Chapter – II
Review of Related Literature
CHAPTER 2
REVIEW OF THE LITERATURE

Review of literature is an important exercise in researches. In order to solve problems, the available literature is revised to find out the gaps between existing bodies of knowledge. The knowledge gathered in the past needs to be consolidated. It is advantageous to survey the work which has already been done in a particular field. Before finalizing a research proposal, may be in any field, it is the survey of related literature which proves of paramount assistance in the entire gamut of methodological steps. The study of related literature acts as a guide past, not only in regard to the quantity of work done in the field but also enables the investigator to perceive the gaps and lacunas in the concerned field of research.

It sharpens research objectives, suggests what variables should be eliminated being non-meaningful increases the likelihood of interpreting results, aids in interpreting meaningful even if non-significant results and makes research cumulative from one study to the next. It helps in avoiding repetition and in exploring new dimensions to the existing body of knowledge in the concerned area. It is a fruitful source of hypotheses and it help to demonstrate the relationships between completed research and topics under investigation.

Review is an integral part of the research helping the researcher in classification of this problem and avoid duplication. It helps in defining and delimiting the problem. There exists a continuum between the old theories and the new ones. Knowledge is dynamic and it always grows along this continuum. The past is to be discussed to view a problem in a proper perspective so that a researcher may streamline his/her efforts to solve the problem.

The study of related literature provides essential information on the work already available in that field while avoiding unnecessary duplication. It also helps revealing the facts and figures which had earlier remained untouched, unexpected and unexplored in the previews research studies. In simple terms, survey of related
literature means to locate, to read and to evaluate the past as well as the current literature of research concerned with the project undertaken. The quote C.V. Hood, Without a critical study of the related literature the investigator will be groping in the dark and perhaps uselessly repeat work already done. Therefore, the study of related literature can never be ignored in any type of research.

Though small and medium enterprises are the biggest employers in the country, very few studies dealing with either employees’ health and security measures have been carried out. In fact, in-depth studies on the provision of health and safety measures in small and medium enterprises especially are negligible. However, some useful literature is available in textbooks and published theses. Further, a good number of articles published in various academic magazines and journals are also available. In this regard, the available literature has been outlined hereunder.

Shinha (1979) has highlighted the significance of the Small Scale Industry in India. They provide employment to a considerable number of workers and also develop professional skills, government policies as they tend to provide work and also create conditions for improvement and as such are helpful in the improvement of Indian economy. It gives improvement of government policies.

Shutt & Whittington (1987) have highlighted the fragmentation strategies and the rise of small units: cases from the North West. It argues that the growth in small firms and small plants can be partly understood as the result of large firm fragmentation strategies in response to increasing demand and innovation risk and crisis over control of the labour process. Consequently much small firm employment growth should be regarded as employment transfer, often entailing job losses. The paper goes on to examine the recent fragmentation strategies of three large manufacturing companies in the North West. In conclusion, it is argues that such large manufacturing regions as the North West are likely to suffer most from the fragmentation process.

Netherlands (1989) has described that in 1975, the United States was the world's largest producer of machine tools, the second largest exporter, and had the lowest degree of dependence on imports of all major machine tool producing countries. By 1987, the U.S. had slipped into fourth place as producer of machine
tools (behind Japan, West Germany, and the U.S.S.R.), into sixth place in exports (behind Switzerland, East Germany, and Italy), and relied on imports for more than half of its supply of machine tools. He highlighted in this paper (1) to explain what happened globally in the machine tool industry since the mid-1970s, (2) to examine the arguments concerning the strategic role of the industry in industrial development, and (3) to analyze the implications for the future and to recommend courses of action.

**Narayana Murthy (1992)** in his thesis, “Employee Welfare in Public Sector—A Study on Selected Units in Visakhapatnam” discussed the various welfare facilities provided by public sector companies like - BHPV Ltd, Hindustan Shipyard Limited, Visakhapatnam, Port Trust, and Dredging Corporation of India. The study concluded that all the four public sector enterprises are highly employee welfare oriented with insignificant differences.

**Kishore Babu (1994)** in his thesis, “Social Security Measures in Public Sector—A Study of Selected Industries in Visakhapatnam” discussed the various social security measures provided by HPCL, BHPV and Hindustan Shipyard Limited to their employees. The study showed that all these three public sector enterprises have been highly employee-oriented in terms of the provision of social security measures.

**Schmitz (1995)** investigated the growth of small local industry in developing countries and explores one particular route for understanding and fostering such growth. It focuses on the clustering of firms and the competitive advantage which they derive from local external economies and joint action, captured in the concept of collective efficiency. Following a conceptual discussion, the article explores the economic and institutional conditions which enhance or hinder collective efficiency. This includes a case study which suggests that responding to opportunity and crisis requires shifting from mere reliance on external economies to joint action and from ascribed to earned trust.

