

# Osteoporosis Behavior Survey Among College Students

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**Abstract:**The purpose of this cross-sectional survey was to find out osteoporosis behavior among college female students of Karachi city. 150 female students were the participants of this study. 114 students thought that exercises not only work on strength of the body but also work on body shape. 75 participants also agree with the point that exercises were quite enjoyable and relaxing for mind. 41% participants change their exercise habits, but others are not interested to change (33%). 50 participants out of 150 put efforts to do exercise, while others are not interested to do effort.

More than 43.3% students were agree with taking enough amount of calcium to make the bones strong and minimize the risk of fracture. 50% agreed that they were taking a well balanced diet. 48.6% people do not go for regular health related check-up on yearly or 6 month basis. While only 6 participants taking adequate amount of calcium and yogurt out of 150. Only 2 participants were taking adequate amount of cheese. 109 participants were not taking calcium supplements. Results show that students have negative attitude and behavior towards osteoporosis prevention program.

**Index Terms—** exercise, Calcium, Behavior, Osteoporosis.

## 1 INTRODUCTION

An idea that when a person is aware about the circumstances of a disease he/she could take part in disease prevention program efficiently. Osteoporosis is a disease which mainly concerned with life style changes. Many researches had done to change dietary habits, physical activities and calcium/vitamin D intake in college students. Osteoporosis could be developed in early ages of life if dietary and physical activities are not matched with the body need. Youth have a burden to minimize risk factors of osteoporosis. Knowledge and perception of osteoporosis in adolescence may help in reducing troublesome of osteoporosis in elderly life. Prevention from osteoporosis improves the elderly quality life.

In 2005 study done to look how many studies have been done on osteoporosis. Here there is a need to mention that so many studies assessed the information concerning the osteoporosis but still there some methodological flaws are presents. (1)

Osteoporosis

is associated age connected metabolic malady that leads to fractures. In this study public health care nurses designed a 1<sup>st</sup>, 2<sup>nd</sup>, 3<sup>rd</sup> level prevention program to completely halt the disease. For this purpose nurses choose a population which is more susceptible to disease. After implementation of 3 week instructional program finally author mentioned that there was no modification in belief and behavior. (2)

Another study had done in Thailand, author tend to use different models among management cluster and intervention cluster. Ultimately author tend to conclude that behav-

ior amendment has been noticed for 30 % and 45% in calcium intake and perceiving exercise habits respectively (3).

One of the factors of osteoporosis is the pollution of cadmium in environment. According to one study done in Europe cadmium takes part in hypercalciuria that causes decrease in density of bone in result fractures and loss of height, disability has been noticed in both sexes. Cadmium may also promote the osteoclastic activity. (4)

One pilot study had done to look at the variation among male and female of university in relation to data of osteoporosis and activity level. At the last, notwithstanding gender, osteoporosis data was comparatively poor. Girls reported larger data and susceptibility towards disease while men seem to be more physical active than girls. (5)

Another study had done on female collegian population. Study results predict that younger college girls shows positive attitude in prevention program of osteoporosis than older girls. As age was absolutely correlate with the amount of knowledge and motivational behavior. (6)

Result shows that participants got motivation for participating in sport which considered as an intrinsic motivation to engage with physical activity. While exercises for weight management were considered as an extra burden or extrinsic factor. (7)

One pilot study at personal university find out that 46% of the scholars were having sedentary life style. (8)

Author reported that concerning 40% to 50% collegian population have sedentary lifestyle. A lot of necessary instructional program fails to change their behavior. Hindrance at subjective level one of the main cause of

this terribly troublesome behavior.(9)

Research on Canadian students shows that Two thirds of students having higher level of activity in higher study level of school.Only one third have low physical activity level.But when these students come in university only 11% of total students became active during 1<sup>st</sup> year at university. (10)

Surveyed men according larger involvement in out door activities than girls,and that they additionally spent longer looking at television and mistreatment the pc .The elder scholar were additional possible to report additional pc use whereas younger ones scored higher on outdoor activities. (11)

Health belief model was used in one study to decide the chance of healthy consumption among adolescence.However as a result of folks create additional and additional freelance consumption selection as they move through university age. (12)

As a result of less physical activity, increase mean body mass index, destroying ingestion selection, behavior perceptions square measure related to exaggerated rates of adolescent blubber. (13)

