa

Jos kyllä, niin kuinka usein niin tapahtuu? Kerran Joskus Usein

35. Kuinka huolissasi olet työpaikkasi väkivaltaisuudesta, luuletko että se vaikuttaa mielentilaasi?

Kyllä Ei Vähän En osaa sanoa

TURVALLISUUS HALLINTA/ RISKIRAPORTOINTI

36. Onko työpaikallasi turvallisuus menettely järjestelmää (onnettomuuksia ja vahinkoja varten)?

Kyllä Ei En osaa sanoa

37. Onko sinua kannustettu ilmoittamaan jos jokin vahinko tai onnettomuus tapahtuu töissä?

Kyllä Ei Joskus En osaa sanoa

38. Kuinka usein työpaikallasi tehdään turvallisuus/riskien arviointi liittyen raportteihin?

Viikoittain Kuukausittain Vuosittain Ei koskaan

39. Tuntuuko sinusta, että olet vapaa puhumaan huolistasi liittyen turvallisuusasioihin?

Kyllä Ei Joskus En osaa sanoa

Jos kyllä, niin luuletko että se vaikuttaa sinuun negatiivisesti työpaikallasi?

Kyllä Ei Joskus En osaa sanoa

40. Tuntuuko sinusta, että työntekijöiden turvallisuus on etusijalla esimiehillesi?

Kyllä Ei Ehkä En osaa sanoa

41. Tuntuuko sinusta, että terveytesi ja turvallisuutesi on tärkeää?

Kyllä Ei Ehkä En osaa sanoa

PAHOINPITELYT/VAHINGOT

42. Oletko koskaan loukkaantunut työpaikallasi?

Kyllä Ei Joskus En osaa sanoa

Jos kyllä, niin miten?

Asiakkaan toimesta Välineiden käytöstä En osaa sanoa

43. Oletko raportoinut näistä loukkaantumisista töissä?

Kyllä Ei Joskus En osaa sanoa

44. Esimies ottaa työntekijöiden loukkaantumiset (isot tai pienet) vakavasti

Kyllä Ei Joskus En osaa sanoa

45. Onko sinua koskaan loukattu suullisesti työpaikallasi?

Kyllä Ei Joskus En osaa sanoa

46. Oletko koskaan tehnyt työvirhettä asiakkaan kanssa, koska olet ajatellut omaa turvallisuuttasi ja terveyttäsi?

Kyllä Ei Joskus En osaa sanoa

47. Mikä on sinun yleinen mielipide turvallisuudesta työpaikallasi?

Hyvä Huono Tyydyttävä En osaa sanoa

48. Kuinka tärkeitä turvallisuus näkökulmat ovat työpaikallasi?

Tärkeä Ei tärkeä En osaa sanoa

49. Vaarantavatko johtajat työntekijöiden turvallisuuden tuottavuuden takia?

Kyllä Ei Joskus En osaa sanoa

Kiitos vastauksistanne!

Appendix 4

SAQ: Demographic results

Table 1. Socio-demographic characteristics of healthcare and assistant personnel who participated in the SAQ in the case Organization

Table 1. Socio-demographic characteristics of respondents		N	Percentage
Gender	Male	16	22.2 %
	Female	56	77.8 %
Age	19–34	32	44.5 %
	35–49	25	34.7 %
	50–69	15	20.8 %
Marital status	Single	24	33.3 %
	Married	33	45.8 %
	Divorced	15	20.8 %
Duration of work	0-1	18	25 %
	1-5	30	41.7 %
	5 and above	24	33.3 %
Level of education	Nonprofessional certificate-social assistants	26	36.1 %
	Diploma – practical nurses	39	54.2 %
	Degree (university) - Physiotherapist, Occupational therapist	7	9.7 %
Job title	Workers	65	90.3 %
	Supervisors / managers	7	9.7 %

Table 1 summarizes the social-demographic characteristics of the respondents. It indicates that a large majority of the respondents were female (77.8%). The minimum age of respondent was 19 and the maximum 63 and most respondent were between age 19 and 34 (44.5%). The table also showed that majority of the respondent (41.7%) have over 1 year job experience, and more than half of the respondents were practical nurses (54.2%). Finally, almost all of the respondents were workers (90.3%) with a (9.7%) rate of supervisors and nursing managers.

