

**THE EFFECT OF PHYSICAL EDUCATION
HEALTH-RELATED PROGRAM FOR
EMPLOYEES (PEHPE) ON EXERCISE
BEHAVIOUR AND QUALITY OF WORK LIFE
AMONG EMPLOYEES IN MOBARAKEH STEEL
COMPANY, IRAN**

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COMPANY, IRAN**

by

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**Thesis submitted in fulfilment of the requirements
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LIST OF ABBREVIATIONS

EB	Exercise Behaviour
QWL	Quality Of Work Life
PEHPE	Physical Education, Health-Related Program for Employees
HRQOL	Health-Related Quality of Life
PCS	Physical Component Summary
MCS	Mental Component Summary
OECD	Organization for Economic Cooperation and Development
GDP	Gross Domestic Product
USDHHS	U.S. Department of Health and Human Services
CDC	Centers for Disease Control
PCS	Physical Component Summary
MCS	Mental Component Summary
GDP	Gross Domestic Product
GLTEQ	Godin Leisure Time Exercise Questionnaire
NASPE	National Association for Sport and Physical Education
LEAP	Lifestyle Education for Activity Program
TOPS	Test of Performance Strategies
SCT	Social Cognitive Behaviour Theory
SDT	Self-determination Theory
TTM	Transtheoretical Model
EII	Exercise Imagery Inventory
CDS	Causal Dimension Scale
ACSM	American College of Sports Medicine

MVPA TPB	Moderate to Vigorous Intensity Physical Activity Theory of Planned Behaviour
TRA	Theory of Reasoned Action
SEPEP	Sports Education in Physical Education Program
CVI	Content Validity Index
SNAI	Sports Needs Assessment in Terms of Interest
QWLQ	Quality of Work Life Questionnaire
EBQ	Exercise Behaviour Questionnaire

**KESAN-KESAN PROGRAM BERKAITAN KESIHATAN
DALAM PENDIDIKAN JASMANI UNTUK PEKERJA (PEHPE) KE
ATAS TINGKAH LAKU SENAMAN DAN KUALITI KEHIDUPAN
BEKERJA DALAM KALANGAN PEKERJA DI
SYARIKAT MOBARAKEH STEEL, IRAN**

ABSTRAK

Kajian ini bertujuan memeriksa kesan-kesan Program Berkaitan Kesihatan Pendidikan Jasmani untuk Pekerja atau *Physical Education Health-Related Program for Employees* (PEHPE) ke atas tingkahlaku senaman dan kualiti kehidupan bekerja dalam kalangan pekerja di Mobarakeh Steel Company, Iran. Untuk mengkaji objektif pertama dan kedua, statistik deskriptif menggunakan kaedah tinjauan pada peringkat pertama, manakala bagi objektif ketiga dan keempat, metodologi kajian separa-eksperimen dalam jenis kajian lapangan pada peringkat kedua kajian ini digunakan. Teknik Delphi digunakan untuk mengumpul data kualitatif, sementara soal-selidik digunakan bagi mengumpul data kuantitatif. Soal-selidik Penilaian Keperluan Sukan dari aspek Minat (SNAI) dengan koefisien kebolehpercayaan tinggi bernilai .977 alpha digunakan bagi mengumpul data dalam kalangan sampel yang dipilih secara rawak seramai 376 orang pekerja berdasarkan Jadual Morgan dari populasi pekerja lelaki seramai 15000 orang yang bekerja di Mobarakeh Steel Company. Untuk peringkat kedua kajian ini, kajian rintis menunjukkan bahawa soal-selidik Kualiti Kehidupan Bekerja (QWL) digunakan dengan kebolehpercayaan sempurna Cronbach Alpha .882 dan dimensi-dimensi soal-selidik Tingkahlaku Senaman (EB) lebih dari koefisien .80 Alpha. Ia dimaklumkan dalam syarikat supaya mereka menyertai program PEHPE dan 376 pekerja dipilih secara rawak. Oleh yang demikian, sampel-sampel ini akhirnya