**Pinkovitz, Moskal, & Green (1997)** conducted a study for American Academician Association on the problem of employee turnover and suggested the way to calculate employee turnover cost and specified that the recruitment cost is four to five times more than the retention cost.
Zwerling (1997) searched on occupational injuries continue to exact a great toll on American workers and their employers—the physical and financial costs enormous. However, in the current political climate, few employers or regulatory agencies will implement injury prevention interventions without specific evidence of their effectiveness. This paper reviews the literature on the design, conduct, and evaluation of occupational injury interventions. Our review suggests that randomized controlled trials are rare and also notes that the quasi-experimental studies in the literature often use the weakest designs. We recommend a hierarchical approach to evaluating occupational injury interventions—beginning with qualitative studies, following up with simple quasi-experimental designs using historical controls, continuing with more elaborate quasi-experimental designs comparing different firms' experience, and when necessary, implementing randomized controlled trials.

Sauter et al. (1998) studied and describe about NIOSH recognizes psychological disorders as a leading occupational health problem. This document, developed by a NIOSH working group led by the present authors, represents a first attempt to fashion a comprehensive national strategy to protect and promote the psychological health of workers. Roles are identified for industry, labor, government, and academia Key initiatives include (a) steps to improve working conditions and employee mental health services and (b) increased research and surveillance to advance understanding of the problem. Because work-related psychological disorders appear to be a rapidly developing problem lacking complete definition in terms of scope and etiology, this strategy is not to be considered a final statement of NIOSH policy.

Faisal, I. Khan and Abbasi, S.A. (1999) studied in journal of Loss Prevention in the Process Industries the term domino effect denotes 'chain of accidents' or situations when a fire-explosion-missile-toxic load generated by an accident in one unit in an industry causes secondary and higher order accidents in other units, Most of the past risk assessment studies deal with accident in a single industry, more so in one of the units of an industry. But often, accident in one unit can cause a secondary accident in a nearby unit, which in turn may trigger a tertiary accident, and so on. The probability of occurrence and adverse impacts of such
‘domino’ or cascading’ effects are increasing due to increasing congestion in industrial complexes and increasing congestion in industrial complexes and increasing density of human population around such complexes. The multi-accident catastrophe which occurred in refinery in India, on 14 September 1997, claiming 60 lives and causing loss of property worth over Rs. 600 million, is the most recent example of the damage potential of domino effect. Less F.P. Loss prevention in process industries, Major accidents in process industries and an analysis of their causes and consequences in Journal of Loss Prevention in Process Industries, A quantitative study. Process Safety Progress, 18, 135-145. Recently, we have proposed a systematic methodology called ‘domino effect analysis’ (DEA). The paper makes a strong case for making DEA an integral part of all risk assessment initiatives.

Vijay (1999) in his paper, “Social Security of Labour in New Industrial Towns” felt that social security in the formal sector has an institutionalized expression. He felt that social security is a complex issue since it involves migration of labour from rural areas to new townships. He also felt that the labour in the new industries is recruited on contractual or casual basis. He also mentioned about various institutions through which social security finds expression. Further, he analysed the attributes that would enable access to these institutions.

Hunt et al (2000) stated that the impact of the environment on the health is a complex and difficult to disentangle; health within an environmental context must be considered as a Multiphase and holistic Phenomenon, they recognize that identification of a link between environment and Public is not a new and that Environment Legislation targeted at protecting health through improved housing and sanitation go back centuries (ibid., See also Morris, 2003; Gesler, 1998). In past years, there have been some reports (Meng et al. 1995; Meng and Zhang 1997) from many countries, which showed significant excess of chromosomal aberration hazards of the employees of phosphate fertilizers plant.

Waddell, G. and Burton, A.K. (2000) studied about back pain during work that there is increasing demand for evidence-based health care. Back pain is one of the mostly common and difficult occupational health problems, but there has been no readily available evidence base or guidance on management there are well-established
clinical guidelines for the management of low back pain, but these provide limited
guidance on the occupational aspects. Occupational Health Guidelines for the
Management of Low Back pain at Work were launched by the Faculty of
Occupational Medicine in March 2000. These are the first national occupational
health guidelines in the UK and as far as we are aware, the first truly evidence-linked
occupational health guidelines for back pain in the world. They were based on an
extensive, systemic review of the scientific literature predominantly from
occupational setting or concerning occupational outcomes. But a compact version is
presented here to aid its dissemination.

