

## ORIGINAL ARTICLE

## LEVEL OF PHYSICAL ACTIVITY IN ELDERLY POPULATION OF RAWALPINDI-ISLAMABAD

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## ABSTRACT

**Objective:** To find out the level of physical activity in elderly population. **Methods:** a cross-sectional survey was conducted in Rawalpindi and Islamabad. The sample size of the study was n=165 elders who fulfill the inclusion criteria were included in the study. Non-probability convenience sampling was used in order to collect data from the respondents. To explore physical activity Rapid Assessment of Physical Activity (RAPA) questionnaire was filled by the respondents. The results of study are presented as frequency, percentages; mean±SD. SPSS ver. 21 was used for data analysis. **Results:** A total of 26(15.76%) elderly population were sedentary, 24(14.55%) were under active-perform light to moderate activities but not every week, 58(35.15%) were under active, 31(18.79%) were also under active and perform moderate physical activities every week, 21(12.73%) were active and perform moderate physical activities>30 minutes/day, 5 or more days a week and only 2(1.21%) were active and perform vigorous physical activities >20 minutes/day, 3 or more days a week. **Conclusion:** The result indicates that majority of geriatric population was under active. The elderly population who had sedentary lifestyle and who were active had the same prevalence.

**Keywords:** Elderly population, physical activity, sedentary

## INTRODUCTION

Physical activity in daily life can be categorized into occupational, sports, conditioning, household, or other activities.<sup>1</sup> Planned, structured, and repetitive physical activity has a final or an intermediate objective the improvement or maintenance of physical fitness. To sustain life every individual performs physical activity but the amount of physical activity they perform depends on their personal choice.<sup>2</sup>

Many diseases are associated with the increasing age. Increasing elderly population is defined as the chronological age of 65 years or older.<sup>3</sup> Symptoms of aging can be slow down by the active life style. Increased level of physical activity leads to lower self-reported prevalence of urinary incontinence in the community.<sup>4</sup> Severe incontinence leads to the reduced activity and socially isolated person. Reduced socialism has the impact on the expectancy of life of the increasing aged population.<sup>5</sup>

Physical activity prevents the development of the chronic diseases and reduces the risk of death. Physical activity improves the quality of life of an individual.<sup>6</sup> Researchers have proven that there increased level of physical activity and exercise participation is directly proportional to improved health. In a study, it was reported that 3.2 million

deaths per year are because of inactivity. Even in developed countries where the life expectancy of people is long, low level of physical activity leads to development of chronic health conditions.<sup>7</sup>

To maintain a healthy lifestyle exercising at least 5 days of week at moderate to vigorous level is important.<sup>15-6</sup> Exercising includes both aerobic activity and strength training. In elderly population, only few of them maintain the required level of physical activity that accompanies health improvement. To increase the level of physical activity in elderly population is a challenge for health professionals as they should have sufficient knowledge to prescribe adequate amount of physical activity to the elderly patients so they can improve their quality of life.<sup>8</sup>

Motivating the elderly population to perform more physical activity and maintain it over their lifetime is a true challenge in our society.<sup>9</sup> Some success in this has been reported when physicians have given specific, detailed and localised information to their patients, but more high quality research is needed to continue to address this issue of non-participation in physical activity and exercise of a high enough level to ensure health benefits. Maintaining desired level of physical activity in elderly population also improves their cognitive deficits.<sup>9,10</sup>

In elderly population, the greater concern is their capacity to carry out activities of daily living than the disease prevention. The quality of life and life expectancy of elders who live in a dependent state is low. Increased life expectancy along with functional independency is directly related to level of physical activity.<sup>11</sup>

The purpose of this study was to explore the level of physical activity in elderly population of Rawalpindi Islamabad

## MATERIAL & METHODS

A cross-sectional survey was conducted in Rawalpindi and Islamabad. The sample size of the study was n=165 from elderly population whose age according to our setting was  $\geq 55$  years. The elderly population with prostate cancer, neurological disease, kidney problem and diagnosed case of knee & hip osteoarthritis and sciatica were excluded from the study. Non-probability convenience sampling was used in order to collect data from the respondents. To explore physical activity Rapid Assessment of Physical Activity (RAPA) questionnaire was filled by the respondents. RAPA is a questionnaire designed to assess the level of physical activity in individuals which in our research is used to assess the level of physical activity in elderly population. The study has cross-sectional aspects and results of study are presented as frequency, percentages; mean  $\pm$  SD. SPSS ver. 21 was used for data analysis.