dibahagikan kepada kumpulan eksperimental dan kawalan di mana setiap kumpulan terdiri daripada 63 pekerja dalam tiga peringkat iaitu pra-ujian, pasca-ujian 1 dan pasca-ujian 2 yang berminat mengambil bahagian dalam program tersebut. Ia menunjukkan bahawa koefisien kebolehpercayaan yang sempurna dalam program tersebut ialah .89 Alpha. Akhir sekali, kesimpulan menunjukkan bahawa selepas tiga peringkat melalui teknik Delphi, sembilan komponen yang akhir dengan 69 item digunakan untuk membangunkan program PEHPE akhir. Dalam kajian ini, skor min statistik deskriptif kedudukan ujian aktiviti sukan, MANCOVA, atau Multivariate Analysis of Covariance dengan pengukuran berulang dijalankan. Analisa menunjukkan jenis-jenis program PEHPE yang berbeza mempunyai kesan yang berlainan ke atas perubahan sub-skala dari pasca-ujian 1 ke pasca-ujian 2 selepas kesan pra-ujian dikawal. Dengan kata lain, dapat disimpulkan bahawa program PEHPE berkesan dalam meningkatkan QWL dan kombinasi dimensi perilaku senaman termasuk kepuasan bersenam, kecekapan sendiri bersenam, teknik bersenam, frekuensi bersenam dan peringkat senaman perubahan dalam pasca-ujian 1. Didapati juga bahawa kumpulan eksperimen mempamerkan pasca-ujian 1 dalam kepuasan bersenam, kecekapan sendiri, peringkat perubahan dan frekuensi berbanding dengan kumpulan kawalan. Walaubagaimanapun, ia menunjukkan bahawa tidak ada sebarang peningkatan yang signifikan dalam teknik bersenam dari pra- ke pertengahan ke pasca-ujian 2. Tambahan pula, program PEHPE tidak menunjukkan kesan pengekalangan yang signifikan ke atas usaha mempertingkatkan kualiti kehidupan bekerja. Ia seolah-olah menunjukkan bahawa program PEHPE tidak memberikan kesan yang signifikan ke atas salah satu dimensi tingkah laku senaman iaitu teknik senaman dan juga QWL dalam pasca-ujian 2.

**THE EFFECTS OF PHYSICAL EDUCATION HEALTH-RELATED
PROGRAM FOR EMPLOYEES (PEHPE) ON EXERCISE BEHAVIOUR
AND QUALITY OF WORK LIFE AMONG EMPLOYEES IN
MOBARAKEH STEEL COMPANY, IRAN**

ABSTRACT

This study aims at examining the effects of the Physical Education Health-Related Programme for Employees (PEHPE) on exercise behaviour and quality of work life among employees in Mobarakeh Steel Company, Iran. The survey method was used at the first stage while quasi-experimental research was used at the second stage of this study. The questionnaire of Sports Needs Assessment in terms of Interest (SNAI) with the high reliability coefficient of .977 alpha was used for data collection among the randomly selected sample of 376 employees from the population of 15000 male employees in Mobarakeh Steel Company. For the second stage of this study, pilot study *indicated that* the questionnaire of Quality of Work Life (QWL) was used with the proper reliability Cronbach's Alpha of .882, whereas the questionnaire of Exercise Behaviour (EB) dimensions were seen with more than .80 alpha coefficient. The samples were divided into experimental and control groups where each group included 63 employees for three times as pre-test, post-test 1 and post-test 2 that were interested to participate in the programme. It was revealed that the proper reliability coefficient of the PEHPE programme was .89 alpha. Finally, the findings indicated that after three stages through Delphi technique, nine finalised components with 69 items were used to construct the final PEHPE programme. In this study, descriptive statistics mean score of test rankings of sports activities, MANCOVA, Multivariate Analysis of Covariance with repeated measures were performed. The analysis revealed that

different types of PEHPE programme had different effects on the change of subscales from post-test 1 to post-test 2 after the effect of pre-test was controlled. In other words, as the conclusion, PEHPE programme is effective in enhancing QWL and combination of exercise behaviour dimensions including exercise satisfaction, exercise self-efficacy, exercise techniques, exercise frequency and exercise stage of changes in the post-test 1. It was found that the experimental group exhibited higher post-test 1 in exercise satisfaction, self-efficacy, stage of change and frequency compared to that of the control group. However, it revealed no significant increase in exercise technique from pre-to mid-to post-test 2. In addition, the PEHPE programme did not significantly demonstrated the retention effects on enhancing the quality of work life. It seemed that the PEHPE programme has no significant effects on one of dimensions of exercise behaviour, that is exercise technique and also QWL in the post-test 2.

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CHAPTER ONE

INTRODUCTION

1.1 Introduction

Human resources play a major role in the success of the organizations. Employees are the main resources and have their special behaviours and characteristics (Soltani, 1998). According to this, there are a few main aspects related to the success of employees in organizations including quality of work life (QWL) and exercise behaviour (EB).

The QWL is perceived as an interplay and communication between the employees and working environment. Its main goal is to enhance the efficiency of working environment to meet the organizational and private values as well as the requirements, leading to an increase in job satisfaction and security, well-being, health, competency and equilibrium between the life of work and non-work. It is mentioned in academic studies that reinforced QWL increases employees' satisfaction, confidence, but reduce stress, which results in highly competitive commerce environments. For this reason, in recent years, most of the companies have been identifying methods for their employees to achieve their QWL better (Hyde, Mandip, Agrawa, Gupta, & Seth, 2012).