Susan find out relationship of activity pattern and carrying weight throughout college might contribute to gain weight in adolescence. Susan compare their lifestyle,diet(fruits & vegetables intake),exercise pattern of 1<sup>st</sup> year and 2<sup>nd</sup> year students.At the end he concluded that there is not any obvious relation of exercise,diet,with weight gain.He recommended that there is a need to work out to findout contributions of fat ,muscle,and bone mass to ascertained weight gain.(14)

**MATERIAL AND METHODS**

It was survey design study.Which has been completed within 6 months .The data for study was collected from college female students.Teachers and other staff members were excluded from the selection criteria.150 girls of different government degree colleges of karachi were included in this study .While age factor was limited from 16 to 21 years only for intermediate girls of arts,science ,commerce department.Data was analysed by using SPSS version 20.Study has been accomplished by permission of ethical review committe of isra university.

**RESULT**

Table 1. Do you take a calcium supplement?

	Frequency	Percent
Yes	41	28%
No	109	72%
Total	150	100%

Table 2. How many glasses (8 ounces) of milk do you drink during an average week?

	Frequency	Percent
none per week	43	28.7
1 per week	18	12.0
2 per week	6	4.0
3 per week	11	7.3
4 per week	12	8.0
5 per week	2	1.3
six per week	20	13.3
1 per day	26	17.3
2 per day	5	3.3
3 per day	1	.7
others	6	4.0
Total	150	100%

Table 3. How many times a week do you participate in weight bearing exercise such as a walking program, jogging and/or aerobic dancing?

	Frequency	Percent
less than 10 min	56	37.3
10-15 min, 1-2 times per week	37	24.7
10-15 min 3-4 times per week	21	14.0
10-15 min 5-7 times per week	5	3.3
20-30 min 1-2 times per week	1	.7
20-30 min 3-4 times per week	1	.7
20-30 min 5-7 times per week	6	4.0

More than 30 min per week	23	15.3
Total	150	100%

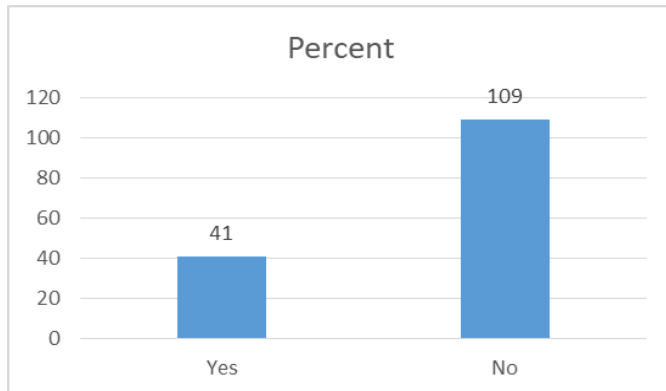


Fig. 1. Do you take a calcium supplement??

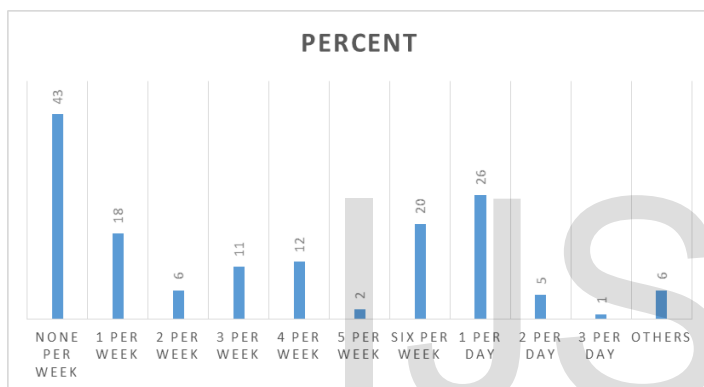


Fig. 2. How many glasses (8 ounces) of milk do you drink during an average week?

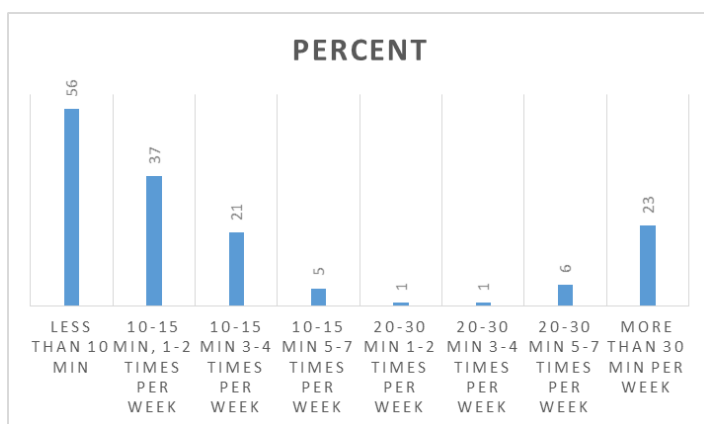


Fig. 3. Which calcium source of you can take daily?

