# Osteoporosis Health Beliefs across Work Status: among premenopausal women 

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#### Abstract

Health is a blessing physically and mentally a healthy person can be more productive and enjoy all aspects of life healthy persons are assert to their family, organizations where they work and to society in order to promote health body needs to function optimally for this the musculoskeletal system plays an important role as certain disease like coronary diseases and COPD (chronic obstructive pulmonary diseases) are more in men same way certain disease are more prevalent among women one of the such disease is osteoporosis which can be prevented by bringing awareness on prevention of osteoporosis. As osteoporosis is a common musculoskeletal disorder referred as silent disease that often remains asymptomatic until bone fracture occurs which makes increase in mortality and morbidity which makes family in crisis due to medical, economical, and social consequences. In Indian scenario women are roots of the family they usually care takers of the family when care taker is bed ridden entire family existence will be altered intern results in reduced functional independence and quality of the life which makes osteoporosis as a public concern. so researcher felt lack of knowledge and belief towards prevention of osteoporosis was major factor for increasing more incidents of osteoporosis.this study assess the beliefs on osteoporosis. Prevention among working and non working premenopausal women. A total 250 working 250 non working premenopausal women were assed with osteoporosis health belief scale it is a 42 item questionnaire consisting of seven sub-scales focusing on health beliefs viz., perceived susceptibility, perceived severity, perceived benefits of exercise, perceived benefits of calcium intake, perceived barriers to exercise, perceived barriers to calcium intake and (aspects related to) health motivatio The mean score of OHBs was conspicuously higher among working women (115.58) as against their non-working counterparts (111.71). Moreover, the independent sample $t$-test results between the work status of the respondents and the mean scores of OHBs were turned out as highly significant ( $\mathrm{p}<0.001$ ). Indicating that the osteoporosis health beliefs were higher among those respondents who were working outside home or in one or the other occupations than those who were non-working (or occupied in homemaking activities). These results suggest that there is difference between working and nonworking women related to osteoporosis beliefs .


## IndexTerms - Component,formatting,style,styling,insert.

## I.Introduction

## "AN OUNCE OF PREVENTION IS WORTH A POUND OF CURE"-BENJAMIN FRANKLIN

Osteoporosis is a silent metabolic diseases which can potentially cause fracture, disability, and increased mortality and morbidity which makes Osteoporosis as a significant clinical and public health concern [1-3]. As per the National Osteoporosis Foundation (NOF) ten million individuals were having osteoporosis and almost 34 million were suffering with low bone mass, which makes them at increased risk for developing osteoporosis [2]. The risk of Woman's breaking her hip due to osteoporosis is equal to her risk of breast, ovarian, and uterine cancers [2]. There were many lifestyle risk factors for developing bone loss and osteoporosis such as a diet with inadequate calcium intake, sedentary life style, family history of osteoporosis [1,2]. Women with a family history of osteoporosis have almost twice the risk of developing the disease, compared with women without a family history [4]. The NOF estimated that $20 \%$ of Asian women aged 50 and older were having osteoporosis, and $52 \%$ were estimated to have low bone mass [2]. Bone metabolism involves repetitive turnover cycles of bone osteoclasts breaking down the bone structure, which is referred to as resorption and bone osteoblast building up the bone structure, a process known as bone remodeling [5]. In both sexes, peak bone mass is reached by 30 years.In women estrogen is needed to keep a healthy balance between bone resorption and bone remodeling [5]. Menopausal women are
especially vulnerable to bone loss due to the fluctuating and declining estrogen levels. This imbalance in bone formation and breaking downleads to accelerated bone loss [5]. In the first five to seven years after menopause, a woman can lose up to $20 \%$ of her bone density, and this loss can lead to osteoporosis [2]. The progression of bone loss that leads to osteoporosis can be slowed or delayed with lifestyle changes, particularly a diet with adequate calcium and vitamin D , weight-bearing physical exercise, [1, 2]. Medications for osteoporosis were also available to minimize bone loss and prevent fracture [1, 2]. Previous studies have shown that many women of all ages do not perceive themselves as being at risk for developing bone loss and osteoporosis [7-11]. However, there were limited published literature specifically on premenopausal women's health beliefs regarding osteoporosis across work status. It is important to assess health beliefs of premenopausal women and to provide them adequate education by Promoting bone health in premenopausal women can reduce morbidity later in postmenopausal period.[12]. The theoretical model for this study was the Health Belief Model (HBM). The Health Belief Model (HBM) is a conceptual framework used to understand health behaviors and reasons for noncompliance with recommendations for health actions [13, 14]. The Health Belief Model was developed in the 1950s by social psychologists working for the United States Public Health Service (USPHS) as a way to explain why medical screening programs were not successful [14-16]. The HBM has four major components for compliance with recommended health action: perceived barriers of recommended health action, perceived benefits of recommended health action, perceived susceptibility to the disease, and perceived severity of the disease [16]. Later the model was expanded to include cues to action and motivating factors [16]. In 1988, selfefficacy was added as a component. The core assumptions of the self-efficacy are based on the belief that three criteria primarily affect whether or not a person will take a health-related action. These three criteria are the conviction that one has the ability to initiate the activity, maintain the activity, and persist in performing the activity in the face of obstacles [17].

