

### An Exploratory Study on Risk For Osteoporosis and Quality of Life Among Men in Mangalore

KEYWORDS	Risk for osteoporosis; quality of life; men				
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**ABSTRACT** The aim of the study was to determine the risk for osteoporosis and quality of life in relation to osteoporosis with selected demographic variables among the men. An exploratory descriptive design was carried out among 200 men of 40-75 years of age and recruited using convenient sampling technique. The data was collected using Modified International Osteoporosis Foundation (IOF) – One Minute Osteoporosis Risk Test and Quality of life questionnaire and data was analyzed using descriptive and inferential statistics. The finding of the study showed that 78.5% (Iow) and 21.5% (moderate) risk for osteoporosis. Majority (94.5%) of the subjects had average quality of life. The study shows that there is moderate positive correlation (r = 0.4; p<0.05) between the risk for osteoporosis and quality of life among men. There was significant association between the risk of osteoporosis with the selected demographic variables such as age, education status, occupation, family income, place of residence, milk intake. Therefore it is concluded that the increase in the risk for osteoporosis shows decline in quality of life among men.

#### Introduction

Osteoporosis is defined by World health organization (WHO) as a "progressive systemic skeleton disease characterized by low bone mass and micro architectural deterioration of bone tissue, with a consequent increase in bone fragility and susceptibility to fracture".<sup>1</sup> Osteoporosis is often known as "the silent thief" because bone loss occurs without any symptoms over the period of time. With the aging of the population worldwide, osteoporosis and osteoporotic fracture are becoming a serious health care issue.<sup>2</sup>

Osteoporosis remains unrecognized and underappreciated more among men. The disease affects millions of people throughout the world. According to The World Osteoporosis Day, October 20<sup>th</sup> 2014 reported that more than 200 million people are thought to be affected worldwide per year. The most common misconception is that osteoporosis affects only women, but it affects millions of men around the world too. The concept is very little known about how much men are at risk.3 An action plan for osteoporosis consensus statement of an expert group, New Delhi, stated that Osteoporosis affects 1 in 5 men over the age of 50years, men are twice likely to die following a hip fracture than women and 1/3rd of all hip fracture worldwide occur among men.<sup>1</sup> Fracture due to osteoporosis leads to long term disability and severe pain that result is poor quality of life and loss of independence as men advance in age.<sup>2</sup> Therefore it is very clear that the men must need to assess the risk for osteoporosis as early as possible to take up needful action and prevent complication.

#### Aim

- 1. To determine the risk for osteoporosis among the men.
- 2. To assess the quality of life among men.
- To find the correlation between risk for osteoporosis and quality of life among men.

 To find association between the risk for osteoporosis with the selected demographic variables.

#### **Materials and Methods**

An exploratory descriptive design was used in this study to assess the risk for osteoporosis and quality of life among men. The study sample size consists of 200 men of 40-75 years and who know English/ Kannada/ Malayalam language were recruited using convenient sampling from the outpatient department of Father Muller Medical College Hospital Mangalore. The subject filled a Baseline proforma, Modified IOF – One Minute Osteoporosis Risk Test and Quality of life questionnaire by IOF. Data was analyzed using descriptive and inferential statistics.

#### **Result and Discussion**

#### Risk for osteoporosis

From the present study. shows that 175 (78.5%) subjects were in low risk, 43 (21.5%) subjects were in moderate risk where as no subjects in high risk for osteoporosis among men with the mean age of 52.78±9.37 years. The study found that 30% of the subjects reported parents diagnosed with osteoporosis while 22% of the subjects got fracture after a minor fall. None were diagnosed with low testosterone level. Physical activity less than 30minutes per day were reported by 13% of the subjects and 24.5% were reported that they avoid eating green leafy vegetables on most of the days. Twenty three percent spend less than 10min per day in the sunlight. Twenty three percent of the subjects were on diabetic drugs and 4.5% had corticosteroid tablets for 3 consecutive months. Twenty eight percent of the subjects drank more than 2 peg/day and 4.5% of the subjects had 1 -2 peg/day of alcohol beverage. Five percent of the subjects are smoker and 37% are used to smoke but they quit. Thirty percent of the subjects prefer only tea and 17.5% took more than 1 glass of daily milk intake. The highest mean percentage score was obtained in the area of life style (47.33%) followed by personal clinical factor (47%) and (33.66%) in the area of hereditary. The present study is congruent with the study by Wong CP et al, in Macau to assess the men's knowledge and their risk showed that after the age of 55years men were at medium to high risk of osteopoprosis.<sup>4</sup> the study is congruent with the study conducted by Agrawal NK et al, in India to determine the prevalence of osteoporosis among 200 healthy men aged 50 years and above which showed that 8.5% osteoporosis and 42% osteopenia was found among the healthy men aged 50 years and above.<sup>5</sup> According to IOF Asian Audit 2013, 50 million India are either osteoporotic or have low bone mass. With the mean age of 57±9.46 years were evaluated 24.6% osteoporosis and 54.3% osteopenia of the male.<sup>3</sup>