Several studies on the assessment of performance indicated that the partnership in the quality of work life programs helps increase everyone's satisfaction (Adrienne, Gordon, & Keefe, 1992). Lau and Bruce (1998) have defined 'quality of work life' as workplace strategies, operation, and environments that promote and maintain

employees' satisfaction to improve working conditions for employees and organizational effectiveness for employers. The conclusion of occupational safety and health studies in schools and higher institutions help create a healthy and safe conscious workforce to increase the QWL of employees. Today, the relationship between physical activity and QWL is increasingly significant. QWL is a broad concept based on expression, which is used to improve living and working conditions of people (Nzomo, 2009).

1.2 The Background of the Research

This chapter presents the important aspects of the current research focusing on the effect of physical education on improving the quality of work life of the staff in one of the industrial companies in Isfahan province, Iran. Its main aim is to generalize and introduce positive behaviour of physical activity to employees in other factories and companies. In Iran, previous studies showed that some people have high self-confidence, and they perceive that they have a useful life. It means that they can solve their problems better, and therefore may have a better quality of work life (Heydari, Alhani, Kazem Negad, & Moezi, 2006). Also, according to the investigation of Nazerian Iravani, & Soltani, (2012), some of the employees in one of the industrial companies in Isfahan province, Iran have lack high self-confidence. This study indicated that the selective aerobic exercises significantly improve the employees' confidence and thus implementing regular extensive sports programs in the company are necessary.

In Iran, in recent decades, the relationship between education, mental factors and exercises and sports have provided many of the administrators within different

companies with the knowledge of the great affairs and advantages of physical activity programs, fitness programs, and recreational activities at the workplace for their workers. In this case, it does not limit the organizations' responsibilities in a healthy society by producing more goods or profitable services. However, the managers of organizations believe that the organizations need to pay more attention to physical and mental health needs of their employees in order to achieve the organizational goals (Soltani & Soltani, 2004).

1.2.1 Quality of Work Life (QWL)

In recent years, QWL programs have played a significant role in increasing working labor productivity in prestigious companies and organizations (Abtahi & Kazemi, 2004). A number of experts indicated a remarkable decrease in the productivity and product quality of such prestigious companies due to low QWL of employees (Shimon & Randall, 2005). According to those researchers, improving the QWL is one of the main objectives or goals of industrial organizations in Iran. Consequently, the investigations into the effects of behavioural factors associated with physical activity on QWL have become main issues. That means physical activity is also one of the most important methods of promoting a brand of industrial companies in Isfahan province and contributing to Iranian society. In this regard, Iravani, Nazerian, & Soltani (2011) discussed the management and sports managers in industrial companies, which emphasizes the important role of improving the recreational facilities for individuals. With regard to this current matter, this research also aimed to investigate the effects of

Physical Education, Health-Related Program for Employees (PEHPE) on QWL of employees in one of the biggest industrial companies in Isfahan province, Iran.

In other words, because of the reasons explained above, this research attempted to investigate the effects of PEHPE on exercise behaviour and quality of work life (QWL).

1.2.2 Exercise Behaviour (EB)

A specific set of constructs that fits the heading of modifiable psychological correlates of physical activity is social cognitive variables. From social cognitive perspectives, Bandura (1986) identifies reciprocally influencing characteristics of a person, environment, and behaviour and then indicated that an individual's behaviour is determined by the interaction of these features (Bandura, 1997). Social cognitive variables include self-efficacy, i.e., confidence (Buckworth & Dishman, 2007) and self-regulation, i.e., the personal control of goal directed behaviour (Bandura, 1986). These variables influence self-initiated change in health behaviour such as physical activity. Indeed, these variables are important particularly when physical activity becomes increasing under the control of an individual (Dishman, Dunn, Sallis, Vandenberg, & Pratt, 2010). The researches in Iran, Farmanbar, Niknami, Heydar Nia, & Haji Zadeh (2010); and Sheikholeslam, Mohamad, Mohammad, & Vaseghi, (2004) showed that 80% of Iranian people are inactive that one of the important factor, which affect is related to the exercise behaviour.

Understanding how different types of motivation towards exercises frequency contribute to exercise behaviour is the first step to identify the ways to increase exercise frequency among individuals (Lindsay et al., 2012).

It is the fact that most of the staff must encounter relatively passive working environment with a high mental and physical pressure, irregular scheduling or shifting, less job promotion, and social-emotional pressure (Weyers, Peter, Boggild, Jeppesen, & Siegrist, 2006), which leads to job dissatisfaction, and thus they expect to work in more active working environments (Chaboyer, Najman, & Dunn, 2001). With regard to the concept of satisfaction, Cunningham (2007) viewed health improvement and fitness as satisfaction dimensions. Satisfaction is the first component and becomes an important variable within the context of sports and physical activity. Previous research in this area has also demonstrated the significant associations of satisfaction with the time individuals spent in their recreational activities.

