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Self-efficacy as the Best Predictor for Doing Low Back Pain Prevention Behavior among Health Care Workers

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ABSTRACT

Aim: Nursing has obtained the second rank regarding Work – Related MusculoSkeletal Disorders (WRMSDs). This study aimed to assess if self –efficacy could be the best predictor for back Pain Prevention behavior among health care workers.

Method and Instruments: In this cross-sectional study, 452 healthcare workers who were working in different wards of the 6 general hospitals affiliated to Qom University of Medical Sciences were randomly selected through convenience sampling method. Data were collected through 3 scales such as demographic questionnaire, Work Related Low Back Pain Predictors Questionnaire (WRLBPPQ) and a checklist for assessing the preventive behaviors of spinal damage. Data were analyzed through descriptive and analytic tests through SPSS version 16.

Finding: A total of 452 individuals) with a mean age of (37± 8.3) years participated in the study (289 males and 163 females. Multiple linear regression analysis showed that self-efficacy was the most important predictor for back Pain Prevention Behavior (Standardized Coefficients: 0.218, P value < 0.0001)

Conclusion: The results of this study can be used to develop an education program based on self-efficacy training/promoting among healthcare workers.

Keywords: Self- efficacy , Low back Pain, Predictor, Prevention, Health Care Worker.

Introduction

Low Back Pain (LBP) is reported as the most common nurses' health problem in comparison with other professionals [1] so that it obtained second rank prevalence among Work – Related MusculoSkeletal Disorders (WRMSDs) [2]. In nursing profession psychological, organizational, personal and physical factors of the workplace contribute to incidence of LBP [3]. In spite of these factors, repetitive movements and carrying heavy loads through abnormal body postures are effective factors for WRMSDs [4-6]. In addition, vibration, lifting, pushing and pulling the loads, and staying in static positions for long time can be mentioned as risk factors for musculoskeletal disorders in nursing [7-8].

Research shows that in general, people who use appropriate strategies to control their problems in their workplaces are less likely to suffer work burnout, and their assessment of their personal development is more positive than those who do not use appropriate strategies. Conversely, those who give up or escape from problems are more likely to be exposed to emotional and attitudinal burnout [9]. In this regard, previous evidence reported that adjusting environment, performing efficient self-care and improving interpersonal relationships are proper ways of promoting health [10].

Back pain and its physical and psychosocial consequences impose heavy costs on families and ultimately, on the entire of health care system of the country and negatively affects the quality of individuals life and their family [11]. It is recommended that health educators should pay attention to the type of behavior, target population, and patterns used in previous interventions in the context of the intended subject to select the appropriate pattern for their interventions [12]. Theories are a set of interrelated concepts, definitions, and propositions that

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present a systematic way of understanding events and situations, or explain or predict events or situations [13]. The social cognitive theory contains the effective factors and related structures to the behavior by which multidimensional education program could be provided. However, selecting a proper theory should be based on community needs and in accordance with existing scientific evidence and also according to new related evidences [14]. Self- efficacy is one of most theories' constructs such as social cognitive theory as a comprehensive and multidimensional theory which could identify the factors affecting preventive behaviors.

Since, many studies showed self-efficacy as the strongest predictor of doing healthy behaviors, this study aimed to explore if this variable could predict LBP prevention behavior among health workers in hospitals of Ghom, Iran.

Methods and Instruments

In this study, 452 healthcare workers were randomly selected conveniently. The proportion of potential participants from each ward was based on all employed healthcare workers in that ward. The healthcare worker working in the hospitals with at least one year working experience and with age of 20 to 60 years were allowed to include in the study. However, individuals with history of spine surgery, lumbar disease, congenital abnormalities and other organ defects which prevent them to do LBP preventive behaviors, were excluded from the study.

All ethical principals were considered in this study and Informed consent form obtained from the participants. This study was approved by the ethical committee of Tarbiat Modares University. Data were collected from three questionnaires. The first questionnaire was about demographic and occupational variables, the second questionnaire was Work Related Low Back Pain Predictors Questionnaire (WRLBPPQ) that was validated in previous study [15] and the third one was a checklist for assessing the preventive behaviors of spinal damage. WRLBPPQ included 7 constructs and 40 items with a 5-point Likert scale from strongly agree (score 5) to strongly disagree (score 1) which the higher score indicates the better position. In addition, a researcher-made 12-aitem checklist for assessing the preventive unhealthy behaviors towards spinal damage was used. The items of this checklist were selected through reviewing related evidence [16]. This checklist was a self-reporting and were marked by healthcare workers through "never", "sometimes," "often," and "always" choices with 1 to 4 score and total score of 12 to 48 in which the higher score indicates better situation.