Appendix 5

SAQ: Results of Overall Perceptions of Safety

Table2. Show the result of response of workers perceptions and overview of safety based on the SAQ questionnaires.

Questionnaires Questions	Positive response	Negative response	Percentage (%) positive response rate
	Freq	Freq	
1. Positively worded question: Patient safety is never sacrificed to get the work done	48	24	67%
2. Positively worded question: Our process and systems are good at preventing accidents and errors from happening	43	29	60%
3. Positively worded question: Management takes workers safety seriously	57	15	79%
4. Negatively worded questions: Is it by chance that serious accidents and mistakes don't happen here?	45	27	63%
5. Positively worded question: I feel very safe working here.	48	24	67%
6. Negatively worded question: Do you feel patient safety and wellbeing is of more concern to management than workers own?	30	42	42%
Percentage of all positive response rate of overall safety management section			63%

Table 2 below summarizes positive responses for items in the section of Overall Perceptions of Safety. As seen from Table 2, this section had 6 questions, four positively worded (strongly agree/agree) (1), (2) and (3), and two negatively worded (strongly disagree/disagree) (5), and (6). The overall percentage for positive response rate for this dimension was 63%.

Appendix 6

SAQ: Results from Ergonomic Safety Dimension

Table 3 summarizes results responses in the Ergonomic dimensions from the SAQ questionnaires

Questionnaires Questions	Positive response	Negative response	Percentage (%)positive response rate
	Freq	Freq	
1. Positively worded question: we use ergonomic product and we were properly trained on how to used them	53	19	74%
2. positively worded question: we have good safety systems for usage of these equipment	44	28	61%
3. Negatively worded question: do you presently feel bodily discomfort which you feel could have arisen from your work?	20	52	28%
4. Negatively worded question: have you had back, neck or waist pains in the last 12 months?	15	57	21%
5. positively worded question: We all get proper induction and training when we start our jobs and also get trained in safety procedure in our job units	42	30	58%
Percentage of all positive response rate for Ergonomics dimension section			48%

This section had three positively worded question (Strongly agree/agree or most of the time/always) and 2 negatively worded question (Strongly disagree/disagree or never/rarely) the percentage for positive response rate for this dimension was 48%.

As seen from Table 3, the positive response rate was 48%

Appendix 7

SAQ: Results from Psychosocial Dimension

Table 4 Summarizes results responses in psychosocial dimension from the SAQ questionnaires.

Questionnaires Questions	Positive response	Negative response	Percentage (%)positive response rate
	Freq	Freq	
1. Positively worded question: Every case of assault either big or small is taken seriously by management	59	13	82%
2. Negatively worded question: have you ever been depressed or stressed out due to safety issues at work	41	31	57%
3. Positively worded question: we have a stress and work burnout systems that help to relieve workers deal with those issues	24	48	33%
4. Negatively worded question: Do you sometimes feel compelled to work with client, even though your safety may be compromise?	38	34	53%
5. Negatively worded: Whenever we have work pressure, managers wants us to work faster, even if it threatens workers safety”	57	15	79%
Percentage of all positive response rate for Psychosocial dimension section			61%

This section had two positively worded question (Strongly agree/agree or most of the time/always) and three negatively worded question (Strongly disagree/disagree or never/rarely). As seen from table 4, the percentage for positive response rate for this dimension was 61%.

Appendix 8

SAQ: Results from Biological Dimensions

Table 5 summarizes results responses in biological dimensions from SAQ questionnaires distributed to workers.

Questionnaires Questions	Positive response	Negative response	Percentage (%)positive response rate
	Freq	Freq	
1. Negatively worded question: have you sometimes endangered your own health and safety in the process of caring for a client with contagious disease?	39	33	54%
2. Negatively worded question: how concern are you about your health, when taking care of patients	35	37	49%
3. Negatively worded question: worried about my own health and safety affect how I do my job	41	31	57%
4. Negatively worded question: do you believe you have sometimes contacted some infections or disease from patient?	28	44	39%
Percentage of all positive response rate for Biological dimension section			50%

This section had four negatively worded question (Strongly disagree/disagree or never/rarely). As seen from table 5, the percentage for positive response rate for this dimension was 50%.