A number of studies have also found a positive association of self-regulation strategies (i.e., goal setting, mental imagery and the causal attribution dimension of perceived personal control) with physical activity (Saelens, Gehrman & Sallis, 2000), and psychological processes (Matthews & Moran, 2011). However, core components or strategies of self-regulation that are considered the most effective in facilitating physical activity are still unclear. Additionally, most studies on the relationship between these strategies and physical activity remain theoretical (Gould & Chung, 2004). Since mental imagery and goal were confirmed to be the main interventions in physical activities for increasing performance and improving strategies of self-efficacy, it might also be applicable for exercise behaviour (EB). Although self-regulation strategies' potential (e.g., goal setting) is emphasized in the domain of physical activity, it has received relatively little empirical research compared with confidence and other social cognitive variables (Umstatted, Saunders, Wilcox, Valois, & Dowda, 2006). Physical activity is an

effective means of intervening confidence and satisfaction. This finding is the great importance of these process variables in improving behaviour and quality of life (Rejeski & Brawley, 2006). In a study on behavioural characteristics, confidence was also introduced as one of the most important items influencing the success of sports events (Pieter and Mateo, & Bercades, 2000). Undoubtedly, researchers, therefore tend to support increased use of self-regulation models in this domain (Gould & Chung, 2004).

To understanding the better effects of physical activity program on exercise behaviour among employees, it is also necessary to explore the frequency of physical activity. A model proposed to improve health behaviour including sports revealed that several frequencies of exercise significantly improve individuals' behaviour (Marcus, Selby, Niaura, & Rossi, 1992). In addition, Shabani, Ghafari, and Honari (2011) stated that individuals lack information on the most appropriate duration and intensity of each exercise session. Moreover, a large amount of research has demonstrated a link between physical activity and health, which leads to conducting the present research in order to determine how frequently employees need to exercise per session and per week through the PEHPE to positively affect their exercise behaviour. On the other hand, the present research aimed to determine the effect of PEHPE on another dimension of exercise behaviour, exercise technique, among employees. In order to get health benefits associated with physical education, it is important to improve the exercise behaviour and do exercise regularly with an appropriate intensity.

1.3 Problem Statement

a) The first issue of this study is related to priority and components of PEHPE. In terms of priority, it is necessary to understand the needs or interests of the participants to improve human's abilities such as improving the level of physical and mental health, knowledge, information, skills and understanding them based on their needs and interests in sports activities among employees in industrial companies in Iran which according to (Lotfi, 2009) are not prioritized before surveying physical education programs.

b) Looking at the second issue of component aspects, the previous research indicated the existing problem that affect physical education programs are still limited for the employees in industrial companies in Isfahan province, Iran (Nazerian & Soltani, 2008). Hence, there is a need to find solutions to a matter of the greatest concern with regard to working condition and physical education in those companies. Nevertheless, in recent years, very little attention has been paid to the significant role of sports programs components in the development of human resources and the elevation of industrial working quality (Soltani & Soltani, 2004). In this view, Dubbert (2000) agreed that physical activity has been an essential factor that has a positive impact on physical health. Therefore, the main aim of this research was to survey a Physical Education and Health-Related program for employees (PEHPE) in one of the industrial companies of Esfahan province, Iran.

c) Thirdly, the issue is about the effect of PEHPE on exercise behaviour. It has been observed that very little attention has been paid to psychological aspects such as

exercise behaviour of human resources. Recent studies have revealed a positive association between positive behaviours of individuals with good health, and thus unhealthy people could gain a physically active lifestyle through doing exercise. It seems that the core dimensions of exercise behaviour including satisfaction, confidence, different techniques or strategies (i.e., goal setting, imagery, and the perceived personal control), and exercise frequency—are major factors that can influence physical activity (Matthews & Moran, 2011). Therefore, the current study attempted to investigate the effects of the physical education program on exercise behaviour, namely exercise satisfaction, exercise confidence, different exercise techniques or strategies (i.e., goal setting, imagery, and the perceived personal control), exercise stages and exercise frequency of employees in organizations.

d) The last issue is related to the effect of PEHPE on the quality of work life (QWL) whereby results of a survey of QWL in Mobarakeh Steel Company conducted by Soltani and Palahang (2011) indicated that the QWL of overall mean of its indicator in a period of 2006-2010 in this company significantly was low level of the QWL among the employees or sometimes remained the same. QWL and physical activity have become two current aspects that should be taken into account in multidisciplinary organizations (Talaie, Arofzad, Naderian and Razavi, 2011). Human resources are perceived as a major factor in the competitive advantage, success, and survival of organizations. Therefore, it is necessary to gain deep insights into human resources' (employees') psychological and physical needs (Fattah, 2008). At present, people tend to have positive perceptions of the important role of QWL because of its effectiveness (Shimon & Randall, 2005). Likewise,