Linear regression analysis was used to predict the most important factor of unhealthy behaviors for LBP.

Results

Totally, 452 individuals (289 males and 163 females) with mean age of 37±8.3 years participated in the study. Table 1 shows all assessed demographic characteristics.

Multiple linear regression analysis on 452 healthcare workers showed that the construct of Self-efficacy (Standardized Coefficients: 0.218, p value < 0.0001) among other constructs like self-control, outcome reinforcement and emotional coping had the most predictive value for doing prevention behaviors of lumbar injury.

Discussion

In this study self-efficacy among other factors such as emotional coping, self-control, and outcome reinforcement was the best predictor of lumbar injury prevention. This finding is in the line of other previous study that showed self-efficacy as the best influencing factor on behavior change.

According literature, Individual morality can have a major impact on self-efficacy beliefs. Furthermore, optimism and positive morals could increase self-efficacy beliefs, and also disappointment and depression could reduce self-efficacy beliefs.

The predictive potential of self-efficacy suggests that in order to do lumbar health behavior in the workplace, healthcare workers need to believe that they are capable

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Table 1) Demographic characteristics of participants in the study.

Variable	Unit	Mean (SD)
Age	Year	37±8.3
Work experience	Year	10.27 ± 8.1
		No (%)
Gender	Male	289 (63.9)
	Female	163 (33.6)
Employment Status	Permanent employment	31(7)
	Contract- based employment	16(3.5)
	Contract-based service provider	366(81)
	Others	22(4.7)
Marital status	Single	47 (10.4)
	Married	391(86.5)
	Other	14(3.1)
Educational level	Bachelor Degree	58(12.8)
	Associate Degree	14(3.1)
	Diploma	112(24.8)
	Middle School	113(25)
	Primary school	138(34.3)

of doing it. However, previous researches showed that factors such as high working hours, the compression of work shifts, and limited number of workers in workplaces, anxiety, and stress can deprive them of this belief and they cannot put aside the wrong behaviors [15].

In the line with the current research, previous study conducted by Tulloch and colleagues showed that social and physical support through self-efficacy and outcome expectations were indirect predictors of physical activity [17].

It has been argued that not having desirable feelings in performing a proper health activity, not observing healthy lumbar behaviors, and also not getting necessary coordination with the environment and surrounding as well as feeling disturbed, could encounter problems in conducting or continuing the healthy behavior.

The results of this study also indicated that coping with carrying out healthy lumbar behaviors and observing correct body posture during patient care as well as positive emotions and feelings of healthcare workers is important for doing healthy behaviors. Thus, self - efficacy was recognized as one of the most important predictors of doing preventive behaviors in this study. Because, doing healthy behavior is so easier by recognizing and satisfying ones' needs in a desirable manner such as belonging, affection, success, security, sympathy, freedom from sin and encouragement [18].

Lumbar health behaviors could create good mental health and resistance to complications of mental stress, positive morality and personal life satisfaction, and proper coordination between feelings, activities and thoughts [19]. However, given the obtained satisfaction of doing these behaviors, could lead to higher self - efficacy and so can be used to manage and overcome problems. This study caused participants' knowing the consequences of health care prevention behavior due to spine damage and provide a way to modify their behavior by controlling the emotions and overcoming the inhibitory emotional responses that

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leading to high self-efficacy.
In addition, this study showed, the emphasis on the consequences of these behaviors and their compatibility with healthcare workers, morale could be effective for doing the behavior.
Despite strong points of this study such as large sample size, there were few limitations such as self-reporting and non-causative study that is recommended to be considered in future studies.

Conclusion

The results of this study can be used to develop an education program based on self-efficacy improving regarding doing low back pain preventive behavior among healthcare workers.

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Conflicts of Interest: There is no conflict of interest for this study.
Author Contribution. SSh was the principal researcher. SST supervised the study. ARJ advised the study.
Ethical Permission. In this study, all ethical principals were considered and it was approved in Tarbiat Modares University as a post doc project.
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