## Aims and objectives

The aim of study was to analyse and interpret the Osteoporosis Health Beliefs (OHBs) of working and nonworking premenopausal women. The measurement of OHBs among the respondents has been done adopting a standardised scale - Osteoporosis Health Beliefs Scale (OHBS) - developed by Kim, Horan \& Gendler (1991) [15].

## Material and methods

It was a descriptive study carried out in tirupati municipal corporation election wards, which is located in chittoor distict,of Andhrapradesh. Five wards were selected randomly from these selected wards five streets were selected for the present study. The study population include all the premenopausal working and non working women from selected streets .sample size taken as 250 working 250 non working premenopusal women. Data were collected from a semi structured questionnaire. p valuless than 0.05 was taken to be statistically significant.

## Measurement of Osteoporosis Health Beliefs

One of the major objectives of the present research work is to study the patterns, of the Osteoporosis Health Beliefs (OHBs) among the respondents and hence, the measurement of OHBs was carried out based on the OHBS developed by Kim, Horan \& Gendler (1991)[ 15 ]. This was a 42 -item instrument consisting of seven sub-scales focusing on health beliefs viz., perceived susceptibility, perceived severity, perceived benefits of exercise, perceived benefits of calcium intake, perceived barriers to exercise, perceived barriers to calcium intake and (aspects related to) health motivation. The researcher collected the responses for these 42-statements from the respondents on a five-point Likert scale assigning the scores in the following lines: 1 $=$ Significantly Disagree, $2=$ Disagree, $3=$ Neutral, $4=$ Agree and $5=$ Significantly Agree. It was also specified that 'Agree' or 'Strongly Agree' are correct responses. Based on these assigned scores, the overall magnitude of OHBs was computed by pooling all the scores for each of the respondents, which ranged between 51 and 158. The reliability of the scale was tested by calculating Cronbach's Alpha ( $\alpha$ ), 0.730, which can be said that the scale was fairly reliable.

## IV. RESULTS AND DISCUSSION

Osteoporosis Heath Beliefs across Respondents' Work Status 1.1 Perceived Susceptibility:

The percentages of working women who reported Agree and Strongly Agree for the six statements under consideration were fallen in range of $10.8-23.2 \%$ and $3.6-7.2 \%$, respectively, whereas the corresponding percentages among non-working women were little higher side (11.6-27.6\% and $2.4-12.8 \%$, respectively).

### 1.2 Perceived Severity:

Tthe percentages of working women who reported Agree and Strongly Agree for the six statements under consideration were fallen in the range of $14.0-25.8$ per cent and 8.0 percent -12.0 percent, respectively, whereas the corresponding percentages among non-working women were somewhat lower ( 15.6 per cent -27.2 percent and 2.0 per cent -11.2 percent).

