

Prevalence And Association Of Overweight With Major Non-Communicable Diseases Among Elderly People Living In Kesbewa Secretariat Division, Colombo, Sri Lanka

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Abstract:-Non-Communicable diseases (NCDs) have become a major global health problem. Cardiovascular diseases, diabetes mellitus, cancer and chronic respiratory diseases are considered as major NCDs. Those conditions commonly can be seen among elderly populations. Therefore this, community based cross sectional study was conducted among 368 participants over the age of 60 years to determine the prevalence of NCDs and its associated anthropometric measurements among elderly living in Kesbewa secretariat division, Colombo district, Sri Lanka. A representative sample was obtained by multi-stage cluster sampling technique. A pre-tested interviewer administered questionnaire was used and body mass index (BMI), waist hip ratio (WHR) were calculated through the anthropometric measurements. Statistical analysis was done by SPSS 23.0. Among the respondents, 60.9% (n=224) were females and mean age was 69.53±6.147. Out of the total sample 58.1% (n=214) of respondents were suffering from major NCDs. The prevalence of cardiovascular diseases, diabetes mellitus (DM), cancer, chronic respiratory diseases were 19.3%, 40.2%, 1.6%, and 12% respectively and 42.4% respondents were suffering from at least one NCD. The results suggested that BMI (P<0.05) and WHR (p<0.05) are significantly associated with major NCDs. The analysis revealed significant association between DM

and overweight (p<0.05). There was no significant association between other major NCDs with overweight. The prevalence of NCDs are considerably high and higher BMI & WHR are the major study observation of NCDs among elderly. As the factors are considered as modifiable risk factors, actions should be taken to address at community level to reduce the disease burden associated with NCDs.

KEY WORDS- Non-Communicable Diseases, Prevalence, Overweight, elderly

Introduction: The elderly population is rapidly progressing in worldwide due to declining of fertility rates, lower infant mortality and increasing of survival rates as a result of advancements in medical sector. The aging of the population has become a major discussion point in modern economics and is a major concern on the future growth of the world (Perera, 2017). Non-communicable diseases (NCDs) are considered as one of the major problems which can be highlighted with the increasing of elderly population (Third UN High-level Meeting on Non-Communicable Diseases, 2018). Cardiovascular diseases (CVDs), cancer (CA), chronic respiratory diseases (CRDs) and diabetes mellitus (DM) which are known as major NCDs and are leading causes of mortality in the world (STEPS survey Sri Lanka, 2015). Day by day, NCDs are increasing due to modifiable risk factors,

which are tobacco, harmful use of alcohol, unhealthy dietary habits, insufficient physical activity, overweight/ obesity, raised blood pressure, raised blood sugar and raised cholesterol (WHO, 2018). Therefore this study was carried out to determine the prevalence of NCDs and its association with overweight.

Methodology: This, community based cross sectional study was conducted among 368 participants over the age of 60 years. A representative sample was obtained by multi-stage cluster sampling technique. A pre-tested interviewer administered questionnaire was used and body mass index (BMI) and waist hip ratio (WHR) were calculated through the anthropometric measurements. The questionnaire consisted of 3 sections which were socio-demographic data, physiological and/or biological risk factors and anthropometric measurements. According to BMI value, candidates were classified into four groups depending on the classification of Epidemiological unit in Sri Lanka. Data were analyzed using SPSS version 23.0 and both descriptive statistics and inferential statistics (chi square) were used.

Results: Among the total of 368 respondents, majority was females (n = 224, 60.9%). Mean value of the age of the respondents was 69.53±6.147 years. Out of the total sample, 58.2% (n=214) of respondents were suffering from major NCDs. The prevalence of cardiovascular diseases, diabetes mellitus (DM), cancer, chronic respiratory diseases were 19.3%, 40.2% 1.6%, and 12% respectively and 42.4% respondents were suffering from any NCD. Considering the distribution of weight, if someone's BMI value is above or equal to 23, they were categorized as overweight. Respondents falling to overweight and obese (>27.5) categories considering BMI were considered as "at risk". 22.3% of male respondents and 34.0% of female were