Lokanadha Reddy & Mohan Reddy (2010) stated that using different techniques for improving QWL could meet employees' psychological needs. However, very few investigations were conducted on the impacts or the relationships of QWL and physical education program among employees who are working in industrial organizations in Iran. Moreover, very little attention has been paid to psychological aspects such as exercise behaviour of human resources in Iran (Mirsepasi, 1998). Thus, there is a need to enhance the development of physical education programs and related components for employees of Mobarakeh Steel Company, Iran to improve exercise behaviour and QWL of employees in the organizations. Nevertheless, the investigations into these issues have not been a focus during the last decades. In addition, there is very a few investigation of the physical education program and quality of workplace among employees with the consideration of psychological aspects. On the other hand, there are not any determined components of physical education program with priorities employees' interests (Nazerian, Shahizan, Soltan Hosein, Nazerian, and Lotfi, 2017).

The results in its adverse effects on societies in general and companies in particular. It is true that there are individuals who have physical fitness; however, they get difficulties in their life and work due to the psychological crisis (Nazerian et al., 2012). With regard to theses issues of this research aimed to the effect of the determined physical education program improve the employees' QWL and exercise behaviour in Mobarakeh Steel Company in Isfahan Province, where employees pay less attention to improving their exercise behaviour through any educational program.

1.4 Research Objectives

To achieve the main objective of the current research, quantitative research objectives are presented as follows:

- (i) To prioritize the employees' interest in terms of sports activities to develop Physical Education, Health-Related Program for Employees (PEHPE) of Mobarakeh Steel Company, Iran.
- (ii) To determine the components of Physical Education, Health-Related Program for Employees (PEHPE) of Mobarakeh Steel Company, Iran.
- (iii) To determine the difference in the effect of Physical Education, Health-Related Program for Employees (PEHPE) on exercise behaviour in terms of exercise satisfaction, exercise self-efficacy, exercise techniques, exercise stages of change and exercise frequency in the post-test1 and post-test2 compared with the control group among employees of Mobarakeh Steel Company, Iran.
- (iv) To determine the difference in the effect of Physical Education, Health-Related Program for Employees (PEHPE) on the quality of work life (QWL) in the pre-test, post-test1, and post-test2 between the control and experimental group among employees of Mobarakeh Steel Company, Iran.

1.5 Research Questions

- Q1.** What are the priorities of employees' interest in sports activities among employees in order to examine the effect of Physical Education, Health-Related Program for Employees (PEHPE) of Mobarakeh Steel Company, Iran?

Q2. Which components of Physical Education, Health-Related Program for Employees (PEHPE) are perceived as essential among the employees of Mobarakeh Steel Company, Iran?

Q3. What is the effect of Physical Education, Health-Related Program for Employees (PEHPE) on exercise behaviour in terms of exercise satisfaction, exercise self-efficacy, exercise techniques, exercise stages of change and exercise frequency in the post-test1 and post-test2 compared with the control group among employees of Mobarakeh Steel Company, Iran?

Q4. What is the effect of Physical Education, Health-Related Program for Employees (PEHPE) on the quality of work life in the post 1 and post-test2 compared with control group among employees of Mobarakeh Steel Company, Iran?

1.6 Research Hypotheses

As research question, Q3 measures the effect of the Physical Education, Health-Related Program for Employees (PEHPE) on behaviour exercise behaviour twice (post-test1 and post-test2), there will be two hypotheses to be tested to answer research question Q3.

The first main hypothesis focuses on post-test1 on exercise behaviour as stated below:

Ha1: *There will be a significant difference in the post-test1 between the control and experimental group of the PEHPE in terms of the linear combination of exercise behaviour dimensions, namely exercise satisfaction, exercise self-efficacy, exercise*

techniques, exercise frequency and exercise stages of changes after the effect of the pretest is controlled.

The second main hypothesis focuses on post-test2 on exercise behaviour as stated below:

Ha2: *There will be a significant difference in the post-test2 between the control and experimental group of the PEHPE in terms of the linear combination of exercise behaviour dimensions, namely exercise satisfaction, exercise self-efficacy, exercise techniques, exercise frequency and exercise stages of change after the effect of the pretest is controlled.*

As research question, Q4 measures the effect of the PEHPE on the quality of work life twice (post-test1 and post-test2), there will be two hypotheses to be tested to answer research question Q4.

The third main hypothesis focuses on post-test1 of the quality of work life as stated below:

Ha3: *There will be a significant difference in the post-test1 between the control and experimental group of the PEHPE in terms of quality of work life (QWL) after the effect of the pretest is controlled.*

The fourth main hypothesis focuses on post-test2 of the quality of work life as stated below:

Ha4: *There will be a significant difference in the post-test2 between the control and experimental group of the PEHPE in terms of quality of work life (QWL) after the effect of the pretest is controlled.*

1.7 Significance of the Study

This research will be essential because it examined the effects of PEHPE on improving exercise behaviour (EB) and the quality of work life (QWL) of employees. This program was developed to meet the main organizational goal. Very little research has examined the effects of the educational program of sport on exercise behaviour (Lovell & Butler, 2014). In recent years, although most people become pay more attention to exercise behaviour, very few of them spend their considerable amount of leisure time doing exercise. A lack of physical activity decreases health (Biddle, Brehm, Verheijden, & Hopman-Rock., 2015).