Romijn (2001) give a conceptual analysis, in her paper "Technology support
for Small Scale Industry in Developing countries: A Review of Concept and Project
Practices". There is restrictive approach about the technology in competitive
environment. There is lack of practical experience with project technology assistance
programmes and inadequate understanding of the role of the Small Scale Sector in
industrial development.

and environment that team can be managed in different ways; using supervisor, team
leaders or self-managed. The management of health and safety and other business risk
is dependent on the way in which the team is managed. Although the difference are
not always significant, it is noticeable that within organization using supervised work
environment, there is a lack of communication of specific health and safety
information, little involvement and participation in safety activities, and a greater
reliance on the safety functions. However in organization using team leader and self-
managed groups, there is evidence of greater management involvement, more open
communication, and greater employee involvement in health and safety, although
empowerment is its true sense was still limited in these organizations.

Goldenhar, Linda M. et.al. (2001) studied often lacked a theoretical basis;
they used small samples, and tested interventions lacking the intensity to cause the
desired change. Most designs were either no experimental or quasi-experimental with
uncontrolled sources of bias. Recommendations for future research include methods
of minimizing the problems and biases caused by these weaknesses. No
methodological issues such as the costs of implementing interventions and the cultural and political dimensions of the workplace are also addressed. Although many methodological issues associated with field-based research are not easily addressed, researches should make a stronger attempt to address these issues if the field of occupational health and safety intervention research is to be productive.

KHAN, I. Faisal and Abbasid, S.A. (2001) studied and state that in their research article of Risk Assessment in Chemical Process Industries the use of a new computer-automated tool TORAP (Tools for Rapid risk Assessment in Petroleum refinery and Petrochemical industries) is demonstrated through a rapid and quantitative risk assessment of a typical petroleum refinery. The package has been applied for an appraisal of the risks of accidents (fires, explosions and toxic release) posed by different units of the refinery, and to identify steps to prevent/manages accidents. The studies reveal that TORAP enables a user to quickly focus on the accidents likely to occur, and enables forecasting the nature and impacts of such accidents. This information is directly utilizable in identifying 'soft' spots and in taking appropriate remedial measures to prevent or control accidents. The special attributes of TORAP are: (a) wide range of applications-achieved by incorporating models capable of handling all types of industrial fires and explosions, (b) sophistication- brought about by including state-of-the-art models developed by these authors and others, (c) user-friendliness- achieved by incorporating on line-help, graphics, carefully formatted output, and above all, an automatic module, with which even a lay user can conduct a risk assessment. The entire package, especially its automatic module, is supported by an extensive knowledge-base built into the software.

Hunt et al (2000) and DEFRA (2002) an stated that the adverse health effects of exposure to high concentration of chemicals such as Benzene, 1,3-butadiene, Carbon monoxide, lead nitrogen oxides, Ozone, Particles and sulphur dioxide, range from mental impairment to cancer and with excessive exposure death. Whilst Air quality has been improved in Urban and Rural areas during the last 20 years, between 123000 and 241000 death are thought to be hastened annually due to air pollution by ozone, Particulates and sulphur dioxide (ibid.3; DEFRA, 2003:76)
Poorer people living in the disadvantaged areas are exposed to the highest level of air pollution.

**Balasubrahmanya (2005)** has highlighted the performance and prospects of Small Scale Industry in Globalization era in India. They find the competitive environment due to globalization, domestic economic liberalization and dilution of sector specific protective measures. It probes the implications of globalization and domestic economic liberalization for Small Scale units, employment, output, and exports. It ensures the sustenance and competitive growth of small Scale Industry in India.

**Chun-Chich-Chi (2006)** researched on industries are two of the main sources of industrial air pollution in Taiwan. Data used in this study concern outdoor air pollution and the health of individuals living in communities in close significantly higher in mothers living near the oil refinery plants than in control mothers in Taiwan. After controlling for several possible confounders (including maternal age, season, marital status, maternal education, and infant sex), the adjusted odds ratio was 1.14 (95% CI=1.01-1.28) for delivery of preterm infants for mothers living near oil refinery plants. These data provide further support for the hypothesis that air pollution can affect the outcome of pregnancies.

**Rao, Venkateswara (2006)** in his M.Phil. dissertation, “A Study of Health and Welfare Measures for workers in Singareni Collieries Company Limited inquired into the various health and welfare facilities provided by the company to its employees. The researcher concluded that SCCL is highly employee-welfare oriented.

**Duggal (2006)** in his article, “Need to Universalise Social Security” stated that those who can afford it get their own social security through a public mandate and those who can not afford it have to buy or arrange their own social security. Further, he stated that the malaise can only be overcome by universalizing social security.