Appendix 9

SAQ: Result from Physical Dimension

Table 6 summarizes results responses in physical dimension from the SAQ questionnaires distributed out to workers.

Questionnaires Questions	Positive response	Negative response	Percentage (%)positive response rate
	Freq	Freq	
1. Negatively worded question: have you ever experience violence of any form at work, and have you thought there is a possibility of violence in your workplace?	62	10	86%
2. Negatively worded question: have you or any workmate ever been attacked or threatened physically at work?	28	44	39%
3. Negatively worded question: how worried or concerned are you about the possibility of violent attack from client and do you think it affects your job?	45	27	63%
Percentage of all positive response rate for Physical dimension section			63%

This section had 3 negatively worded question (Strongly disagree/disagree or never/rarely). As seen from table 6, the percentage for positive response rate for this dimension was 63%.

Appendix 10

SAQ: Results from Chemical Dimensions

Table 7 summarizes results responses in chemical dimension from the SAQ questionnaires distributed out to workers.

Questionnaires Questions	Positive response	Negative response	Percentage (%)positive response rate
	Freq	Freq	
1. Positively worded question: we use chemicals at work and, we were giving proper orientation of its handling and usage	46	26	64%
2. Positively worded question: our managers and superior are concerned about how we use these chemicals	15	57	21%
3. Negatively worded question: How often does your workplace do chemical safety evaluation	22	50	31%
Percentage of all positive response rate for Chemical dimension section			39%

This section had two positively worded question (Strongly agree/agree or most of the time/always) and 1 negatively worded question (Strongly disagree/disagree or never/rarely). As seen from the table 7 above, the percentage for positive response rate for this dimension was 39%.

Appendix 11

SAQ: Results from Frequency of Event Reporting

Table 8 summarizes results responses in Frequency of Events Reporting from the SAQ questionnaires distributed out to workers.

Questionnaires Questions	Positive response	Negative response	Percentage (%)positive response rate
	Freq	Freq	
1. Positively worded question: we are encourage to report every accident and mistakes	51	21	71%
2. Negatively worded question: do you feel free to report your safety concerns about your work?	52	20	72%
3. Negatively worded question: do you feel reporting any safety concerns or event affect you negatively at work	48	24	67%
4. positively worded question: If we report a serious problem where someone could get hurt, management put in a solution and fix it straight away	51	21	71%
5. Positively worded question: Safe work procedures are reviewed and updated if there is an incident report. We try to find out why an incident happened and how to fix it	44	28	57%
Percentage of all positive response rate for Frequency of event reporting dimension section			68%

This section had three positively worded question (Strongly agree/agree or most of the time/always) and 2 negatively worded question (Strongly disagree/disagree or never/rarely). As seen from the table 8 above, the percentage for positive response rate for this dimension was 68%.

Appendix 12

SAQ: Results from Communications and punitive response to error

Table 9 summarizes the results in communication and punitive response to error dimension from the SAQ questionnaires distributed to workers in case organization.

Questionnaires Questions	Positive response	Negative response	Percentage (%)positive response rate
	Freq	Freq	
1. Positively worded question: workers speak feel free to speak up if they see something that may negatively affects their safety	50	22	69 %
2. Positively worded question: We are informed about errors and accidents that happen in this unit	41	31	57 %
3. Positively worded question: In this unit, we feel free to discuss the decisions or actions taken by management regarding safety	51	21	8 %
4. positively worded question: In our units, we discuss ways to prevent errors and other unsafe situations from happening again”	45	27	53 %
5.Negatively worded question: do you think workers are afraid to ask questions when something does not seem right	48	24	67 %
6.Negatively worded question: do you think when an event is reported, it feels like the person is been written off and not the problem	41	31	57 %
Percentage of all positive response rate for communication and punitive response to error section			62 %

This section had six question with five positively and one negatively worded questions using (strongly agree/agree worded (strongly disagree/disagree). The percentage for positive response rate from table 9 above was 62%.