The relationship between behaviour, health, and disease is taken into consideration. Especially, studies explore the reason why some people are not physically active; whereas others are physically active (Biddle et al., 2015; Chodzko-Zajko et al., Hardman & Stensel, 2009; Stensel, Gorely & Biddle, 2008). Physical education plays an important role in the prevention and treatment of overweight as well as has a positive effect on health. In particular, doing exercise can help reduce cholesterol, hypertension, and lower fat deposition and strengthen the muscles of body weight. To improve the cardio-respiratory system, density of bone, and muscle endurance and muscle strength, sports exercise is an important component for all individuals to have their healthy lifestyle (CDC, 2010). The current data also show that physical activity of moderate intensity

and time decreases depression and anxiety but improves mood and quality of life throughout the life span (Badri Azarin, 2013; Berger & Owen, 1992; Biddle, Fox, & Boutcher, 2000; Ossie, 2010; Raglin, 1990).

Today, QWL needs to be improved because of its growing importance in forming all people's positive attitudes. QWL is a result of the relationship between employees and workplace, which exemplifies the degree of proper consistency with his or her job. On the other hand, physical activities with the most part of the educational exercises in companies can provide the basic foundation of spiritual, intellectual and physical aspects for the employees via the creation of a balance between physical, mental and social aspects of the organization, leading to the improvements in job performance, productiveness and the quality of life (Iravani et al., 2011). Additionally, if there is an unbalance between the factors discussed above, QWL will be reduced, and thus the organization will be ill-developed (Allameh, 2006).

Moreover, physical activity may improve the quality of life such as enhancing self-esteem, reducing state and trait anxiety, coping with stress and improving sleep. Physical education and exercises can indirectly improve subjective health and QWL because of the treatment and prevention role of problems with psychological health. Individuals who are active in their life and work can live healthier and longer. Also, their motor skills are improved to prevent diseases (Munroe-Chandler & Gammage, 2005). The body and mental indicators of such people can prevent injuries at the workplace compared to others. Physical activities can help employees meet their psychological needs. From healthy perspectives, the quality of work life (QWL) is

necessary since the nature of the working environment is related to employees and behaviours. Several studies on exercise behaviour development were conducted to reduce behavioural problems.

Thus, this study is expected to be beneficial with regard to exploring the impact of the program of physical education on the employees' behaviour and QWL that can improve their health but decrease injuries as a result of any activity. The findings of the study are also expected to become a guideline for counsellors, managers of companies, and for those who study and implement techniques for improving the QWL and health of workers and dimensions of exercise behaviour via educational exercises.

Furthermore, the results of this study can play a major role in developing the workers' full potential by assisting them to achieve higher goals as presented below:

- i. Giving additional notice to the efficiency of physical activities in order to enhance, motivate and encourage to use physical educational activities such as implementing the curriculum in industrial companies;
- ii. Contributing to future studies such as providing a physical activity handbook that can improve the workers' abilities to modify their behaviour towards sports, leisure time for exercise or fun, and to improve safe and healthy working conditions, human capacities, decrease the occupational injuries and accidents. It can also develop the social accretion and association at the workplace, social relationship with work life as well as employees' perception of their physical and mental health at the workplace;

- iii. Supporting the reasons why physical education should be considered as a technique which the managers of the organizations should use in their companies to improve the well-being of their employees and to create work experiences. The experiences and skills of workers in their physical activities help promote their fitness to improve their health;
- iv. Sharing the findings, recommendations, and suggestions of this study with other organizations;
- v. Improving knowledge of exercise behaviour, and its techniques can be expanded for use with a non-athletic group of the workers. This might improve the behaviour potential of the techniques used in physical activities.
- vi. Needs assessment exercise is an essential basis for planning the program that leads to identifying goals and objectives.

Through observing an industrial organization, Mobarakeh Steel Company could recognize how QWL and efficiency can be improved, how it can make the maximum use of limited resources to achieve its goals and missions, how physical and mental health is improved, and how physical activities can increase employees QWL. This investigation attempts to show the positive effects of educational exercise behaviour on the quality of work life to achieve the organizational goals,. It proposes useful guidelines because all managers strive to increase the efficiency and productivity of the organization. Based on the Iron Information Bank and Steel Database of Iran (2013), Mobarakeh Steel Company in Isfahan Province is the most selling companies in Iran and one of the biggest Steel Company in the Middle East.

