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Research Article

An Exploratory Study to Assess the Knowledge, Perception, Practice and Factors Influencing Non-adherence to Regular Exercise Regime among Elderly Women in Selected Community of Delhi

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Abstract

Introduction: The profound shift in the proportion of older or elderly Indians, taking place in the context of changing family relationships and limited social support system will bring with it a variety of social, economic and health care policy challenges.

Objectives: The primary objective of the study was to assess the Knowledge, Perception and Practice of regular exercise regime among elderly women and to determine the factors influencing regular exercise regime among elderly women.

Methods: The quantitative research approach with an exploratory survey research design was selected. 100 elderly women belonging to age group of 60-80 years were selected using purposive sampling technique from Tughlakabad extension, an urban area of Delhi. A structured interview schedule was used to collect the data. The data obtained was tabulated in Microsoft Excel Spread Sheet and was analyzed in terms of objective of the study using descriptive and inferential statistics.

Results: The findings revealed that majority of the women were having average knowledge (80%) and good perception (89%) but almost half of them (48%) were having poor practice of regular exercise. The most common reasons for non-adherence to regular exercise regime were that exercise can be replaced with house hold works (71%) and difficulty to find time from busy schedule (67%). Knowledge and perception, knowledge and practice were found to be significantly related. A significant association was observed with knowledge regarding exercise regime and educational status of women whereas practice was found significantly associated with their family income, education and working status.

Conclusion: The study findings revealed that although the elderly women had good perception and average knowledge about the regular exercise regime, their practice for the same was poor. It was observed that elderly women had access to public amenities like parks for walking and open gym for practicing different exercises so there is a need for motivation, encouragement and support from the family members and society so that they can utilize these facilities.

Keywords: Elderly women, Knowledge, Non-adherence, Perception, Practice, Regular exercise regime

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Introduction

India's elderly population has already crossed 100 million marks during 2011. According to the census 2011, total Indian population sex ratio is in favour of male, whereas elderly population sex ratio is in favour of female.[1] As an older adult, regular physical activity is one of the most important things that one can do for one's health. It can prevent many of the health problems that seem to come with age. It also helps the muscles to grow stronger so one can keep doing one's day-to-day activities without becoming dependent on others.[2] 'WHO Global Strategy on Physical Activity and Health' has given guidelines which are relevant to all healthy adults aged 65 years and above. They are also relevant to individuals in this age range with chronic NCD conditions.[3]

One of the Vision of the NPHCE (National programme for Health Care Of elderly) is to promote the concept of Active and Healthy Ageing.[4] Many older adults know about the health benefits of an active lifestyle, but, frequently, pain prevents them from engaging in physical activity.[5] According to NIH: National Institute on Aging - Exercise and physical activity are good for just about everyone, including older adults. There are four main types and each type is different. Doing them all will give more benefits.[6]

Despite the well-known health benefits of physical activity, most midlife and older adults lead sedentary lifestyles. The family is one of the most important care providers for the elderly. In fact, the majority of caregivers for the elderly are often members of their own family, most often a daughter or a granddaughter.[6] So, it is very important to create awareness among public about the health promoting and disease preventive measures. Researcher felt the need of improving physical activities among elderly which will in turn make them independent and contribute to their self-confidence.

Materials and Methods

The quantitative descriptive research approach was adopted for the study with an exploratory survey research design. The duration data were collected from October, 2017 to November, 2017 of the study was one month.

Inclusion criteria included Elderly women of age group 60- 80 years of age, who were willing to participate in the study, who can understand Hindi or English and those who are available at the time of data collection. The study excluded Elderly women suffering from severe arthritis, body movement restrictions, bed ridden and any lower limb or spinal cord deformities and women with mental disorders.

Research variables in this study were knowledge, perception, practice and factors influencing non-adherence to regular exercise regime among elderly women. The sample of present study comprises of 100 elderly women aged 60-80 years in a selected urban area of Delhi (Tughlakabad extension) selected by non-probability purposive sampling technique. A house to house survey & face to face interview was used to collect data. The tool used was a structured interview schedule. The reliability of the structured interview schedule on knowledge was assessed by using KR 20 and found to be 0.866. The reliability of likert scale to assess perception regarding regular exercise and checklist to assess the expressed Practice of regular exercise was calculated by using Cronbach's alpha formula and found to be 0.828 and 0.925, respectively.