**Venkata Ratnam (2006)** in his book, “Industrial Relations” discussed the provisions made for social security in the constitution of India, labour legislations, collective agreements and voluntary arrangements for the organised sector. He also
discussed the key issues in social security in the context of the emerging socio-economic environment.

**Dasanayaka (2006)** has highlighted the significance role and problems of small and medium scale enterprises all over the economies around the world. They contribute in many aspects such as employment generation, export, tax income, innovation, competitiveness, equitable income distribution, social stability, domestic resource usages and regional development; they are struggling to survive in today's globalize competitive environment. They are hampered by the lack of technology, access to credit and markets and dumping of foreign products. They are constrained by problems relating to both product and factor market. Lack of institutional support and policy inertia has further reduced the full potential of SMEs to the national economy.

**Srivastava (2007)** in his thesis, “Study of Labour Welfare and Social Security in the Industrial undertakings of RaeBarelli District” discussed comprehensively about the various welfare and social security measures provided by various companies in the district. The study found that a majority of the companies is employee welfare and social security oriented.

**Wu, and Shahidehpour (2007)** have defined the security-constrained unit commitment (SCUC) model with emphases on the simultaneous optimization of energy and ancillary services markets. Benders decomposition is used to decouple the SCUC into a unit commitment (UC) master problem and hourly network security checking sub problems. Lagrangian relaxation is used to decouple the UC problem into individual single-unit commitment problems. Dynamic programming is used to find the optimal commitment decision. A simultaneous marginal curve algorithm is proposed to find the optimal values of energy and ancillary services. A six-bus system with three units and the IEEE 118-bus system with 54 units are analyzed to illustrate the proposed mode.

**Macik-Frey, Quick, Campbell and Nelson (2007)** conducted a study, “Advances in Occupational Health: From a Stressful Beginning to a Positive Future”. They declared about Occupational health psychology, that it is a relatively young
specialty within the science and practice of psychology. This handbook is designed to consolidate and organize the rising knowledge in the field from the interdisciplinary perspectives of an international group of scholars and researchers. Provide historical, contemporary, and future-oriented perspectives on this emerging specialty after first discussing prevention and public health in occupational settings. That addresses key causes of health and safety at work as well as key risks to health and safety, focusing on factors both within the specific workplace as well as broader occupational factors and factors from the personal life area. Regardless of how effectively organization design prevention and public health programs to protect the health and safety of people at working place, some experience symptoms and health disorders, and the specific primary, secondary, or tertiary interventions for health and safety, this book addressing issues of epidemiology, program evaluation, and socioeconomic cost-benefit analysis.

Hsua, S.H., Leea, C.C., Wua, M.C and Takano, K. (2008) identify the safety factors and their influence mechanism in Taiwan and Japan oil refinery. Taiwanese purely emphasis on safety activities, higher devotion to supervision as well as quality of safety performance. Whereas Japanese engaged to work on systematic safety and efficient reporting system of team work which can minimize the health safety threats. These perform task and script provide safety improvement in emerging countries and developed countries respectively.

Ganesh and D'Souza (2008) in their article “Social Security and Welfare Measures at New Mangalore Port Trust - A Case Study” felt that employees at NMPT are quite satisfied with the social security benefits provided by the organisation. They also stated that the provision of welfare facilities and social security benefits has a greater influence on the working of employees through psychological and social satisfaction.

Kala (2008) in her article, “Social Security of Unorganised workers” felt that people who are employed in shops and establishments, handlooms and power looms, agriculture, construction are not covered by social security measures and hence the government introduced Aam Admi Bima Yojana and Indira Gandhi National old Age
pension scheme to help the unorganised sector employees as well as the old people who are above 65 years of age.