#### Quality of life

The present study found that among men only 10(5%) had good quality of life, 189(94.5%) men had average and 1(0.5%) men had poor quality of life. The highest mean percentage score was found in mental function (75.12%) as follows by Leisure and social activity (73.18 %), General health perception (64.66 %), Mobility (60.32%), Pain (56.85%), Jobs around the house (50.93%) and activity of daily living (23.53%). This study is congruent with the study conducted by Cawthon PM et al, to explore Health related quality of life (HRQoL) among German male patients with osteoporosis in 155 male patients with osteoporosis showed that Patients with  $\geq 2$  fractures had the highest level of impairment in HRQoL. Of all the dimensions, pain/discomfort was the most affected. Better HRQoL were detected in the whole sample for jobs around the house, activities of daily living and mobility compared to other dimensions. The highest levels of impairment were observed in the QUALEFFO-41 domains of general health perception, mental function and pain.7

## Correlation between the risk for osteoporosis and quality of life among men

The study shows that there is moderate positive correlation between the risk for osteoporosis and quality of life among men (r = 0.4; p<0.05). Hence it can be interpreted that the increase in the risk for osteoporosis, increases in the deteriorate of the quality of life among men.

Association between the risk for osteoporosis among men with demographic variables

# Table 1: Association between the risk for osteoporosis among men with demographic variables N = 200

Variables	Risk for osteoporosis		v <sup>2</sup> val-	Р
	Low	Moderate	ue	Value
Age limit in years: 40 – 50 51 – 60 61 – 75	92 43 22	4 16 23	41.57	.01*
Religion Hindu Muslim Christian	47 15 93	16 3 24	1.11	.59
Marital Status: Married Unmarried	149 8	40 3	.23	.70

	r	r	r	1
Education Status:				
No formal educa- tion	45	18		
Primary	51	16		
Secondary	35	9	9.54	.03*
Pre university / Diploma	9	0		
Graduate	0	0		
Post graduate				
Skilled	17	8		
Unskilled	00	12	51 54	01*
Drafaasiar	20	12	54.50	.01
Profession	37	0		
Unemployed Family income in	2	15		
Rs/month	49	34		
≤10000	71	9		
10001 – 20000	31	0	33.74	.01*
20001 – 30000	6	0		
>30001	0			
Place of Resi-				
dence:	87	33	6 39	0.01*
Rural	70	10	0.57	0.01
Urban Diatany Pattanya				
Dietary Pattern:	6	0		
Vegetarian	150	41	5.27	.06
Mixed	1	2		
Ovo vegetarian				
day (household				
measure):	84	42		0.1.+
Only tea	59	1	28.27	.01*
1 glass milk	14	0		
2 glass milk and more				
Number of Hos-				
to bone related	113	36		
condition:	113	7	2 4 0	25
Nil	42	/	2.00	.25
1 – 2 times	2	0		
3 times and more				
Diagnosed with	-			
No a	9	3	0.09	.72
res	148	40		
No $\mathbb{R}^{1}$				
Bivii (Kg/m-) :	-			
(<19)	9	33		1.00
Normal (19-24.9)	105	29	6.0	
Overweight (25-	5	19		
29.9)				

P<0.05

\* Significant

Data in Table 1 reveals the computed chi square " $\chi^{2"}$  between the risk for osteoporosis among men with demographic variables. The table shows that there is association with the risk of osteoporosis with the selected demographic variables such as age ( $\chi^2$  >5.99, p=.01), education status ( $\chi^2$  >9.49, p=0.03), occupation ( $\chi^2$  >7.82, p=01), family income ( $\chi^2$  >7.82, p = .000), place of residence ( $\chi^2$ >3.84, p=0.014), milk intake ( $\chi^2$  >5.99, p=.01) at 0.05 level of significance. Thus it can be interpreted that there is significant association between risk of osteoporosis and selected demographic variables such as age, education status, occupation, family income, place of residence and milk intake. This study is congruent with the study conducted by Adler RA, among the 1856 men in Netherland to find the association of bone loss with age. The result revealed that there is accelerated in bone loss with age as seen clearly in men.5 This studies finding is congruent with the study conducted in Asian countries showed that urbanization also appears to be associated with an increase in prevalence of osteoporosis.<sup>3</sup> This study is congruent with the study conducted by Sahei S et al, to evaluate the protective association of milk intake on the risk of hip fracture among 5209 men and women aged 28 - 63 years in USA. The result revealed that participants with medium (>1 and <7serv/wk) or higher (≥7serv/wk) milk intake tended to had lower hip fracture risk than those with low (≤1serv/wk) intake.

#### Conclusion

Men are risk for osteoporosis and effect the quality of life moderately. The increase in the risk for osteoporosis, the decline of the quality of life is increase among men. The risk for osteoporosis has an impact on the quality of life which in turn affects the productivity of men's life. The study explored the risk of men developing osteoporosis over the period of time with advancement of age. Therefore the health of men needs to be addressed appropriately. Primary prevention of osteoporosis should be promoted to men starting in the middle age.

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