



PREVALENCE OF UNHEALTHY LIFESTYLE IN A HOSPITAL-BASED SAMPLE OF COMMUNITY-DWELLING OLDER ADULTS IN GOA, INDIA

Occupational Therapy

Vivek Vajaratkar* MOT (Neuroscience), Lecturer in Occupational Therapy, Dept. of Orthopaedic Surgery, Goa Medical College, Bambolim, Goa-403202, India. *Corresponding Author

Amitabh Dwivedi PhD (OT) Professor and Dean, Jaipur Occupational Therapy College, Maharaj Vinayak Global University, Dhand, Amer, Jaipur, Rajasthan-302038, India.

ABSTRACT

The main objective of this study was to determine prevalence of unhealthy lifestyle in a sample of community-dwelling older adults in Goa, India by using cross sectional hospital based study. The study was performed in the Goa Medical College and Hospital, Goa, India. The sample consisted of 382 participants (mean $\pm$ SD age: 59.3 ± 3.56). HELP-screener and HELP profile tools were completed by all the 382 participants. A preliminary prevalence of unhealthy lifestyle estimate was 75.39% (95% CI; 70.76% to 79.63%). Overall 288 participant were found to have an unhealthy lifestyle. This study is one of the first to provide a preliminary estimate of the prevalence of unhealthy lifestyle in a hospital-Based sample of community-dwelling older adults in Goa, India. Such research in low-resource settings is crucial in order to guide appropriate monitoring health-related lifestyle factors and establishing the intervention plan that aim to promote healthy lifestyles with aging.

KEYWORDS

prevalence, unhealthy lifestyle, epidemiology, health lifestyle assessment

INTRODUCTION

Worldwide, aging has become an urgent issue. Researchers predict that the number of people aged ≥ 65 years in the global population will increase to 1 billion by 2030, which means that 1/8 of the population will be elderly¹. This increased demand will, in turn, lead to higher public healthcare expenditures, which may outweigh the need to build additional schools and improve the education system. This situation is highly undesirable, as the lack of an educated younger workforce can have unfavourable economic consequences. To economize on future government healthcare expenditures, investigation of the population's lifestyle and health habits would be reasonable. Some reports have described the healthcare needs of older adults in Russia, but they have not provided a comprehensive, reliable, and clear picture of the health status of this population in different domains². A healthy lifestyle can contribute to healthy aging, which in turn decreases healthcare demand. Health deteriorates as people age, increasing disease risk and worsening self-reported health status. Healthy habits can slow this deterioration and may increase the likelihood of positive self-ratings of health in comparison with those expected based on "objective" assessments. Thus, a healthy lifestyle may be a good investment from decision makers' point of view, as the combined effects of healthy habits may reduce mortality risk³.

Recent prevalence study conducted in India⁴ was recommended that to conduct screening programs which should be instituted at the community level, for the early diagnosis, treatment, and further regular monitoring of the treatment compliance to control diseases related morbidity and mortality. The old age is unpreventable physiological state and epidemiologically independent risk factor for chronic non-communicable diseases. This study was designed to determine the prevalence of chronic diseases and disability among geriatric study subjects. This cross-sectional study was conducted to assess various dimensions that affect the lives of the elderly which includes the socio-demographic variables, employment status, lifestyle habits, health and psychological conditions

The influence of health behaviours on health is not immediate. Behaviours such as unhealthy dietary practices can influence current utility, but damage health and reduce health stock in the long term. Until recently, there has been a paucity of instruments developed to measure the various lifestyle factors in a holistic and systematic manner. A comprehensive, systematic evaluation assessing the breadth of lifestyle behaviours is needed in order to reflect the nation's current health-care emphasis as well as the role of occupational therapy in services for older adults. To fill this gap, Hwang developed the Health Enhancement Lifestyle Profile (HELP)^{5,6,7} and its screening version, the HELP-Screener^{8,9,10}. These are a set of self-report instruments designed for screening and monitoring health-related lifestyle factors and establishing the intervention plan and goals that aim to promote healthy lifestyles with aging. Moreover, a lack of comprehensive and valid lifestyle measures was found in several

population-based studies that investigated variables associated with lifestyles in older adults; that is, in these large-scale surveys, health promoting behaviours and lifestyles were examined simply by asking a few questions that focused mostly on the habits of exercise, diet, or smoking^{11,12}. The purpose of this study was to determine prevalence of unhealthy lifestyle in a sample of community-dwelling older adults in Goa, India. The main objective of the study was to assess the prevalence of unhealthy lifestyle among older adults by using cross sectional hospital based study.