In January, 2008, Science & Communication Division (Rashtriya Vigyan Evam Sanchar Parishad-RVPSP) of the Department of Science & Technology, Government of India invited open proposals from various organizations for conducting a study on Occupational Health Hazards of Women and preparation of Manual for health and safety of the women industrial workers in India. The Parishad has been mandated to empower women and selected awareness on occupational hazards as an area of priority. In the early years, the ILO focused on increasing safety in factories and providing protection against industrial hazards caused by individual, particularly hazardous, substances such as white lead, anthrax and white phosphorous. The focus on the specific regulation of these substances was continued until 1971 when the Benzene Convention, 1971 (No. 136), was adopted. In 1986, the Asbestos Convention, 1986 (No. 162), was adopted, which is the most recent example of this approach. These standards essentially consist of a straightforward set of rules to be observed. In parallel, during the 1930s broader sectoral perspectives were introduced through the adoption of standards on hygiene in offices and safety in construction. Standards addressing common concerns in specific branches of economic activities have continued to be developed since then with a focus on the most hazardous industries and sectors such as construction (the Safety and Health in Construction Convention, 1988 (No. 167)), mines (Safety and Health in Mines Convention, 1995 (No. 176)), and most recently agriculture (Safety and Health in Agriculture Convention, 2001 (No. 184)). The need for common international directions concerning the question of the classification and labeling of dangerous substances was recognized as early as the 1930s. It was only in June 2002, however, that the GHS was adopted. It was in the area of OSH that the need for model regulations, the precursor to codes of practice, emerged and where they have been most extensively used. A model code was adopted in 1937 as an annex to the Safety Provisions (Building) Recommendation, 1937 (No. 53), which accompanied the Safety Provisions (Building) Convention, 1937 (No. 62). Member States were invited to "give the fullest effect possible and desirable under National conditions to the
provisions of, or provisions equivalent to the provisions of, the Model Code.” Subsequently, due to pressing needs in the industry in the reconstruction phase after the Second World War, two model regulations were passed through the Governing Body in 1949 and 1950 and made public without prior sanction from the International Labour Conference. This adoption procedure was then maintained, but in 1951, when yet another model regulation was at issue, the Governing Body decided to replace the term “model regulation” with “code of practice” in order to clarify that such models were intended to serve as guidance and did not entail any legal obligations for ILO member States. In the post-war era, increased emphasis was placed on the protection of health and the need for occupational health services. The “merger” between these disciplines was not entirely ready at the time of the adoption of the Occupational Safety and Health Convention, 1981 (No. 155), and this Convention contains only a very brief reference to occupational health services. A few years later, in 1985, a separate instrument on this issue was adopted. The post-war era up to the 1970s was marked by an emphasis on the specific need for protection against occupational cancer and an increasing awareness of the need for a more comprehensive approach to the human environment in general but also to the working environment. The “Robens Report”, 16 published in 1972, was a significant element in this development. International standards adopted since then have introduced a number of new, more comprehensive approaches and elements. A first ILO effort resulted in the adoption of the Working Environment (Air Pollution, Noise and Vibration) Convention, 1977 (No.148), which was a much more comprehensive standard than any of the previous OSH standards. Its scope is nevertheless limited to physical hazards and hazardous substances and agents to the extent that they fall within the definitions of air pollution, noise and vibration in the Convention.

It was the Occupational Safety and Health Convention, 1981 (No. 155), that clearly marked a new departure in that, as well as dealing in a comprehensive manner with OSH and the working environment, it is to a large extent a policy instrument rather than an instrument laying down precise legal obligations. It prescribes the formulation, implementation and periodic review of a national policy with the overriding comprehensive aim “to prevent accidents and injury to health arising out
of, linked with or occurring in the course of work, by minimizing, so far as is reasonably practicable, the causes of hazards inherent

In the working environment "With two exceptions, all instruments adopted after Convention No. 155 include a provision calling for a national policy on the subject matter they regulate. Unlike Convention No. 155, but like the Occupational Health Services Convention, 1985 (No. 161), none of these Conventions elaborates on the substance of the policy. Instead they turn straight to the measures to be taken for the application of the Convention. A major reason for the trend away from Conventions laying down precise legal standards and towards more policy-oriented instruments was undoubtedly the realization that substances and processes, as well as techniques for dealing with them, are constantly evolving. It is thus necessary to have international standards that are sufficiently flexible to adapt to change and that provide for the periodic review of national policy, as well as measures adopted at the national level in the light of current technical progress and advances in scientific knowledge. The foundation for this approach is laid down in Convention No. 155 which requires in Article 7 that the situation regarding occupational safety and health and the working environment shall be reviewed at appropriate intervals, either overall or in respect of particular areas, with a view to identifying major problems, evolving effective methods for dealing with them and priorities of action, and evaluating results. The need for adaptability of OSH standards was already recognized in the drafting of the Radiation Protection Convention, 1960 (No. 115), which requires that the maximum permissible doses of ionizing radiations fixed by ratifying States shall be kept under constant review in the light of current knowledge. The Occupational Cancer Convention, 1974 (No. 139), requires ratifying States to "periodically determine" the carcinogenic substances and agents to which the Convention shall apply. The Working Environment (Air Pollution, Noise and Vibration) Convention, 1977 (No. 148), introduced a greater degree of flexibility by leaving it to the competent authority to establish criteria for determining the hazards of exposure and to specify exposure limits where appropriate as well as requiring that these should be supplemented and revised regularly in the light of current international knowledge and data. The Asbestos Convention, 1986 (No. 162), requires
that national laws and regulations prescribing measures for safety in the use of asbestos be periodically reviewed in the light of technical progress and advances in scientific knowledge, while the Chemicals Convention, 1990 (No. 170), requires the competent authority to establish systems and specific criteria for the classification of chemicals so as to assess whether a chemical is hazardous, and that the classifications systems and their application be progressively extended. The Prevention of Major Industrial Accidents Convention, 1993 (No. 174), requires employers to review, update and amend the safety report required by the Convention, “when developments in technical knowledge or in the assessment of hazards make this appropriate”. In all these cases, either the Convention itself or the supplementary. Recommendation makes reference to other texts that will provide guidance in keeping the measures taken, to give effect to the Convention, up to date. The new List of Occupational Diseases Recommendation, 2002 (No. 194), contains an innovation specifically