Very few studies were conducted in this field. The majority of people still do not have enough information on this issue. For this reason, further research needs to be conducted especially for improving health and benefit of employees and employers. If the results of this research yield positive results of the effects of PEHPE on EB and QWL, the benefits of this strategy will be proven by the present study that is necessary to consider both exterior and interior aspects of the human resource as their work life and behaviour. Since all managers make great efforts to increase the organization's productivity and efficiency, this investigation aims to examine the effect of PEHPE on exercise behaviour (EB) and the quality of work life (QWL) among employees of the biggest company in the Isfahan Province, Iran.

1.8 Conceptual and Operational Definitions

1.8.1 Quality of Work Life (QWL)

The quality of work life (QWL) is commonly defined as a general construct involving a person's job-related health, mental perception and understanding of the desirability of an organization's employees in physical and psychological working environment, their working conditions devoid of mental problems and other negative personal consequences (Walton, 1973).

In this study, QWL is referred to as the components of safe and healthy working conditions, adequate compensation, development of human capacities, constant growth and security, work and total life space, social integration and relevance of work life as

well as constitutionalism in work organizations, which derived from the questionnaire that developed by Walton (1973).

1.8.2 Exercise Behaviour (Physical Activity Behaviour)

Exercise behaviour (EB) is defined as an influence on individual's behaviour (the state or movement that an employee shows). It is determined by the interaction of the characteristics such as physical activity satisfaction, physical activity frequency, physical activity techniques or strategies (goal setting, imagery, and the perceived personal control) and the confidence of physical activities that are social cognitive variables (Matthews & Moran, 2011).

The operational definition of exercise behaviour in this study include five dimensions and as follows: exercise satisfaction, exercise frequency, exercise techniques or strategies (goal setting, imagery, and the perceived personal control) and the exercise self-efficacy which derived from the exercise behaviour questionnaire that developed by Matthews & Moran (2011) as follows:

1.8.2(a) Exercise Satisfaction

Based on the questionnaire on exercise behaviour developed by Matthews and Moran (2011), exercise (physical activity) satisfaction in this study refers to the enjoying feeling about exercise in free time while doing physical activity, which helps develop close relationships, relieve stress, get relaxed, contribute to emotional well-being, develop fitness social interaction, and feel interested.

1.8.2(b) Exercise Technique (Strategy)

In the present research, three strategies of Zimmerman's model (2000) were selected for the examination based on the physical activity technique (strategy) involved in the exercise behaviour questionnaire developed by Matthews and Moran (2011). These strategies are goal setting (from the forethought phase), imagery (from the performance phase), and the causal attribution dimension of perceived personal control (from the self- reflection phase). These strategies are linked individually to physical activity. Additionally, according to the exercise behaviour questionnaire, these techniques are applied in three ways: (1) setting the physical activity targets or objectives to be achieved, (2) recording a person's exercise behaviour, and (3) "mentally" seeing herself or himself in physical activity that may include feeling exercising or performing chosen physical activity and getting psyched up or setting goals for activity (imagine). Mental imagery is a psychological skill used for performance improvement. When someone uses imagery and imagine himself or herself to perform a successful skill, she/he can develop his or her efficacy expectation.

1.8.2(c) Exercise Frequency

In this study, exercise frequency is included in the exercise behaviour questionnaire developed by James Matthews and Moran (2011). It refers to the average number of times per week for different physical activities, duration of the activities and the intensity of exercise involving: (1) strenuous exercise (heart beating rapidly, sweating) including running, jogging, football, basketball, vigorous swimming, and vigorous long distance bicycling; (2) moderate exercise (not exhausting, light sweating)

including fast walking, tennis table, easy bicycling, volleyball, simple badminton, easy swimming, general gym exercise, and dancing (exercise movement); and (3) mild exercises (no sweating, minimal effort) including yoga, easy walking, and stretching.

1.8.2(d) Exercise Self-efficacy

In this study, exercise (physical activity) confidence is included in the exercise behaviour questionnaire developed by Matthews and Moran (2011) to know how confident a person could be physically active in a given situation. For example, how confident a person can be physically active when she/he is tired, in a bad mood, on holidays, feels to have no time or when the weather is bad. In this study, confidence also refers to self-efficacy, sports confidence, self-confidence, perceived competency outcome expectancies and movement confidence.