fallen in to overweight category. The results suggested that BMI (P<0.05) and WHR (p<0.05) are significantly associated with major NCDs. The analysis revealed significant association between DM and overweight (p<0.05). There was no significant association between other major NCDs with overweight. The research results of "Body mass Index and quality of life among elderly" by Kusumaratna and Hidayat, (2016) had revealed that, 30% male and 42% female are in the overweight category when BMI values considered. Similarly, the findings of this research indicates that females were mostly overweight than male respondents. Moreover the previous study of "Association between BMI and chronic NCDs among the elderly chronic diseases, BMI and elderly" (Lam et al., 2015) have also emphasized the significant association between NCDs and the respondents of overweight BMI which was similar to this study.

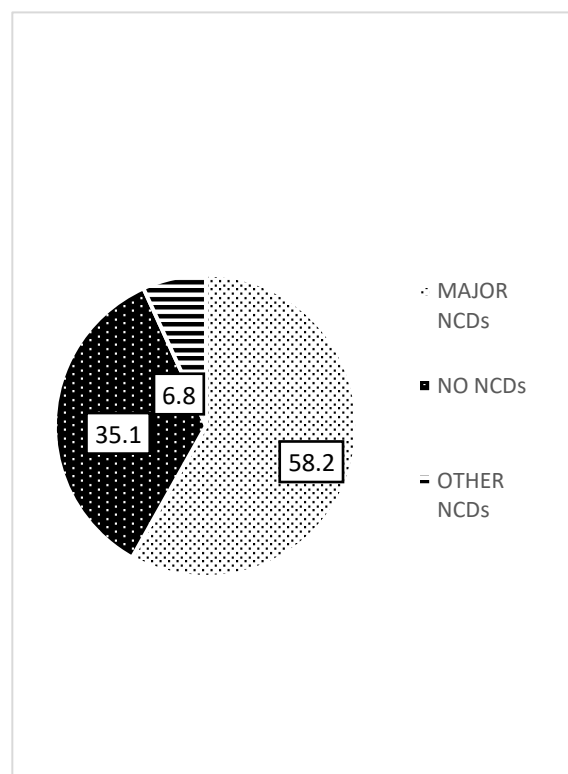


Figure 11 - Reported major NCDs

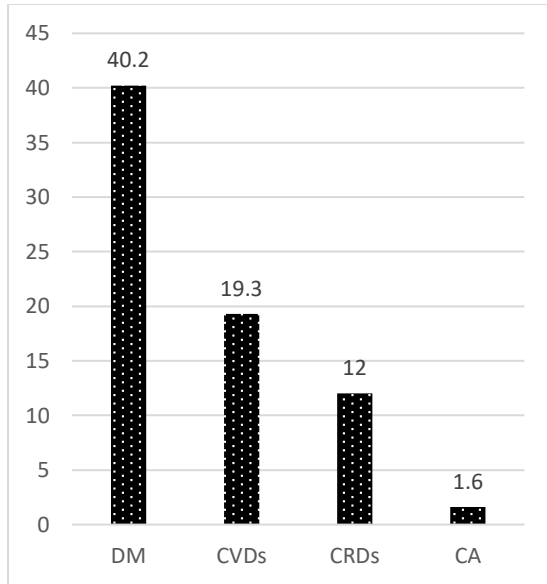


Figure 12 - Major NCDs

Table 9 - Association overweight with Major NCDs

Major NCDs	Frequency	Percentage	P value
CVDs	46	12.5	0.118
DM	93	25.3	0.045
CRDs	27	7.3	0.490
CA	3	0.8	0.745

Conclusion: The prevalence of NCDs are considerably high and higher BMI & WHR are the major study observation of NCDs among elderly. The findings indicate that there is a significant association between diabetic mellitus and overweight while the other major NCDs has no any significant association with overweight BMI. As the factors are considered as modifiable risk

factors, actions should be taken to address at community level to reduce the disease burden associated with NCDs.

KEY WORDS- Non-Communicable Diseases, Prevalence, Overweight, elderly

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