Designed to respond to the need for adaptability to scientific progress. The Recommendation includes in its annex a list of occupational diseases to be regularly reviewed and updated through tripartite meetings of experts convened by the Governing Body. Lists established this way are to be submitted to the Governing Body for approval, and upon approval shall “replace the preceding list” and be communicated to the Members of the ILO.

In terms of basic underlying principles, a driving force in the evolution of standard setting in the field of OSH has been the move towards the prevention of occupational accidents and diseases as opposed to the sole prescription of protective measures. However, it is sometimes difficult to separate the two or qualify a particular measure as one or the other. For example, the earlier Conventions, which are considered to be protection-oriented, contain preventive elements (e.g. the White Lead (Painting) Convention, 1921 (No. 13), and the Benzene Convention, 1971 (No. 136), which both prohibit certain uses of the respective substances). Nonetheless, while these earlier Conventions, along with the more recent ones, continue to contain both preventive and protective elements, a decisive thrust in the direction of prevention was given with the adoption of the Occupational Safety and Health Convention, 1981 (No. 155), and the Occupational Health Services Convention, 1985
(No. 161), which are essentially aimed at preventive policies and measures. The more recent Conventions place due weight on the priority to be given to preventive measures; Protective measures being a last resort if risks cannot be prevented minimized or eliminated. It may also be considered that the first tentative references to ergonomics are a reflection of the move towards prevention.

In 1975, the International Labour Conference adopted a resolution that called for national policies as well as policies at the enterprise level. This was the first step in a shift towards a management approach to OSH, and is noticeable in Conventions adopted since the resolution in the emphasis placed on the responsibilities of the employer and the rights and duties of the workers. Part IV of Convention No. 155 deals with action at the level of the undertaking and these rights and responsibilities are also the subject of separate parts of Conventions Nos. 170, 174 and 176. The aim was to give employers and workers in the enterprise the responsibility of managing the OSH system in order for the policy to be better adapted to the undertaking. In order to address an increasing application of management principles to OSH and demand for standards in this area, in 2001 the ILO adopted Guidelines on occupational safety and health management systems.

The adoption of the International Programme for the Improvement of Working Conditions and Environment (PIACT) in 1976 marked an important parallel development in the ILO’s approach to OSH. The PIACT philosophy was and remains remarkable because it brought together developments in policy instruments and the expansion of OSH to take into account environmental concerns. It clarified the respective roles of the ILO and the WHO, i.e. the same issue of health in relation to work is addressed by the WHO through public health strategies, health policies and laws, and by the ILO through labour strategies to improve working conditions and the working environment, tripartism and labour laws. It also constructed a comprehensive model for an occupational safety and health policy, which embodies the basic principles contained in ILO instruments on OSH. It advocated that this should be coupled with a “participatory approach”, preparing the ground for ILO support for the concept of “safety culture” which emerged in the aftermath of Chernobyl (1986). According to current thinking on OSH, the building of a “safety culture” is a key to
effective preventive action. In enterprises, safety cultures must be built from within through a management systems approach. OSH is composed of specific and interrelated components, each serving individual functions and with specific characteristics, but each also contributing, albeit in different ways, to the functioning of the system. The management systems approach constitutes the framework which can make these components function together and the Guidelines on occupational safety and health management systems embody these principles.

Various works have been carried out for the safety of the workers and also environmental safety to protect precious life of the workers as well as working area. Many scholars worked and give their valuable ideas related to Occupational Health and Safety. Their articles are briefly discussed below:

**Ketola, Tarja (2008)** studied and stated that it regularly results in environment shocks and stress and in public outrage. Strategic planning has become very complex in practice as the traditional political and economic factors to be taken into account have now been accompanied by environmental factors. This paper examines the strategic environment planning process in two companies with different approaches to change. It seems that top-down sophisticate strategic environment planning leaves room for power struggles which may compromise the environmental behavior of a company. In addition, there is often a gap between environmental scenarios and environmental policies which should be filled with a vision. A bottom-up approach may lead to better environmental performance because there is little room for political games and because the operating unit can respond directly to the environmental pressure exerted by its interest-groups. Yet the lack of scenarios and visions in a bottom-up approach reduces the operating unit’s chances to make long-term plans, and allows it only to react to changes in its business environment. In general, companies should enrich their strategic environmental planning with visioning and link these two with rigorous strategic environmental leadership.