### 1.3 Perceived Benefits of Exercise:

Information about the responses provided by the respondents for perceived benefits of exercise was depicted in Table 1.3. the percentages of working women who reported Agree and Strongly Agree for the six statements under consideration were reported to be in range of 16.4 percent -21.6 per cent and 4.8 percent -11.6 percent, respectively, whereas the corresponding percentages among non-working women were marginally lower ( 9.6 per cent -23.2 per cent and 2.0 per cent -9.2 per cent, respectively).

Table 1.1 Percentage Distributions of the Respondents by their Responses to the Statements Related to Perceived Susceptibility

| Statements related to Perceived | Responses to Statements (in \%s) |  |  |  |  | Total |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Susceptibility | SDA | DA | NU | A | SA | \% | N |
| 1. My chance of getting Osteoporosis is high |  |  |  |  |  |  |  |
| Non-Working | 26.4 | 25.2 | 23.2 | 16.4 | 8.8 | 100.0 | 250 |
| Working | 19.2 | 28.8 | 25.6 | 19.6 | 6.8 | 100.0 | 250 |
| Total | 22.8 | 27.0 | 24.4 | 18.0 | 7.8 | 100.0 | 500 |
| 2. Because of my body build, I am more Likely to develop Osteoporosis |  |  |  |  |  |  |  |
| Non-Working | 17.2 | 17.2 | 35.6 | 27.6 | 2.4 | 100.0 | 250 |
| Working | 17.2 | 16.4 | 40.4 | 22.4 | 3.6 | 100.0 | 250 |
| Total | 17.2 | 16.8 | 38.0 | 25.0 | 3.0 | 100.0 | 500 |
| 3. It is extremely likely that I will get Osteoporosis ${ }^{@}$ |  |  |  |  |  |  |  |
| Non-Working | 18.0 | 28.0 | 24.4 | 18.0 | 11.6 | 100.0 | 250 |
| Working | 21.6 | 34.0 | 26.4 | 10.8 | 7.2 | 100.0 | 250 |
| Total | 19.8 | 31.0 | 25.4 | 14.4 | 9.4 | 100.0 | 500 |
| 4. There is good chance that I will get after Osteoporosis |  |  |  |  |  |  |  |
| Non-Working | 16.8 | 26.8 | 28.8 | 23.2 | 4.4 | 100.0 | 250 |
| Working | 12.4 | 27.6 | 30.8 | 23.2 | 6.0 | 100.0 | 250 |
| Total | 14.6 | 27.2 | 29.8 | 23.2 | 5.2 | 100.0 | 500 |
| 5. I am more likely than the average person to get Osteoporosis |  |  |  |  |  |  |  |
| Non-Working | 29.2 | 12.8 | 32.0 | 19.6 | 6.4 | 100.0 | 250 |
| Working | 21.2 | 21.2 | 33.2 | 17.2 | 7.2 | 100.0 | 250 |
| Total | 25.2 | 17.0 | 32.6 | 18.4 | 6.8 | 100.0 | 500 |
| 6. My family history makes more likely that I will get Osteoporosis ${ }^{@}$ |  |  |  |  |  |  |  |
| Non-Working | 20.0 | 26.8 | 28.8 | 11.6 | 12.8 | 100.0 | 250 |
| Working | 22.0 | 28.0 | 24.0 | 19.2 | 6.8 | 100.0 | 250 |
| Total | 21.0 | 27.4 | 26.4 | 15.4 | 9.8 | 100.0 | 500 |

Note: SDA=Strongly Disagree, DA=Disagree, NU=Neutral, A=Agree and SA=Strongly Agree
$@=$ Chi-square test results are significant at 0.05 and 0.05 levels between the Items Marked in that order across Work Status of Women

### 1.4 Perceived Benefits of Calcium Intake:

The percentages of working women who reported Agree and Strongly Agree for the six statements under consideration were fall in the range of 18.8 per cent -24.0 percent and 4.8 per cent -12.8 pecent, respectively, whereas the corresponding
percentages among the non-working women were little lower ( 16.8 per cent -24.0 per cent and 4.8 per cent -12.8 per cent, respectively).