The samples were visited only once to collect the data and around 20 minutes were spent on each sample. There were no drop outs.

The study protocol was approved by Jamia Hamdard Institutional Review Board for Ethical Clearance and written informed consent was obtained from the subjects.

Data Collection Tools and Techniques

The data collection tool developed for the present study was a structured interview schedule. The tool was divided into 5 sections.

- **Section A:** Socio-Demographic profile
- **Section B:** Knowledge regarding regular exercise regime
- **Section C:** Factors influencing non-adherence to regular exercise regime among elderly women
- **Section D:** Likert rating scale to assess perception regarding regular exercise
- **Section E:** Checklist to assess the expressed Practice of regular exercise

Demographic variables in this study were age, education, occupation, social class, religion, marital status, physical morbidities and family history of chronic diseases. Interview schedule to assess the knowledge consists of 30 objective questions. The total knowledge scores ranged from 0-30.

The score is further divided as follows; Poor knowledge (<11), Average knowledge (12-24) and Good knowledge (25-30). Factors influencing regular exercise regime among elderly women were assessed by a checklist consisting of 20 statements and one study sample can have multiple responses as one may have many reasons for not doing exercise. Likert scale for assessing perception consisted of 20 statements on a three-point scale with saying agree (A), disagree (DA), unable to decide (UD) according to what they perceive about different aspects of regular exercise. The scoring was done like good perception (28-40), average perception (14-27) and poor perception (0-13). Practice of regular exercise regime were assessed by a checklist consisting of 20 statements to which the participants will

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respond by saying yes or no. A score of <10 is considered poor practice, score of 11-15 is considered average practice and score of 16-20 is considered good practice.

Data Analysis: The data obtained was tabulated in Microsoft Excel Spread Sheet and was analyzed in terms of objective of the study using descriptive and inferential statistics.

Results

Section I: Distribution of Sample Characteristics of Respondents according to Background Data

Table 1.Frequency and percentage distribution of elderly women by their background data

(n=100)

S. No.	Sample Characteristics	Frequency (f)	Percentage (%)
1.	**Age in years**		
	60-66	63	63%
	67-73	33	33%
	74-80	04	4%
2.	**BMI**		
	<18.5	01	1%
	18.5-25	28	28%
	26-30	50	50%
	>30	21	21%
3.	**Working status**		
	House wife	82	82%
	Employed	18	18%
4.	**Educational qualification**		
	Illiterate	49	49%
	Primary Education (1^{st} -5^{th} class)	26	26%
	Secondary Education (6^{th} -12^{th})	21	21%
	Graduation and above	04	4%
5.	**Religion**		
	Hindu	64	64%
	Muslim	17	17%
	Sikh	06	6%
	Christian	13	13%
6.	**Monthly family income (in Rupees)**		
	Less than 15,000	10	10%
	15,001-25,000	45	45%
	25,001- 35,000	28	28%
	Above 35,000	17	17%
7.	**Type of family**		
	Nuclear	34	34%
	Joint	66	66%
8.	**Marital status**		
	Unmarried	06	6%
	Married	65	65%
	Divorced/Separated	02	2%
	Widow	27	27%
9.	**Dietary pattern**		
	Vegetarian	39	39%
	Non-vegetarian	61	61%
10.	**Native State**		
	Uttar Pradesh	65	65%
	Haryana	10	10%
	Punjab	08	8%
	Kerala	11	11%
	Bihar	04	4%
	Uttarakhand	02	2%
11.	**History of medical illness**		
	Hypertension	36	36%
	Diabetes	40	40%
	Hyperlipidemia	06	6%
	Heart diseases	04	4%
	Arthritis	48	48%
	Hypothyroidism	03	3%
12.	**History of past surgery**		
	Cataract	04	4%
	Cardiac	02	2%
	Hysterectomy	04	4%
	Fracture reduction	10	10%
	Neurological	01	1%

The data in Table 1 reveals that majority i.e. 63% of subjects belonged to age group of 60-66 years followed by 33% in the age group of 67-73 years and 4% in the age group of 74-80 years. With regard to BMI it was seen that half of the women were overweight having BMI in the range of 25-30 Kg/m^2, 28% were normal weight with BMI in range of 18.5 to 25 Kg/m^2, 21 % were obese with BMI >30 Kg/m^2 and only 1% were found to be underweight with BMI <18.5 Kg/m^2.