## RESULTS

The total numbers of study participants n=165. The minimum age of subjects was 50 years and maximum was 91 years. The mean  $\pm$  SD age of subjects was  $63.40 \pm 8.85$  years, and BMI was  $25.32 \pm 4.12$  kg/m<sup>2</sup>. (table 1)

A total of 26(15.76%) elderly population were sedentary, 24(14.55%) were under active-perform light to moderate activities but not every week.

Table 1: Characteristics of study participants (n=165)

	N(%)
Gender	Male
	94(57.0)
	Female
	71(43.0)
BMI Category	<18 (Underweight)
	4(2.4)
	18.5-24.9 (Healthy weight)
	79(47.9)
	25-30 (Overweight)
	65(39.4)
	30-35 (Obese)
	17(10.3)
Area	Rural
	85(51.5)
	Urban
	80(48.5)
Comorbidities	No
	92(55.8)
	Diabetes
	24(14.5)
	HTN
	27(16.4)
	Constipation
	4(2.4)
	HTN+Diabetes
	15(9.1)
	HTN+Constipation
	2(1.2)
	HTN+Anemic
	1(.6)
Smoking	Yes
	32(19.4)
	No
	133(80.6)

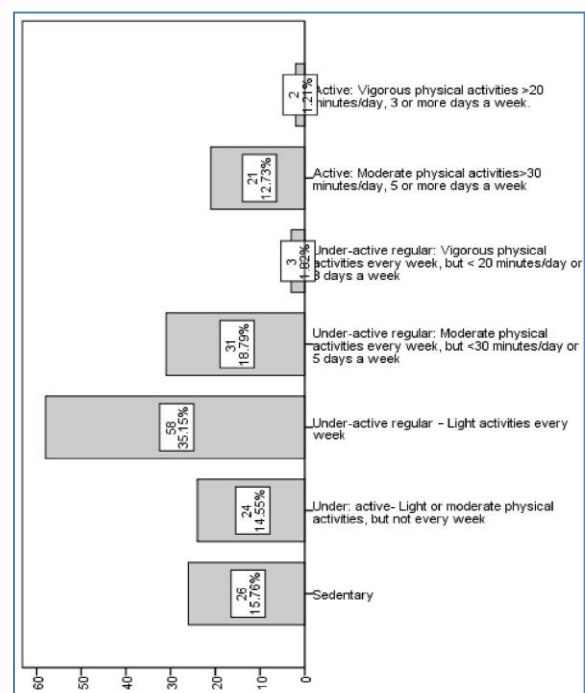


Figure 1: Physical Activity (Aerobics)

A total of 58(35.15%) were under active and perform light activities every week. A total of 31(18.79%) were also under active and perform moderate physical activities every week but <30 minutes/day or <5 days/week. A total of 3(1.82%) were under active and perform vigorous physical activities every week, but < 20 minutes/day or 3 days a week. A total 21(12.73%) were active and perform moderate

physical activities >30 minutes/day, 5 or more days a week and only 2(1.21%) were active and perform

vigorous physical activities >20 minutes/day, 3 or more days a week. (Figure 1)

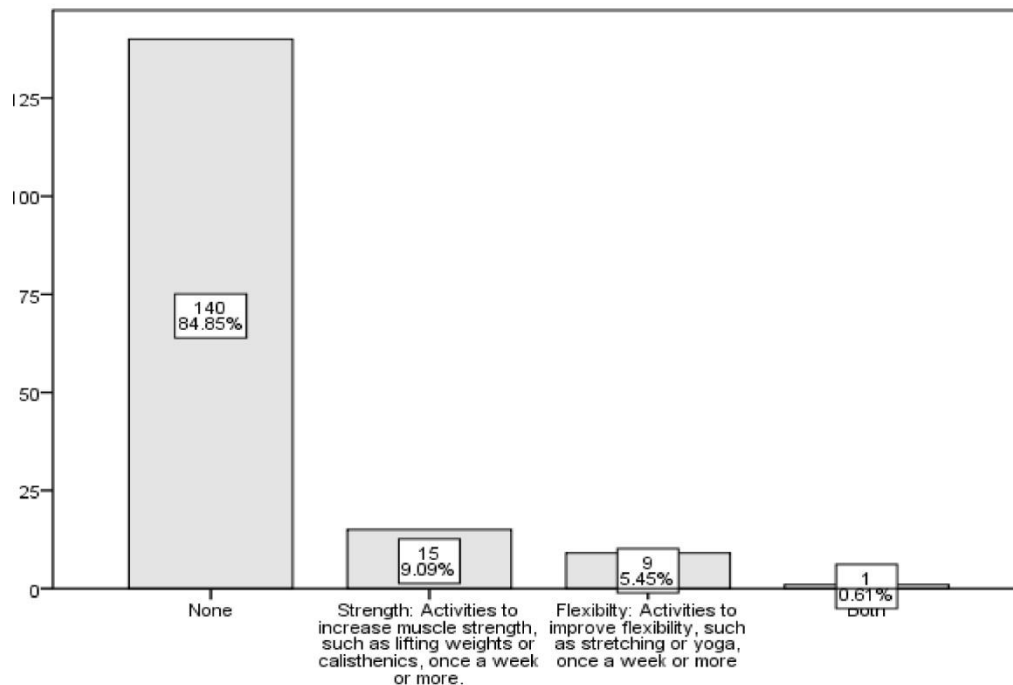


Figure 2: Physical Activity (Strength & Flexibility)