### 1.5 Perceived Barriers to Exercise:

The percentages of working women who reported Agree and Strongly Agree for the six statements under study were fell in range of 14.8 percent -20.8 percent and 5.0 per cent -22.0 percent, respectively, whereas the corresponding percentages among the non-working women were somewhat higher ( 10.0 per cent -31.6 per cent and 3.6 per cent -18.8 per cent, respectively).

Table 1.2 Percentage Distributions of the Respondents by their Responses to the Statements Related to Perceived Severity

| Statements related to Perceived Severity | Responses to Statements (in \%s) |  |  |  |  | Total |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | SDA | DA | NU | A | SA | \% | N |
| 1. The thought of having Osteoporosis scares |  |  |  |  |  |  |  |
| Non-Working | 20.0 | 17.6 | 31.2 | 20.0 | 11.2 | 100.0 | 250 |
| Working | 21.6 | 22.4 | 25.2 | 18.8 | 12.0 | 100.0 | 250 |
| Total | 20.8 | 20.0 | 28.2 | 19.4 | 11.6 | 100.0 | 500 |
| 2. If I have osteoporosis, I would be crippled |  |  |  |  |  |  |  |
| Non-Working | 16.8 | 21.2 | 28.4 | 27.2 | 6.4 | 100.0 | 250 |
| Working | 18.8 | 22.4 | 22.0 | 28.8 | 8.0 | 100.0 | 250 |
| Total | 17.6 | 21.8 | 25.2 | 28.0 | 7.2 | 100.0 | 500 |
| 3. My feelings about myself would change, If I get Osteoporosis ${ }^{\text {@ }}$ |  |  |  |  |  |  |  |
| Non-Working | 28.0 | 16.0 | 32.8 | 15.6 | 7.6 | 100.0 | 250 |
| Working | 18.8 | 24.0 | 31.2 | 14.0 | 12.0 | 100.0 | 250 |
| Total | 23.4 | 20.0 | 32.0 | 14.8 | 9.8 | 100.0 | 500 |
| 4. It would be very costly if I got Osteoporosis ${ }^{\text {® }}$ |  |  |  |  |  |  |  |
| Non-Working | 30.4 | 25.6 | 22.4 | 18.4 | 3.2 | 100.0 | 250 |
| Working | 20.8 | 19.2 | 27.6 | 27.6 | 8.8 | 100.0 | 250 |
| Total | 25.6 | 22.4 | 25.0 | 25.0 | 6.0 | 100.0 | 500 |
| 5. When I think about Osteoporosis, I get depressed |  |  |  |  |  |  |  |
| Non-Working | 19.6 | 23.2 | 25.2 | 23.4 | 9.6 | 100.0 | 250 |
| Working | 19.6 | 24.8 | 29.2 | 18.0 | 8.4 | 100.0 | 250 |
| Total | 19.6 | 24.0 | 27.2 | 20.2 | 9.0 | 100.0 | 500 |
| 6. It would be serious if I got Osteoporosis ${ }^{\text {® }}$ |  |  |  |  |  |  |  |
| Non-Working | 22.8 | 27.2 | 27.6 | 20.0 | 2.0 | 100.0 | 250 |
| Working | 18.0 | 21.6 | 33.2 | 18.4 | 8.8 | 100.0 | 250 |
| Total | 20.4 | 24.4 | 30.4 | 18.2 | 5.4 | 100.0 | 500 |

Note: SDA=Strongly Disagree, DA=Disagree, NU=Neutral, A=Agree and SA=Strongly Agree $@=$ Chi-square test results are significant at $0.05,0.001$ and 0.01 levels between the Items Marked in that order across Work Status of Women, respectively
Table 1.3 Percentage Distributions of the Respondents by their Responses to the Statements Related to Perceived Benefits of Exercise