Majority of the women were housewives i.e. 82% and rest 18% were employed.

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Maximum women were illiterate i.e. 49%, 26% were primary educated, 21% were secondary educated and only 4% were Graduate. In relation to religion it was seen that 64% women were Hindu followed by 17% Muslim, 13% Christian and only 6% belonging to Sikhism. It was found that 45% women were having their monthly income in the range of Rs.15,001-25,000, 28% with family income from Rs.25,001-35,000, 17% had above Rs.35,000 and 10% were having < Rs.15,000. In relation to family type 66% women were having nuclear family and rest 34% were living in joint family.

65% were widow, married, 6 % unmarried and divorced/ Separated.

Seeing the dietary pattern of the study subjects it was seen that 61 (61%) were Non- vegetarians and 39 (39%) were vegetarians.

Most of the study subjects belonged to Uttar Pradesh (65%) followed by 11% from Kerala. 10% from Haryana, 8% from Punjab, 4% from Bihar and 2% from Uttarakhand.

The data also depicts that common medical issues among women were Arthritis (48%), Diabetes (40%), Hypertension (36%), Hyperlipidaemia (6%), Heart diseases (4%) and Hypothyroidism (3%).

The data regarding past surgical history revealed that, (10%) women had Fracture reduction surgery followed by Cataract surgery and Hysterectomy in (4%). 2% of the sample had undergone Cardiac surgeries, and (1%) had undergone craniotomy for haematoma evacuation.