**Goswami (2009)** in the article, “A Critique of the Unorganised Workers Social Security Act” made an attempt to discuss the unorganised workers security Act, 2008. The writer felt that the Act does not make it mandatory for the Government to introduce new welfare schemes. It unfairly divides unorganized
workers into those below the poverty line and those above, and is silent on a national minimum wage, improving working conditions, and the problems of women workers like unequal pay, sexual harassment at the work place etc.

**Asher (2009)** in his article, “Pension Plans, Provident Fund Schemes and Retirement policies: India’s Social Security Reform Imperative” stated that the major objectives of any social security system are consumption smoothing over an individual’s life time, insurance against longevity and inflation risks, income redistribution for society as a whole and poverty relief. He felt that these have to be traded off against economic growth, labour market efficiency and labour market flexibility.

**Aswathappa (2010)** in his book, “Human Resource Management” discussed the various types of benefits and services provided to employees in terms of payment for time not worked, insurance benefits, compensation benefits, pension plans etc. He also discussed the ways to administer the benefits and services in a better way.

**Johannsson, B. et al (2010)** worked and the purpose of this study was to carry out a broad survey and analysis of relevant research articles about piece rate wages and their effects on health and safety that were published internationally until the fall of 2008. The aim was to summarize and describe the state of the art of the research in this field and if possible draw conclusions from the accumulated research results. Although research is still sparse and fragmented, much of the accumulated knowledge about the effects of piece rate work tells us that piece rates in many situations have a negative effect on health and safety. The fact that 27 of the 31 studied articles found negative effects of piece rates on different aspects of health and safety does not prove causality, but together they give very strong support for the hypothesis that in most situations piece rates have negative effects on health and safety. In order to achieve better knowledge about the effects of piece rates in branches where piece rates are regarded problematic, further research is needed and such research has to be designed to meet the specific questions that are to be answered.

**Bhatia (2010)** in his article, “Social Security for the Most Overlooked Human Resources in India” stated that the formal social security support is available to only a
small fraction of India’s labour force working in the organised sector. A massive 93 per cent of the labour workforce in the unorganised sector continues to remain uncovered by any social security programs despite its huge contribution to the GDP.

**Jeya and Kirubakaran (2010)** in their article, “A Study on Impact of Social Welfare Schemes on Rural women in Cuddalore District” dealt with the impact of social welfare schemes on rural women. It also outlined the extent of benefit availed by the rural women based on field survey. The result is that rural women are greatly benefited by the provision of social welfare schemes.

**Josephine and Rudolph (2011)** conducted a study of health and safety practices in small and medium sized enterprises: -A case of Botswana. The purpose of this research is to understand the views of different employees in small and medium enterprises about what can be done to improve the health and safety in work places. In order to carry out this research, questionnaires were used to collect the views of different employees concerning this topic in these organizations, and literature was also reviewed. From the findings, it shows that when good health and safety practices are not put in place, accidents, major and minor injuries can happen, and it is what most of the employees in other companies have so far experienced. This implies that if health and safety is not managed effectively, both the two parties being employees and the organization would suffer because for the organization to function effectively, it needs employees and for the people to survive, they need to work.

**Lekka, Chrysanthi and Sugden Caroline (2011)** worked and suggested that there are a number of practices that organizations can adopt to achieve high levels of reliability and safety. These practices are often discussed in the context of major incidents to highlight the safety standards that high hazard organization should try to emulate. However, previous research has predominantly focused on non-profit organizations should try to emulate. However, previous research has examined whether high reliability practices may be meaningfully applied to commercial contexts. This paper addresses this gap by using a qualitative approach to explore the types of reliability-enhancing practices implemented in a UK-based oil refinery in its attempt to achieve its ethos of safe and reliable operations’. The findings illustrate the
successful application of reliability-enhancing practices in several domains, including; hazard identification and control; emergency preparedness and collection; and analysis of incidents and near misses. Management commitment to safety emerged as an important factor underpinning the successful implementation of reliability-enhancing practices, highlighting its potential significance in the context of commercial organizations. However, promoting an open reporting culture and maintaining high levels of management visibility may be some of the challenges encountered by organizations striving to implement reliability-enhancing practices.

Poongavanam (2011) in his article, “A Study on Labour Welfare Facility (with reference to AFT, Pondicherry) made an attempt to study the Welfare facilities provided by a large, well-recognised Government enterprise in Pondicherry, namely Anglo French Textiles. The study found that welfare measures will improve the physique, intelligence, morality and standard of living of workers, which in turn will improve their efficiency and productivity.