METHODS

A cross-sectional institutional-based study was undertaken to know the prevalence of unhealthy lifestyle among older adults. The study was conducted in Goa, on the west coast of India. Goa is in an advanced stage of the epidemiological and demographic transition in the country, with some of the best health indicators¹³ and a rising proportion of older people; the 2001 Census reported that 8.3% of the total population was aged over 60 years¹⁴. The study was carried out in tertiary health care hospital and medical college- Goa Medical College, Goa during the period between March 2017 and June 2018. 382 participants were recruited by using following Inclusion and exclusion criteria:

Inclusion criteria:

1. Minimum age of 55
2. Informed consent
3. No significant hearing, visual impairment in the child or parent
4. Patient not suffering from cognitive disorders or any other neurological
5. Patient not suffering from psychiatric disorder.

Exclusion criteria:

1. Lack of consent
2. Experiencing an unfortunate event during the past month
3. Taking antipsychotic drugs during the past month
4. Participation in other research studies.
5. Residence outside Goa

The Institutional Ethical Committee approval was taken from Goa Medical College, Goa. All the participants were consented before participation. All the registered older adult cases were screened by using Health Enhancement Lifestyle Profile- Screening Version (HELP-Screener). All probable cases with unhealthy lifestyle were examined by a trained clinician to confirm the unhealthy lifestyle according to HELP profile. HELP-screener was completed by all the 382 participants either (1) in a direct interview, in which a researcher read aloud the questions and recorded responses for the participant or (2) by means of paper and pen, administered onsite to an individual or a group of participants. All the probable and non-probable (True and false positive cases) cases were completed HELP profile to confirm the cases with unhealthy lifestyles.

MEDCALC: easy to use statistical software version 18.6 was used for the statistical analysis. Value of $p < 0.05$ was considered statistically significant.

RESULT

The sample from Goa Medical College consisted of 382 participants (Age mean $\pm$ SD age: 59.3 ± 3.56) (see Table 1 and 2 for demographics and Occupational characteristics of the participants). HELP-screener and HELP profile tools were completed by all the 382 participants. All the cases who met cut-off score 9 on HELP-Screener ($n=184$) and remaining cases who were above cut-off score ($n=198$) were administered HELP diagnostic tool. The subjects included 192 (52%) man and 190 (50%) woman were aged between 55-65 years. Preliminary Prevalence Estimate

A preliminary prevalence of unhealthy lifestyle estimate was calculated from the follow-up of participants with HELP data from the participants (Fig. 1). Overall 288 (75.39%, 95% CI; 70.76% to 79.63%) participant were found to have an unhealthy lifestyle.

Table 1: Demographic characteristics of participants in the study

	Participants
Total no. of participants	n=382
Gender	n (%)
Male	n=192 (50.26%)
Female	n=190 (49.73%)
Age range	55-65 (Years)
Age	mean $\pm$ SD age: 59.3 ± 3.56
Nationality	Indian

Table 1: Distribution of occupational characteristics of the subjects in this study

Sr. No.	Occupation	No. of Participants
1	Not Working	198
2	Legislature, Senior Officer, Manager	24
3	Professionals	35
4	Technician and associate professionals	32
5	Clerk	12
6	Service Worker and market sales workers	39
7	Skilled Agriculture and Fisheries Workers	9
8	Craft and related trade workers	8
9	Plant and Machinery operators and assemblers	7
10	Elementary occupations	17
11	Armed Forces	1

DISCUSSION

This study provides a preliminary estimate of the preliminary prevalence of unhealthy lifestyle in a hospital-Based sample of community-dwelling older adults in Goa, India. As such, this study provides the first estimate of unhealthy lifestyle in a large hospital-based cohort in Goa, India. This was necessitated by the lack of availability of prevalence of unhealthy lifestyle of older adults (as available in many Western countries). Earlier studies have been done in India among a sample of diseased population. Recent study in India estimated prevalence of a Healthy Lifestyle among Individuals with Cardiovascular Disease in High-, Middle- and Low-Income Countries¹⁵. This study found that patients with a Coronary Heart Disease or stroke event from countries with varying income levels, the prevalence of healthy lifestyle behaviours was low, with even lower levels in poorer countries.