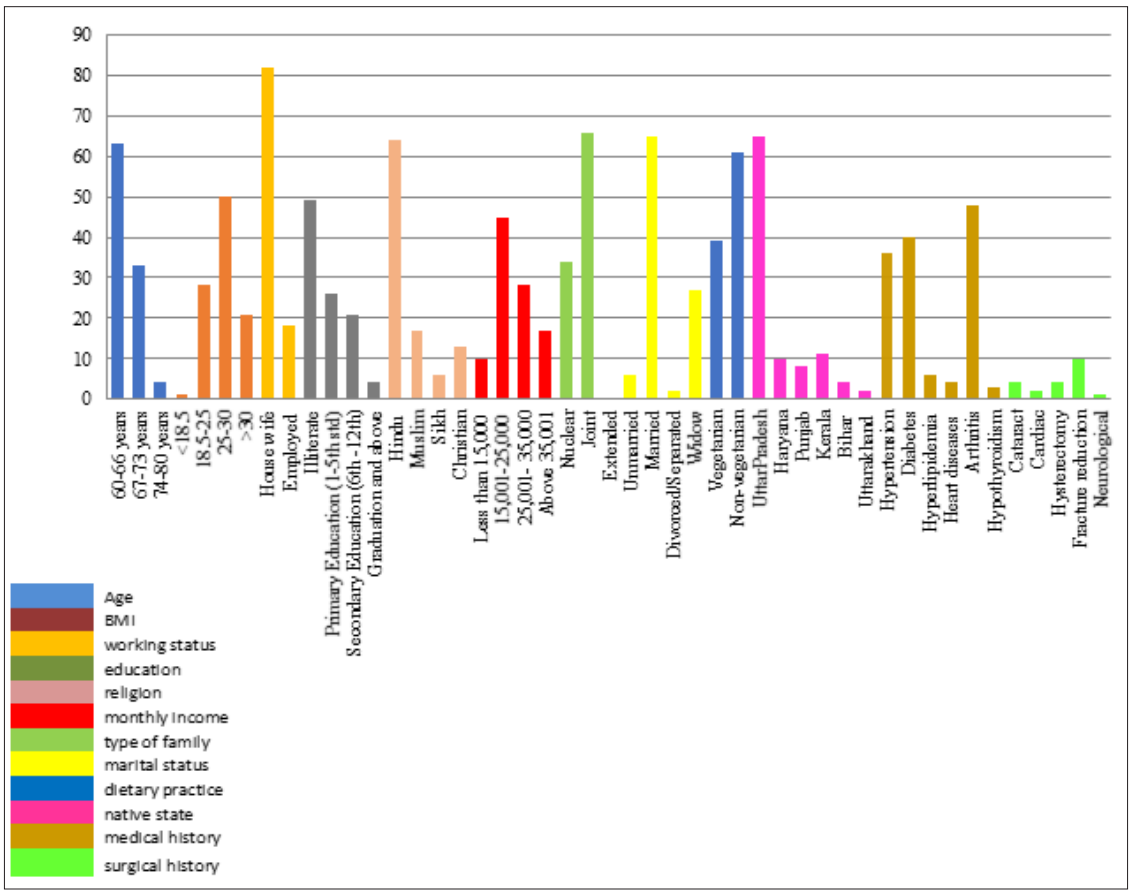

Figure 1.Component bar diagram showing demographical characteristics of the study subjects

Section II: Analysis and Interpretation of Knowledge, Perception and Practice Scores of Elderly Women Regarding Regular Exercise Regime

Table 2.Frequency and percentage distribution of elderly women by their knowledge scores regarding regular exercise regime

(n=100)

S. No.	Category	Frequency (f)	Percentage (%)
1.	Good	08	8%
2.	Average	80	80%
3.	Poor	12	12%

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The data in table 2 shows that majority of the study subjects (80%) were having average knowledge, 12 (12%) were having poor knowledge and 8(8%) have obtained good knowledge scores. Even though majority of study sample were illiterate exposure to mass media has created the awareness regarding elderly exercise among them.

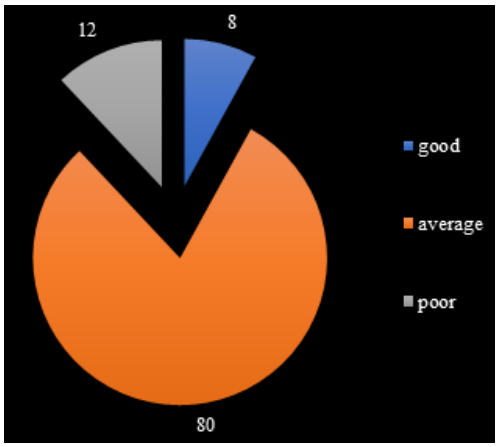

Figure 2.Pie diagram showing frequency and percentage distribution of elderly women by their knowledge scores regarding regular exercise regime

Table 3.Frequency and percentage distribution of elderly women by their perception scores regarding regular exercise regime

(n = 100)

S. No.	Category	Frequency (f)	Percentage (%)
1	Good	89	89%
2	Average	11	11%
3	Poor	0	0%

The data in table 3 shows that majority of the study subjects 89(89%) were having good perception, 11 (11%) were having average perception and no one obtained poor perception score. The scores suggest that the perception of study subjects is good as they have a good understanding regarding the exercises among elderly.

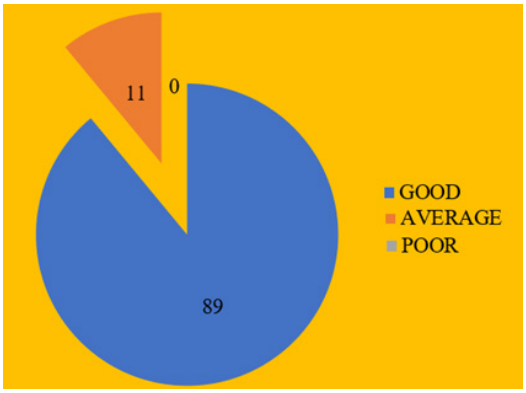

Figure 3.Pie diagram showing frequency and percentage distribution of elderly women by their perception scores regarding regular exercise regime

Table 4.Frequency and percentage distribution of elderly women by their practice scores of regular exercise regime

(n=100)

S. No.	Category	Frequency (f)	Percentage (%)
1.	Good practice	08	8%
2.	Fair practice	44	44%
3.	Poor practice	48	48%

The table 4 shows that (48%) of the study subjects were having poor practice while (44%) were having fair practice and (8%) obtained good practice scores. The study subjects who are in fair practice category are those who do daily or alternate days walking as an exercise and some asanas of yoga.

