

## Psychological Factors of Osteoporosis

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### DESCRIPTION

Osteoporosis is a major public health concern affecting millions of older adults worldwide. The Osteoporosis Health Belief Scale (OHBS) and Osteoporosis Self-efficacy Scale (OSES) evaluate osteoporosis health beliefs, as well as perceived susceptibility and seriousness, benefits, barriers, and self-efficacy of calcium and exercise, and health motivation, and their relationship to preventive health behaviours. A comprehensive search of studies that enclosed OHBS and OSES subscale scores as outcomes were performed. Osteoporosis may be a progressive skeletal disease that may be for the most part prevented and managed through health behaviours like adequate calcium and vitamin D intake, timely diagnosing, and cost-efficient treatment [1]. Fragility fractures, the consequence of osteoporosis, have profound effects. Among the foremost devastating are hip fractures with 30,000 occurring yearly in North American countries and the prevalence of vertebral deformities, which generally represent vertebral fractures, is seen in 22.5% of men and 24.5% of women over 50 years of age. These fractures reduce individuals' quality of life and are related to a 3-fold increased risk of death within 5 years compared to people who don't suffer fractures.

Current analysis suggests that several people with fragility fracture don't undergo applicable screening or treatment and don't interact in preventive health behaviours. Evaluating the structural and psychological determinants of health behaviour is vital so as to better understand and manage the disease. Rosenstock's Health Belief Model (HBM) is one of the foremost widely used psychosocial frameworks in health behaviour analysis and practice [2]. It is also the most widely applied conceptual framework for evaluating osteoporosis health beliefs and their relationship to osteoporosis-related health behaviours. The HBM suggests that an individual's health beliefs are related to the chance of participating in health behaviours. The premise of the HBM is that an individual's actions to prevent, screen for, or manage disease depend on the subsequent constructs: (a) perceived susceptibility, (b) perceived seriousness, (c) perceived advantages of a behaviour, (d) perceived barriers to a behaviour, (e) indication to action as well as events that encourage people to take action, and (f) self-efficacy. Modifying factors like demographics,

socio-psychological variables, and socioeconomic standing may additionally influence perceptions, and therefore indirectly influence health behaviours.

Since its development, a large diversity of populations, health conditions, and health behaviours are measured using the HBM. Scott et al. determined the connection between the HBM constructs and health behaviour in sixteen studies, none of that associated with osteoporosis [3]. Results of weighted mean effect sizes showed susceptibility, seriousness, barriers, and benefits were important predictors of health behaviours. Health beliefs might vary depending on health conditions and may not be generalized. Therefore, it's necessary that construct definitions are consistent with the original HBM theory, however, that measures are specific to the health behaviour and population being self-addressed. As an example, barriers to osteoporosis screening are also completely different from barriers to endoscopy.

Osteoporosis health beliefs in men and women might impact decisions to change preventive health behaviours. Schuit et al. identified barriers as the most typical health belief subscale impacting osteoporosis-related health behaviours, and validation of the OHBS showed greater health motivation and fewer perceived barriers to calcium intake and exercise were the foremost important constructs in explaining exercise and calcium intake behaviours in older adults [4]. As an example, women who perceived themselves as susceptible to osteoporosis and perceived several benefits and few barriers to calcium intake were more likely to use calcium and vitamin D supplements. These results are more likely to use calcium and vitamin D HBM literature findings whereby perceived barriers and susceptibility are the foremost important constructs influencing health behaviours.

Since its development, many studies using the OSES have shown that self-efficacy of calcium intake and exercise are significantly related to calcium intake and exercise behaviour for osteoporosis prevention and management in women. As an example, Nguyen [5] classified young women based on their calcium intake and exercises (high versus low) and found that women who reported high calcium intake ( $\geq 1200$  mg/day) and high exercise levels ( $\geq 90$  min/wk) were considerably more likely to have high self-efficacy of

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**Received:** 04-Apr-2022, Manuscript No. JOPA-22-17153; **Editor assigned:** 08-Apr-2022, PreQC No. JOPA-22-17153 (PQ); **Reviewed:** 22-Apr-2022, QC No. JOPA-22-17153; **Revised:** 29-Apr-2022, Manuscript No. JOPA-22-17153 (R); **Published:** 06-May-2022, DOI: 10.35841/2329-9509.22.10.302.

**Citation:** Edwin S (2022) Psychological Factors of Osteoporosis. J Osteopor Phys Act. 10: 302.

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calcium intake and exercise. No studies were found that evaluated self-efficacy and its relationship to osteoporosis preventive behaviours in men. With reference to the OHBS and OSES, perceived seriousness, benefits, barriers, and self-efficacy of calcium intake and exercise, and health motivation seem to be the foremost common subscales in men and women and explain the change in osteoporosis preventive behaviours, exercise and calcium intake. Modifying the OHBS and OSES questionnaires to predict different health behaviours associated with osteoporosis, like vitamin D intake and drug therapy initiation would be useful in trade osteoporosis education interventions for both research and practice.

While interventions for ever-changing osteoporosis health beliefs and behaviours are also helpful in analysis and practice. Specifically, longitudinal, randomized controlled trials evaluating the influence of osteoporosis education combined with and without DXA-screening results. These interventions to focus on health belief perceptions of older men, biological time ladies, young adults, or completely different ethnicities are important for health behaviour modification inside these teams. Osteoporosis health beliefs are modifiable, therefore, taking these into consideration once designing interventions or promoting health behaviours might facilitate improve

prevention of the disease and have long-run cost-saving benefits for the health care system when compared to the costs related to treating and caring for people who have already suffered a fracture.

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