This study applies recently developed standard tools to fill the gap in lifestyle measurements. The 15-item HELP-Screener is a reliable and valid tool designed to serve as a time-efficient screen that determines^{8,9,10} if further evaluation with the original 56-item HELP is needed for a client. The further evaluation using the 56-item HELP^{5,6,7} can provide a more in-depth understanding of particular areas of the client's life warranting lifestyle modifications or regimens. Study in Russia¹ found that a large body of evidence has demonstrated that self-reported health assessment has high predictive validity for mortality, physical disability, and chronic disease status. Furthermore, self-assessed health is a stronger predictor of mortality than physician-assessed health³. Self-rated health is a valid and extensive measure of health. Obviously, an individual's health status changes over time and a

single measure is not capable of reflecting such change. Thus, the importance of self-rated health lies in the stability of its predictive power over time. This feature is also important because a single measure of self-rated health is more easily and less expensively obtained than assessments made by a clinician³. In addition, the four health behaviours examined in this study are associated with different disease risks, and disentanglement of these relationships can be difficult. Thus, self-reported health is a good outcome measure that generally depicts how respondents describe their health status. The results of the study in Russia indicate that health behaviours, especially physical activity, are important for the health of Russia's older population. HELP-Screener and HELP assessment tools are capturing all these features.

As a first study of its kind, this work is not without its limitations and hence caution is called for in interpreting its findings. One limitation is the potential underrepresentation of the Goan population, and low to high- socio-economic status population. As this is being hospital-based study most middle or high-SES individuals may not be attending Government run hospital study site and hence may have opted. This under-representation of participants from the middle or high SES may have led to a higher prevalence estimate. The second limitation was the lack of available or access to prevalence rate of unhealthy population without diseases from other parts of India to compare the reliability of this study findings. Nevertheless, this study shows the large gaps between actual and ideal prevalence of healthy lifestyle behaviours among older adults.

The scope of Occupational Therapy practice is the promotion of health and wellness for all populations to optimize participation in daily occupations, namely, "Living Life To Its Fullest TM" (AOTA, 2010). As lifetimes grow longer due to medical advances and living life to its fullest will require prevention of health risks and maintenance of health promoting behaviors to ensure a healthier lifestyle and greater quality of life in old age. To that end, assessing and monitoring lifestyle behaviors become essential roles of occupational therapists working with the older adult population. The 15-item HELP-Screener^{8,9,10} and the 56-item HELP^{5,6,7} were recently developed to fill the gap in lifestyle measurements. The 15-item HELP-Screener is a reliable and valid tool designed to serve as a time-efficient screen that determines if further evaluation with the original 56-item HELP is needed for a client. The further evaluation using the 56-item HELP can provide a more in-depth understanding of particular areas of the client's life warranting lifestyle modifications or regimens.

CONCLUSION

This study is one of the first to provide a preliminary estimate of the prevalence of unhealthy lifestyle in a hospital-Based sample of community-dwelling older adults in Goa, India

The higher prevalence estimates for unhealthy lifestyle of older adults (75.39 %) should be considered with caution as they represent a higher-bound of the true prevalence in the country. This result however can form the basis of future large-scale epidemiological and related (genetic and environmental) research on older adults or older population in India. Such research in low-resource settings is crucial in order to inform policies and to guide appropriate monitoring health-related lifestyle factors and establishing the intervention plan and goals that aim to promote healthy lifestyles with aging.