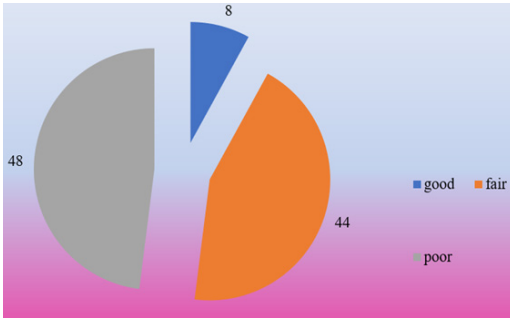

Figure 4.Pie diagram showing frequency and percentage distribution of elderly women by their practice scores regarding regular exercise regime

Section III: Findings Related to Factors Influencing Non-Adherence to Regular Exercise Regime among Elderly Women

Table 5.Frequency and percentage distribution of elderly women by the factors influencing non adherence to regular exercise regime among elderly women

(n= 100)

S. No.	Items	Frequency (f) *	Percentage (%)
1.	Exercise is expensive in terms of money	2	2
2.	Regular exercise is tiring	39	39
3.	Regular exercise hurt	24	24
4.	Lack of time to do regular exercises	67	67
5.	Shameful to do exercise in public	24	24
6.	Do not have a companion	14	14
7.	Lack of knowledge about different types of exercise	40	40

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8.	Thin people don't need exercises	20	20
9.	Exercise is painful	31	31
10.	Exercise is not enjoyable	0	0
11.	Lack of place to do exercises	21	21
12.	Non-conducive weather	40	40
13.	No one to motivate	10	10
14.	Family member's discouragement	2	2
15.	Exercise is needed only when doctor prescribes	14	14
16.	Laziness to do regular exercises	62	62
17.	Exercise is needed only when there is overeating	16	16
18.	Exercise can be replaced with house hold works	71	71
19.	Many exercises are harmful for the body	51	51
20.	Spiritual life is more important than doing exercise in old age	12	12

*One study subject can have multiple responses.

The most common reasons which were given by the study subjects for non-adherence to regular exercise regime were Exercise can be replaced with house hold works (71%), It is difficult to find time from busy schedule for daily exercises (67%) and laziness to do exercises as a routine (62%).

The factors which were found least to hinder exercise were Practicing daily exercise is expensive in terms of money (2%), Family members discourage to do exercise (2%).

Section IV: Finding Related to Relationship between Knowledge, Perception and Practice of Regular Exercise Regime among Elderly Women

Table 6.Karl Pearson's Co-Relation Coefficient to find out relationship between knowledge and perception, knowledge and practice and perception and practice of regular exercise regime among elderly women

(n=100)

Variables		Pearson's r
Knowledge	Perception	r= 0.377*
Knowledge	Practice	r= 0.411*
Perception	Practice	r=0.116

r = (98) 0.195 P ≥ 0.05 significant at 0.05 level.

The data in table shows that knowledge scores of elderly women regarding regular exercises has a significant relationship with their perception scores regarding the same. Women, who have better knowledge regarding regular exercise, perceive it better. The correlation between knowledge and practice was also statistically significant thus the women who know about regular exercises and its benefits tend to practise it regularly. When perception and practice were correlated no significant relationship was observed. This shows that even though the elderly women perceive regular exercise correctly they fail to practice it regularly.

Section V: Findings Related to the Association of Knowledge, Perception and Practice Scores with Selected Demographic Characteristics of Elderly Women

Table 7.Association of knowledge variable with selected demographic characteristics of elderly women

(n = 100)

Variables	Knowledge	Practice	Perception
Age	**χ^2 with Yates's correction**		
60-66 yrs	1.1991	0.8343	0.7423
67-73 yrs			
74-80 yrs			
Family Income (in rupees)	12.3929	14.7091*	1.8294
Less than 15,000			
15,001-25,000			
25001-35,000			
Above 35001			

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Marital status	0.154	5.064	0.72551
Unmarried			
Married			
Divorced / Separated			
Widow			
Religion	3.1658	5.9531	0.0504
Hindu			
Muslim			
Sikh			
Christian			
Education	13.0687*	15.486*	1.9889
Illiterate			
Primary Education (1-5th std)			
Secondary Education (6th -12$^{th\ std}$)			
Graduation and above			
Working status	4.433	6.5605*	0.6834
Housewife			
Employed			

$\chi^2_{(2)}$ =5.99, $\chi^2_{(4)}$ = 9.48, $\chi^2_{(6)}$ = 12.59, (p<0.05).