| Statements related to Perceived Benefits of Exercise | Responses to the Statements (in \%s) |  |  |  |  | Total |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | SDA | DA | NU | A | SA | \% | N |
| 1. Regular Exercise prevents problems that would happened from osteoporosis ${ }^{@}$ |  |  |  |  |  |  |  |
| Non-Working | 18.4 | 27.2 | 30.8 | 20.4 | 3.2 | 100.0 | 250 |
| Working | 19.2 | 17.2 | 38.0 | 16.4 | 9.2 | 100.0 | 250 |
| Total | 18.8 | 22.2 | 34.4 | 18.4 | 6.2 | 100.0 | 500 |
| 2. I feel better when I exercise to prevent Osteoporosis ${ }^{@}$ |  |  |  |  |  |  |  |
| Non-Working | 28.8 | 34.4 | 23.6 | 10.8 | 2.4 | 100.0 | 250 |
| Working | 25.2 | 25.2 | 22.0 | 19.6 | 8.0 | 100.0 | 250 |
| Total | 27.0 | 29.8 | 22.8 | 15.2 | 5.2 | 100.0 | 500 |
| 3. Regular exercise helps to build strong Bones ${ }^{\text {@ }}$ |  |  |  |  |  |  |  |
| Non-Working | 29.6 | 27.2 | 29.2 | 9.6 | 4.4 | 100.0 | 250 |
| Working | 28.0 | 17.6 | 26.4 | 17.6 | 10.4 | 100.0 | 250 |
| Total | 28.0 | 22.4 | 27.8 | 13.6 | 7.4 | 100.0 | 500 |


| 4. Exercising to prevent osteoporosis also |  |  |  |  |  |  |  |
| :---: | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| improve the way my body looks |  |  |  |  |  |  |  |
| Non-Working |  |  |  |  |  |  |  |
| Working | 24.0 | 21.6 | 30.0 | 15.2 | 9.2 | 100.0 | 250 |
| Total | 19.6 | 19.6 | 32.0 | 17.2 | 11.6 | 100.0 | 250 |
| 5. Regular exercise cuts down the chance |  |  |  |  |  |  |  |
| of broken bones |  |  |  |  |  |  |  |
| Non-Working | 18.4 | 22.4 | 30.8 | 23.2 | 5.2 | 100.0 | 250 |
| Working | 17.6 | 21.6 | 31.2 | 21.6 | 8.0 | 100.0 | 250 |
| Total | 18.0 | 22.0 | 31.0 | 22.4 | 6.6 | 100.0 | 500 |
| 6. I feel good about when I exercise to |  |  |  |  |  |  |  |
| prevent Osteoporosis |  |  |  |  |  |  |  |
| Non-Working | 19.2 | 24.8 | 33.6 | 20.4 | 2.0 | 100.0 | 250 |
| Working | 18.0 | 29.2 | 30.0 | 18.0 | 4.8 | 100.0 | 250 |
| Total | 18.6 | 27.0 | 31.8 | 19.2 | 3.4 | 100.0 | 500 |

Note: SDA=Strongly Disagree, DA=Disagree, NU=Neutral, A=Agree and SA=Strongly Agree $@$ = Chi-square test results are significant at $0.001,0.001$ and 0.001 levels between the Items Marked in that order across Work Status of Women, respectively

### 1.6 Perceived Barriers to Calcium Intake:

The percentages of working women who reported their responses as Agree and Strongly Agree for the six statements under study were fell in range of 14.8 percent -32.8 percent and 5.6 per cent -20.8 percent, respectively, whereas the corresponding percentages among the non-working women were somewhat lower ( 12.0 percent - 26.8 percent and 7.2 percent -15.0 percent, respectively).

Table 1.4 Percentage Distribution of the Respondents by their Responses to the Statements Related to Perceived Benefits of Calcium Intake