1.8.2(e) Exercise Change (Stages)

There are five stages of physical activity change as presented below:

i. Stage (I): Pre-contemplation

People seldom think about changing and do not expect to receive any help from others (Not acknowledging that there is a problem with behaviour that needs to change). At this stage, people do not recognize that their behaviour has problems, which needs changing.

ii. Stage (II): Contemplation

In the contemplation stage, people have more awareness of their consequences of the bad habit, and thus they think about their problem. Although they hope

to change such bad habits, they are unsure about it (Acknowledging that there is a problem but are not ready or sure about changing).

iii. Stage (III): Preparation/Determination

In the preparation/determination stage, people decide to change. Their motivation for changing is reflected by statements (Getting ready to change).

iv. Stage (IV): Action/Willpower

In this stage, they believe in changing their bad behaviour using different techniques (Changing behaviour).

v. Stage (V): Maintenance

Maintenance involves being able to avoid successfully from any temptations to return to the bad habit. The goal of the maintenance stage is to maintain the new status. People in this stage tend to remind themselves of how much progress they have made (Maintaining the behaviour change) (Matthews, & Moran, 2011; Omar-Fauzee, Pringle, & Lavalley, 1999; Prochaska, & DiClemente, 1983).

1.8.3 Physical Education

The physical education (PE) is defined as an education in the care and development of the human body, stressing athletics and including hygiene. Also, instruction in sports, exercise, and especially a part of a school or college program in training and practice in different sport fields such as running, football, gymnastics and etc (Collins English Dictionary, 2014). Physical education is a social phenomenon that

provide the participation in mental and physical activities and exercises, underlies the process of human education in the desired direction and able to create flourishing of talents in all aspects of being, maintaining health and happiness, increasing moral virtues towards improving the physical fitness (Zamani & Nazerian, 2012)..

In the present research, physical education refers to physical education and physical activity including practical and theoretical training of physical activity. The content of theoretical sports training includes making motivation, explaining the advantages of using sports exercises in the life and work, understanding the significance of physical activities, training how to do aerobic exercises and how to do and use correct and principled stretching movements, isometric movements, educating guidelines of increasing endurance cardio-respiratory, muscular endurance, strength, implying sports safety recommendations. The content and procedure of practical training include doing exercise and improving skills (i.e., stretching movements, movement or kinetic exercises, jogging with music, training correct fitness, warm up and cool down), training limited sports skills in different fields that employees will be interested in with regard to sports facilities and so on.

In addition, physical activities combine with sports education involving physical motion, or any activity such as jogging, running, swimming, playing football, basketball, tennis, badminton, volleyball, cycling, dancing or other daily activities such as stepping the stairs and walking to the workplace or home.

1.8.4 Physical Activity Levels

Physical activity is categorized into three levels (low, moderate and high) based on the 'International Physical Activity Questionnaire' (IPAQ) (Craig et al., 2003). Moderate intensity physical activity means a level of effort in which the respiration or heart rate of a person increases from 3 to 6 (MET) Metabolic Equivalent of Task (IPAQ, 2005). High/Vigorous-intensity physical activity means a level of effort in which the respiration or heart rate a person significantly increases (greater than 6 MET) (IPAQ, 2005). According to Ainsworth et al. (2011), the Metabolic Equivalent of Task (MET) is simply a physiological measure expressing the energy cost of physical activity and is defined as the ratio of the metabolic rate or the rate of energy consumption during the exercise.

In this research, The different levels of education and age can affect physical activity level). Hence, physical activity is categorized into three levels (low, moderate and high) follows as:

- a) High/Vigorous-intensity physical activity means a level of effort in which the respiration or heart rate as an example with the (110-130 HR/Min) heart rate per minute base on the healthy person wth the normal heart rate as (70 HR/Min) any participant in the PEHPE program significantly increases.
- b) Moderate intensity physical activity means a level of effort in which the respiration or heart rate as an example with the 90-110 heart rate per minute base on the healthy person wth the normal heart rate as (70 HR/Min) of any participant in the PEHPE program increases.

c) Low/ Weak intensity Level of physical activity of participants can be decreased
Moderate intensity physical activity means a level of effort in which the respiration or heart rate of any participant in the PEHPE program decreases with the 80-90 heart rate per minute base on the healthy person with the normal heart rate as an example (70 HR) of any participant in the PEHPE program.

There are the other factors can affect the level of the physical activity which are base on the different variables such as age that is researched by Donat Tuna, Ozcan Edeer, Malkoc, & Aksakoglu, (2009)., Sallis, Buono, Roby, Micalc & Nelson, (1992)., Bruce, & Katzmarzyk, (2002)., Bruce, & Katzmarzyk, (2009).

1.9 Conceptual Framework

The conceptual framework is outlined as below:

According to Maxwell (2005) and Woody, (2010), the concepts, postulations, the theories, and the conceptual framework of a research play a major role in the direction that the study develops. The theories of the present study based on the quality of work life and exercise behaviour form the conceptual framework of this research. This framework is a novel method which investigates how a high level of performance of QWL can be achieved by organizations and maintains over time. According to Sanchez and Heene (2004), different elements such as financial matters, behavioural and organizational issues are incorporated into an active, systemic, cognitive and inclusive framework.

The main objective of this research is to examine the effect of Physical Education Related-Health program for employees (PEHPE) on the exercise behaviour and QWL