According to results a total of 15(9.09%) perform activities to increase muscle strength and 9(5.45%) perform activities improve muscle flexibility once a week or more. (Figure 2).

## DISCUSSION

The aim of the study was to find level of physical activity in elderly population. The results of the study indicated that a small portion of the elderly population is engaged in appropriate level of physical activity and most of the portion is sedentary having little or no physical activity in their daily life leading them towards poor physical health. Elderly population is more involved in sedentary lifestyle, not even performing their activity of daily living which further reduces their level of activity and quality of life.<sup>12</sup> Engaging elders into activity is a challenge to health professional as finding ways to motivate them to increase level of physical activity is difficult.<sup>13</sup>

Healthy aging requires regular participation in physical activity.<sup>14</sup> The individuals involved in regular physical activity show positive health outcomes including better mood states, improved health related quality of life.<sup>15</sup> Researchers have shown that better health is associated with physical activity. Elderly population is at risk of developing chronic

health conditions that physical activity could prevent<sup>16</sup> but in current study most elderly population was underactive and engaged in the moderate activity level of physical activity.

The incident of heart diseases such as coronary heart disease is higher in elders with lower fitness level. Fitness or Adequate exercise has a strong inverse relationship with mortality. Obesity in elderly population is also a major cause of mortality which can be reduced by performing physical activity.<sup>17</sup> As exercise helps in reducing weight and blood pressure. It also reduces level of bad cholesterol from blood and increases good cholesterol. Diabetic patients with regular exercise favorably affect the ability of body to utilize insulin and control blood glucose level. Although exercise effect on a single risk factor is small but if the effect of moderate continued on overall cardiovascular risk is combined with life style modification can be outstanding.<sup>4,16</sup> in current study mostly participants were diabetic and hypertensive.

In one of the research conducted in 2007, the expert panel after recommendations from the American College of Sports and Medicine (ACSM) and the American Heart Association (AHA) concluded that physical activity in elder adults should emphasize on aerobic activity that were in moderate intensity and also emphasize on the risk management by reducing sedentary behaviour.<sup>18</sup> Through our results it was concluded too that those who were engaged in light activity weekly had the low incidences of age related problems and had healthy life.<sup>10</sup> Physical activity including aerobic exercise in older age reduces the risk of functional limitation and disability. Moderate level of physical activity is effective and produces significant outcomes.<sup>11</sup>

According to the results of the research done by Med Science and Sports medicine, older population had the capacity to adapt to increased level of physical activity. From their results it was also concluded that lower intensity aerobic activities had more impact on older population rather than high intensity aerobic training. And they also stated that regular exercise had the positive impact on the population.<sup>18</sup> Elderly population has greater concern with their capacity to carry out activities of daily living than the disease prevention. Elderly population who are dependent on someone has low life expectancy and poor quality of life and who live alone or do their own work are healthier than the ones who are dependent for their ADLs on others. Increased life expectancy along with functional independency is directly related to level of physical activity and those engage in the light weekly activity had less complication and better quality of life.<sup>11,18</sup>

A research was conducted on physical activity in aging, changes in patterns and their relationships to health and functions, reported that a large number from generally older population had no activity and had sedentary lifestyle. Through our research findings, it is also evident that many of older population had sedentary lifestyle and some from many were engaged in the light physical activity.<sup>19</sup> Greater physical activity predicts higher functional status in older age. Moderate to high level of activity is effective. Many studies suggests that moderate amount of physical activity is associated with

improved health and reduced risks of morbidity and mortality when compared to sedentary lifestyle in older age. Physical activity recommendations should be to encourage the most sedentary elderly population to become at least moderately active.<sup>20</sup>

The current study was conducted on elderly population without musculoskeletal or joint problem that may be reason of some kind of physical activity as these problems contribute in no or very low physical activity. Generalizability of the study is also limited by small sample size and sample from Rawalpindi-Islamabad.

## CONCLUSION

The result indicates that majority of geriatric population was under active. But prevalence of sedentary and active life style in geriatric population was almost same. The author suggests an analytical study to further investigate the factor contributing in physical activity with larger sample size.

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