| Statements related to Perceived | Responses to Statements (in \%s) |  |  |  |  | Total |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Benefits of Calcium Intake | SDA | DA | NU | A | SA | \% | N |
| 1. Taking in enough calcium prevents problems from Osteoporosis |  |  |  |  |  |  |  |
| Non-Working | 22.4 | 20.0 | 27.2 | 22.8 | 7.6 | 100.0 | 250 |
| Working | 20.4 | 18.8 | 28.4 | 20.4 | 12.0 | 100.0 | 250 |
| Total | 21.4 | 19.4 | 27.8 | 21.6 | 9.8 | 100.0 | 500 |
| 2. I have lots to gain enough calcium to prevent Osteoporosis |  |  |  |  |  |  |  |
| Non-Working | 26.8 | 17.6 | 22.8 | 22.8 | 10.0 | 100.0 | 250 |
| Working | 24.8 | 18.0 | 30.8 | 21.6 | 4.8 | 100.0 | 250 |
| Total | 25.8 | 17.8 | 26.8 | 22.2 | 7.4 | 100.0 | 500 |
| 3. Taking in enough calcium supplements prevents painful Osteoporosis |  |  |  |  |  |  |  |
| Non-Working | 25.2 | 18.8 | 30.0 | 16.8 | 9.2 | 100.0 | 250 |
| Working | 18.8 | 26.4 | 31.6 | 16.8 | 6.4 | 100.0 | 250 |
| Total | 22.0 | 22.6 | 30.8 | 16.8 | 7.8 | 100.0 | 500 |
| 4. I would not worry as much about Osteoporosis, If I took in enough calcium ${ }^{\circledR}$ Non-Working | 23.6 | 25.6 | 23.0 | 22.0 | 5.2 | 100.0 | 250 |
| Working | 22.0 | 27.6 | 20.4 | 17.2 | 12.8 | 100.0 | 250 |
| Total | 22.8 | 26.6 | 22.0 | 19.6 | 9.0 | 100.0 | 500 |
| 5. Taking in enough calcium cuts down on my chance of broken bones |  |  |  |  |  |  |  |
| Non-Working | 18.8 | 22.0 | 34.4 | 18.4 | 6.4 | 100.0 | 250 |
| Working | 19.6 | 21.6 | 28.4 | 19.6 | 10.8 | 100.0 | 250 |
| Total | 19.2 | 21.8 | 31.4 | 19.0 | 8.6 | 100.0 | 500 |
| 6. I feel good about myself when I take in enough Calcium to prevent Osteoporosis |  |  |  |  |  |  |  |
| Non-Working | 20.0 | 24.0 | 24.8 | 22.6 | 8.4 | 100.0 | 250 |
| Working | 18.4 | 24.0 | 22.4 | 24.0 | 11.2 | 100.0 | 250 |
| Total | 19.2 | 24.0 | 23.6 | 23.4 | 9.8 | 100.0 | 500 |

Note: SDA=Strongly Disagree, DA=Disagree, NU=Neutral, A=Agree and SA=Strongly Agree @ = Chi-square test results are significant at 0.05 level between the Item Marked across Work Status of Women, respectively

### 1.7 Aspects Related to Health Motivation:

The percentages of working women who reported Agree and Strongly Agree for the six statements under study were fell in range of 16.8 per cent -28.4 percent and 4.8 percent - 12.4 percent, respectively, whereas the parallel percentages among the non-working women were marginally lower ( 12.6 percent 22.0 per cent and 2.8 percent - 15.2 percent, respectively).

Table 1.5 Percentage Distribution of the Respondents by their Responses to the Statements Related to Perceived Barriers of Exercises