## DISCUSSION

Mary further find out the soundness of diet and physical activity their relation ship to weight changes in freshman university ladies. Mary received the data related to life style & body composition diet information at the beginging and after 12 months from freshman and at the end of study result shows that reduction in physical activity is the significant characteristics that seems to be shaping weight

gain in freshman. (15)

Another comparison study has done in between elder and younger woman in thai rural area.This study findout the difference of information & attitude, lifestyle patterns in both group with their specific age related prevention behavior regarding osteoporosis.(16)

Researcher recognised that disease related awareness failed to considerably influence milk made dietary intake.This laziness behavior is more prominently presents in females as compare to males .In according to Allison’s opinion, execution of proper academic strategy is needed here to stall the negative attitude related to disease. (17)

According to brief analyses since 1975 ,139 papers printed and explaining the calcium consumption.The solid point for flaws to seak out an association in data –based studies was that the lack of the strategies accessible for estimating long atomic number 20 consumption.(18)

The reibeiro’s research finding recommend that ladies square measure receiving insufficient data concerning osteoporosis,accounts restricted information concerning the sickness and aren’t taking insufficient measures to forestall osteoporosis as they age(19)

One cross-sectional study held within the westmidlands of the UK among (mean age forty years) to look at the information of osteoporosis .Prophetic of data (p<.0005), the bulk (65%)send to be mostly don’t know of the lethal effect of the disease.(20)

One report that is made by surgeon ,more than 44 million people in the uk are at the danger of osteoporosis .one result of the study indicates that age of a person absolutely related with information ,however education wasn’t .there is also need to educate the nurses about to the disease.(21) One study explain the direct effect of an osteoporosis related instructional treatment among woman near to menopausal age 42-52.Woman having history of osteoporosis in their family relatives have higher susceptible-ness.This study findout that there is no knowledge difference in both group i.e.one having family history of osteoporosis and another group not having family history.But inlast result shows that osteoporosis instructional program gives positive effect on the treatment of osteoporosis.(22)

One research has done by using self efficacy scale .This instrument estimate the lifestyle of 201 ladies from age 35 to 95 .Main part of this instrument contain logical reflective question regarding osteoporosis preventive behavior .Result reflects that knowledge is one of the factor that impact on the positive lifestyle(23).

One study associated with increased specialized academic program.On the hindrance and prevention of osteopor-

sis. This program applied on population of golden ager centers and people those spending their lives in homes after retirement. This instructional program comprises the checklist, knowledge and fall safety measures to change to quality of life more stronger. (24)

One more community based study has done on individuals in a university. A finding shows that education wasn't correlate with the knowledge while age completely correlated. (25)

#### CONCLUSION:

It has been concluded that when loss of weight bearing activities reduces the bone mineral density 5% in each month of healthy 25 year person. Then that will happen with an individual in which bone aging process or bone porous process will be start. Walking is one of the weight bearing activities. The persons who walked daily for 20 to 30 minutes they live with healthy life style. Because walking reduces obesity, health diseases incidence and also increases the bone strength by increasing the thickness of compact bone with bone mineralization process. Study that had done in Chulalongkorn in university of Bangkok (Thailand) is quite resemble with my study in fact in this study (85.2%) participant's were known about osteoporosis 80% population don't have positive behavior and was that people were fully known about osteoporosis but they were not adequately in sighting into the consequences of osteoporosis so, there behavior and attitude with disease was quite negative.

The same thing I have concluded. 21 participants were doing weight bearing exercises 10-15 min 3-4 times per week. 23 participants were doing weight bearing exercises More than 30 min per week. 80 participants were doing in non weight bearing exercises less than 10 min. 2 participants were doing in non weight bearing exercises 20-30 min 5-7 times per week. 31 participants were analyzed there activity level in last 3 months timing they recall there memory and decide that they spent their time in high activity level. It means very less population have active lifestyle and healthy diet.

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