Andrew Oyen Arewa and Peter Farrell (2012) conducted a study of compliance with health and safety regulations and economic performance in small and medium construction enterprises. They stated that Small and medium enterprises (SMEs) constitute over 90% of construction businesses and are vital to construction industry operation. Health and safety regulations in the UK compel all organisations, regardless of their nature or size to comply with health and safety rules. However, there is evidence that the risk of suffering an occupational accident in SMEs is higher compared to large enterprises. For every 100,000 workers in the European Union SME sector there are more than 4100 accidents involving over three days absence; while the same rate is 3088 in large firms. In terms of cost, SMEs spend more to remedy (considering costs of rectification work, fines, prosecutions and sentences) adverse health and safety incidents. Fundamentally, the high cost of human capital and the destabilising effects of health and safety make the financial performance of SMEs exposed to greater uncertainties and risks. Indeed SME financial performance is often worse than for large firms. Various attempts by previous research work to substantiate the relationship between compliance with safety and financial performance of SMEs seems elusive. The research question is; does compliance with
health and safety enhance SME financial performance? It is argued that SME commitment to health and safety spins off into many aspects of business performance and thus they simultaneously also benefit from better profitability. The paper is based on a literature review and an appraisal of HSE prosecutions in the period 2007-2011. It is a supplementary study and part of an ongoing PhD that seeks to appraise the effects of investment in health and safety in the UK construction industry.

Auni Fatin Nadia et al. (2013) investigated Occupational Safety and Health Administration (OSHA). This study addresses the issues of occupational safety and health administration practices (OSHAP) and the occupational safety and health administration performances (OSHAPM) that influence by the practices in Malaysian Automotive Industry. This paper also proposed structural relationship OSHAP and OSHAPM model. The implementation of OSHAP is widely believed that it can increase the OSHAPM in automotive industry. This paper discusses the OSHAP which are safety culture, employee involvement, employee attitude, leadership style, safety and health training and effective communication that may have an impact on OSHAPM which are safety and financial performances in the automotive industry. This study theoretically reviewed prior literatures on same problems in our Malaysian industry. Based on previous study, there are positive relationships between OSHA practices and OSHA performances major on safety and financial performances. The target was to reduce some problems in research.

Deross, Baba Md, Ismail, Ahmad Rasdan and Ghani, A. Jaharah (2014) conducted a study, "Conformity to occupational safety and health regulations in Malaysian small and medium enterprises". They pointed out that Regulation on occupational safety and health in Malaysia had evolved from the prescriptive factory and machinery act to a self-regulated occupational safety and health act. However, from the authors' observation the high standards of occupational safety and health culture that surpass the legal requirement were not widely practiced by Small and Medium Enterprises (SMEs). The two main objectives of this study are: First, first, to identify and determine the level of conformity and second, to investigate the reasons of nonconformity to occupational safety and health act regulation in SMEs involved
the chemical industry sub-sectors. The survey questionnaire was distributed to 150 SMEs in chemical industry sub-sectors. Forty one of the survey questionnaires were completed and returned, giving a response rate of 27.3% for the survey. Survey data were analyzed statistically using the SPSS software. The survey results revealed that an overwhelming majority (92.7%) of the respondents from SMEs are likely not conforming to the basic requirement of occupational safety and health act. In addition to this, the survey also found that only 3.1% of the management personnel can be considered competent in terms of knowledge, skill and ability in carrying out occupational safety and health regulation within their respective organization. While, 96.9% of the respondents that participated in the survey can be considered not competent. The authors hope results of this survey could assist the relevant authorities in formulating a better policy and strategy for implementing occupational safety and health in SMEs involved in chemical industry sub-sectors.

Zuber, Visagavel, Raja, and Mohan (2014) investigated occupational health and safety management in manufacturing industries. The study aims at analyzing the occupational health and safety of manufacturing industries in South Africa by gathering information on health management, safety management, motivation, leadership and training, welfare facilities, accident static policy, organization and administration, hazard control and risk analysis monitoring, statistics and reporting. Data were collected by using questionnaire which were developed on health and safety management system. The data collected were analysed by using graphical and D&S method. The overall status shows that the performance on health and safety management system needs improvement in order to ensure a better working conditions for the workers.

OVERVIEW

A comprehensive review of the aforementioned literature reveals that most of the reports of surveys, committees and commissions are aimed at knowing the health and safety standards, working and living conditions of employees of in small and public enterprises in different countries and states so as to recommend the employers and also the government about the need for improved health, and social security