| Statements related to Perceived Benefits of Barriers of Exercises | Responses to Statements (in \%s) |  |  |  |  | Total |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | SDA | DA | NU | A | SA | \% | N |
| 1. I feel like I am not strong enough to exercise regularly ${ }^{@}$ |  |  |  |  |  |  |  |
| Non-Working | 33.2 | 32.8 | 20.4 | 10.0 | 3.6 | 100.0 | 250 |
| Working | 24.0 | 19.2 | 32.4 | 14.8 | 9.6 | 100.0 | 250 |
| Total | 28.6 | 26.0 | 26.4 | 12.4 | 6.6 | 100.0 | 500 |
| 2. I have no place where I can exercise Osteoporosis |  |  |  |  |  |  |  |
| Working | 25.2 | 19.6 | 28.8 | 20.8 | 5.6 | 100.0 | 250 |
| Total | 25.8 | 20.2 | 24.4 | 23.6 | 6.2 | 100.0 | 500 |
| 3. My spouse or family discourage me from exercising ${ }^{@}$ |  |  |  |  |  |  |  |
| Non-Working Working | 22.4 30.8 | 26.4 14.0 | 20.0 | 26.0 18.8 | 5.2 10.4 | 100.0 100.0 | 250 250 |
| Total | 26.6 | 20.2 | 23.0 | 22.4 | 7.8 | 100.0 | 500 |
| 4. Exercising regularly would mean starting a new habit which is hard for me to do |  |  |  |  |  |  |  |
| Non-Working | 26.0 | 19.2 | 22.0 | 14.0 | 18.8 | 100.0 | 250 |
| Working | 24.4 | 18.0 | 16.4 | 19.2 | 22.0 | 100.0 | 250 |
| Total | 25.2 | 18.6 | 19.2 | 16.6 | 10.4 | 100.0 | 500 |
| 5. Exercising regularly makes me uncomfortable ${ }^{@}$ |  |  |  |  |  |  |  |
| Non-Working | 17.6 | 24.0 | 28.4 | 15.6 | 14.4 | 100.0 | 250 |
| Working | 19.6 | 32.0 | 18.8 | 19.6 | 10.0 | 100.0 | 250 |
| Total | 18.6 | 28.0 | 23.8 | 17.6 | 12.2 | 100.0 | 500 |
| 6. Exercising regularly upsets my every day routine ${ }^{@}$ |  |  |  |  |  |  |  |
| Non-Working | 13.6 | 17.2 | 21.2 | 31.6 | 16.4 | 100.0 | 250 |
| Working | 15.2 | 17.2 | 35.6 | 20.0 | 12.0 | 100.0 | 250 |
| Total | 14.4 | 17.2 | 28.4 | 25.8 | 14.2 | 100.0 | 500 |

Note: SDA=Strongly Disagree, DA=Disagree, NU=Neutral, A=Agree and SA=Strongly Agree
@ = Chi-square test results are significant at $0.001,0.001,0.05$ and 0.001 levels between the Items Marked in that order across Work Status of Women, respectively

Table 1.6 Percentage Distribution of the Respondents by their Responses to the Statements Related to Perceived Barriers of Calcium Intake

| Statements related to Perceived <br> Benefits of Barriers of Calcium Intake | Responses to Statements (in \% s) |  |  |  | Total |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | SDA | DA | NU | A | SA | \% | N |
|  |  |  |  |  |  |  |  |
| Non-Working | 32.0 | 17.2 | 28.4 | 15.2 | 7.2 | 100.0 | 250 |
| Working | 24.0 | 25.2 | 28.8 | 14.8 | 7.2 | 100.0 | 250 |
| Total | 28.0 | 21.2 | 28.6 | 15.0 | 7.2 | 100.0 | 500 |
| 2. Calcium rich foods do not agree with mee |  |  |  |  |  |  |  |
| Non-Working | 14.8 | 17.6 | 30.4 | 26.8 | 10.4 | 100.0 | 250 |
| Working | 14.4 | 16.8 | 24.4 | 32.8 | 11.8 | 100.0 | 250 |
| Total | 14.6 | 17.2 | 27.4 | 29.8 | 11.0 | 100.0 | 500 |



Note: SDA=Strongly Disagree, DA=Disagree, NU=Neutral, A=Agree and SA=Strongly Agree @ = Chi-square test results are significant at 0.01 and 0.001 levels between the Items Marked in that order across Work Status of Women, respectively
Table 1.7 Percentage Distribution of the Respondents by their Responses to the Aspects Related to Health Motivation