ACKNOWLEDGEMENT

The author is grateful to his PhD guide Dr. Amitabh Dwivedi, M.O.T., PhD, who is working as a Dean and Professor, College of Occupational Therapy, Maharaj Vinayak Global University, Dhand, Amer, Jaipur, Rajasthan-302038, India. Author also expresses his heartfelt thanks to Interns, students and participants for their kind co-operation and participation, which helped in making this study a success. Author also express his deep sense of gratitude to Dr. Pradeep Naik, Dean, Goa Medical College, Goa and Dr. S.M. Bandekar, Head and Professor, Dept. of Orthopaedic Surgery, GMC, Goa.

REFERENCES

- Selivanova A, and Cramm JM. The relationship between healthy behaviours and health outcomes among older adults in Russia BMC Public Health, 2014; 14:1183. <http://www.biomedcentral.com/1471-2458/14/1183>.
- Gurina NA, Frolova EV, Degryse JM. A roadmap of aging in Russia: the prevalence of frailty in community-dwelling older adults in the St. Petersburg district-the "Crystal" study. J Am Geriatr Soc. 2011; 59:980-988.
- Mossey JM, Shapiro E. Self-rated health: a predictor of mortality among the elderly. Am J Public Health, 1982; 72:800-808.

4. Kaur J, Singh S, Kaur K. Impact of Age on the Prevalence of Chronic Diseases in Geriatric Population International Research Journal of Biological Sciences. 2014; 3(9): 79-85.
5. Hwang JE. Promoting healthy lifestyles with aging: Development and validation of the Health Enhancement Lifestyle Profile (HELP) using the Rasch Measurement Model. American Journal of Occupational Therapy. 2010a; 64 (5):786-795. <http://dx.doi.org/10.5014/ajot.2010.09088>.
6. Hwang JE. Reliability and validity of the Health Enhancement Lifestyle Profile (HELP). OTJR: Occupation, Participation & Health, 2010b; 30 (4):158-168. <http://dx.doi.org/10.3928/15394492-20091225-01>.
7. Hwang JE. Construct validation of the Health Enhancement Lifestyle Profile (HELP) with quality of life among community-dwelling older adults. Physical & Occupational Therapy in Geriatrics. 2010c; 28 (2):117-130. <http://dx.doi.org/10.3109/02703181003637559>.
8. Hwang JE. Development and validation of a 15-item lifestyle screening for community-dwelling older adults. American Journal of Occupational Therapy. 2012a; 66(6):e98-e106. <http://dx.doi.org/10.5014/ajot.2012.005181>.
9. Hwang JE. Validity of the Health Enhancement Lifestyle Profile - Screener (HELP-Screener). OTJR: Occupation, Participation & Health. 2012b; 32(4):135-141. <http://dx.doi.org/10.3928/15394492-20120217-01>.
10. Hwang JE. Reliability of the Health Enhancement Lifestyle Profile - Screener (HELP-Screener). American Journal of Occupational Therapy. 2013; 67(1): e6-e10. <http://dx.doi.org/10.5014/ajot.2013.005934>.
11. Koertge J, Weidner G, Elliott-Eller M, Scherwitz L, Merritt-Worden TA, Marlin R, et al. Improvement in medical risk factors and quality of life in women and men with coronary artery disease in the Multicenter Lifestyle Demonstration Project. American Journal of Cardiology. 2003; 91, 1316-1322. doi: 10.1016/S0002-9149(03)00320-5.
12. Toft U, Kristoffersen L, Ladelund S, Ovesen L, Lau C, Borch-Johnsen K, et al. The impact of a population-based multi-factorial lifestyle intervention on changes in long-term dietary habits: The Inter99 study. Preventive Medicine. 2008; 47, 378-383. doi: 10.1016/j.ypmed.2008.05.013.
13. International Institute of Population Sciences: National Family Health Survey II Goa 1998. 2002.
14. Census 2011. <http://www.censusindia.net>
15. Teo K, et al. Prevalence of a Healthy Lifestyle Among Individuals With Cardiovascular Disease in High-, Middle- and Low-Income Countries The Prospective Urban Rural Epidemiology (PURE) Study JAMA. 2013; 309 (15): 1613-1621.