Knowledge regarding elderly exercise is found to be significantly associated with educational status of elderly women but not with any other variable.

Perception regarding regular exercise among elderly women was not found significantly associated with any of the demographic variables.

In relation to practice it was seen that practice of regular exercise among elderly women is found to be significantly associated with their family income, education and working status, but it is not associated with age, marital status and religion at 0.05 level of significance. Women who are having good family income, better education and who were employed were found to practice regular exercises.

Discussion

The findings of present study are similar to study in Sri Lanka conducted by Risni E. to determine the knowledge, beliefs and practices regarding osteoporosis among females. Although majority of participants had a modest level of knowledge on osteoporosis practices towards preventing Osteoporosis were inadequate. This descriptive cross-sectional study showed that however, in depth knowledge on risk factors, and protective factors was lacking, perceived susceptibility for osteoporosis was low with only 13.9% of women. Exercise was grossly inadequate in the majority and only 13.6% engaged in the recommended exercises.[7]

The findings of present study are similar to a Survey of Adults to identify the Barriers to Exercise conducted by Roper. Just as Americans 50-79 who exercise give a variety of reasons for engaging in physical activities, those who don't exercise also have their share of reasons for not doing so. Time Constraints is a major problem for many (40%) and 37% say they are too tired or lacking energy to exercise.[8]

Recommendations

A similar study can be replicated on a large sample to generalize the findings. Similar study can be replicated in a rural community or with samples of different demographic profile. A study can be replicated to include practice of regular exercise by direct observation instead of expressed practice. A comparative study can be done between male and female and between different age groups. Research studies are recommended to be conducted on different teaching strategies in public health nursing as a tool for BCC.

Conclusion

The study subjects who have better knowledge regarding regular exercise and its benefits perceived it better and tend to practice it regularly. Even though the study subjects perceived regular exercise correctly, they fail to practice it. Knowledge regarding exercise is found to be significantly associated with educational status of elderly women whereas practice of regular exercise among elderly women is significantly associated with their family income, education and working status. It was observed that elderly women had access to public amenities like park for walking and open gym for practicing different exercises. If they are given motivation, encouragement and support from

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the family members and society, they can utilize these facilities to promote health and control their physical morbidities. Health services need to focus on behavioural change communication which can bring a great reduction in the prevalence of certain life style diseases among elderly.

Conflict of Interest: None

References

1. https://www.livemint.com/Politics/z6BacVowf5SvmpD9P1BcaK/20-of-population-to-be-elderly-by-2050-HelpAge-India-repor.html.
2. Scommegna P. India's aging population. Population Reference Bureau. 2012. Available from: https://www.prb.org/india-older-population/.
3. Global Strategy on Diet & Physical Activity. 2004. Available from: http://www.who.int/diet physical activity/strategy/eb11344/strategy_english_web.pdf. Accessed on 12/7/17.
4. Press Information Bureau. National Programme for Health Care of the Elderly. Government of India. Ministry of Health and Family welfare. Cited on 17/12/13. Available from: http://pib.nic.in/newsite/PrintRelease.aspx?relid=101931.
5. Ashe MC, DeLongis A, Graf P et al. Gender differences in pain-physical activity linkages among older adults: lessons learned from daily life approaches. *Pain Research Management* 2016; 23(8): 894-904.
6. NIA's health information for older adults. Being active as you age can help maintain your independence. Available from: https://www.nia.nih.gov/health/exercise-physical-activity. Accessed on 12/6/17.
7. Ediriweera de Silva RE, Haniffa MR, Kumara Gunathillaka KD et al. A descriptive study of knowledge, beliefs and practices regarding osteoporosis among female medical school entrants in Sri Lanka. *Asia Pac Fam Med* 2014; 13(1): 15.
8. Exercise attitudes and behaviors: a survey of adults. AARP, 2002. Retrieved from: https://assets.aarp.org/rgcenter/health/exercise.pdf.

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