| Aspects Related to Health Motivation | Responses to Statements (in \%s) |  |  |  |  | Total |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | SDA | DA | NU | A | SA | \% | N |
| 1. I eat a well-balanced diet |  |  |  |  |  |  |  |
| Non-Working | 18.4 | 22.0 | 32.4 | 20.0 | 7.2 | 100.0 | 250 |
| Working | 15.6 | 22.8 | 31.2 | 19.6 | 10.8 | 100.0 | 250 |
| Total | 17.0 | 22.4 | 31.8 | 19.8 | 9.0 | 100.0 | 500 |
| 2. I look for new information related to health ${ }^{@}$ |  |  |  |  |  |  |  |
| Non-Working | 30.4 | 17.2 | 24.4 | 20.0 | 8.0 | 100.0 | 250 |
| Working | 19.2 | 18.0 | 31.2 | 22.0 | 9.6 | 100.0 | 250 |
| Total | 24.8 | 17.6 | 27.8 | 21.0 | 8.8 | 100.0 | 500 |
| 3. Keeping healthy is very important |  |  |  |  |  |  |  |
| for me | 24.8 | 21.6 | 29.6 | 13.6 | 10.4 | 100.0 | 250 |
| Non-Working | 16.4 | 20.0 | 32.4 | 18.8 | 12.4 | 100.0 | 250 |
| Working | 20.6 | 20.8 | 31.0 | 16.2 | 11.4 | 100.0 | 500 |
| Total |  |  |  |  |  |  |  |
| 4. I try to discover health problems early ${ }^{\text {@ }}$ |  |  |  |  |  |  |  |
| Non-Working | 36.0 | 20.0 | 19.2 | 22.0 | 2.8 | 100.0 | 250 |
| Working | 24.4 | 19.2 | 23.2 | 28.4 | 4.8 | 100.0 | 250 |
| Total | 30.2 | 19.6 | 21.2 | 25.2 | 3.8 | 100.0 | 500 |
| 5. I have a regular health check up even when I am not sick |  |  |  |  |  |  |  |
| Non-Working | 16.4 | 21.6 | 32.0 | 21.2 | 8.8 | 100.0 | 250 |
| Working | 19.6 | 23.6 | 30.0 | 16.8 | 10.0 | 100.0 | 250 |
| Total | 18.0 | 22.6 | 31.0 | 19.0 | 9.4 | 100.0 | 500 |
| 6. I follow recommendations to keep me healthy ${ }^{@}$ |  |  |  |  |  |  |  |
| Non-Working | 23.2 | 16.0 | 28.0 | 17.6 | 15.2 | 100.0 | 250 |
| Working | 27.2 | 18.4 | 26.8 | 22.8 | 4.8 | 100.0 | 250 |
| Total | 25.2 | 17.2 | 27.4 | 20.2 | 10.0 | 100.0 | 500 |

Note: SDA=Strongly Disagree, DA=Disagree, NU=Neutral, A=Agree and SA=Strongly Agree $@=$ Chi-square test results are significant at $0.05,0.05$ and 0.001 levels between the Items Marked in that order across Work Status of Women, respectively
Table 1.8 Respondents' Mean Score of Osteoporosis Health Beliefs by their Work Status

| Work Status of the <br> Respondents | Mean Score of the Osteoporosis Health Beliefs |  |  |
| :---: | :---: | :---: | :---: |
|  | Mean Score | S. D. | No. |
| Non-working | 111.71 | 12.428 | 250 |


| Working | 115.58 | 16.235 | 250 |
| :---: | :---: | :---: | :---: |
| Total | 113.65 | 14.572 | 500 |

Independent Sample $\mathbf{t}$-test Value $=9.146 ; p<0.001$

The mean score of OHBs was conspicuously higher among working women (115.58) as against their nonworking counterparts (111.71). Moreover, the independent sample $t$-test results between the work status of the respondents and the mean scores of OHBs were turned out as highly significant ( $\mathrm{p}<0.001$ ). Indicating that the osteoporosis health beliefs were higher among those respondents who were working outside home or in one or the other occupations than those who were non-working (or occupied in homemaking activities).

## Summary:

In sum, the magnitude of OHBs of the sample women was noted as much higher than the average among the total sample women ( 113.65 on a scale of $51-158$ pooled score). Further, such figure was conspicuously higher among working women (115.58) as against their non-working counterparts.

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## Conflict of Interest:

No conflict of Interest by any author

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