

HEALTH PROMOTION INTERVENTION ON ENABLING OVERWEIGHT ADULTS TO REDUCE THEIR RISK OF NON-COMMUNICABLE DISEASES THROUGH ENERGY BALANCE IN KARUWALAGASHINNA VILLAGE IN ANURADHAPURA DISTRICT

I.D.N. Ihalahewage*, W.T. Rishani, G.T.S. Gunawardena, A.H.N.R. Silva, S. Yasothara, G.L.M.K. De Silva, G.G.N. Duminda, M. Fernando

Health Promotion Unit, Department of Biological Sciences,
Rajarata University of Sri Lanka.

* *nayanahwg@gmail.com*

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Energy imbalance between calories consumed and calories expended is the fundamental cause of overweight and obesity. Intake of high fatted energy-dense foods, physical inactivity due to sedentary nature of many forms of work, changing modes of transportation and increasing urbanization are major reasons for this. Overweight is generally defined as having excessive body fat accumulation that may impair health. Non communicable diseases such as cardiovascular diseases, diabetes and osteoarthritis origin due to the raised BMI caused by energy imbalance. Body mass index (BMI) is an index of weight-for-height, commonly used to classify overweight and obesity. Overweight people should be conscious about the amount of healthy and unhealthy foods they consume. Supportive environments and

communities are fundamental in shaping people's choices, making the healthier choice of foods and regular physical activities.

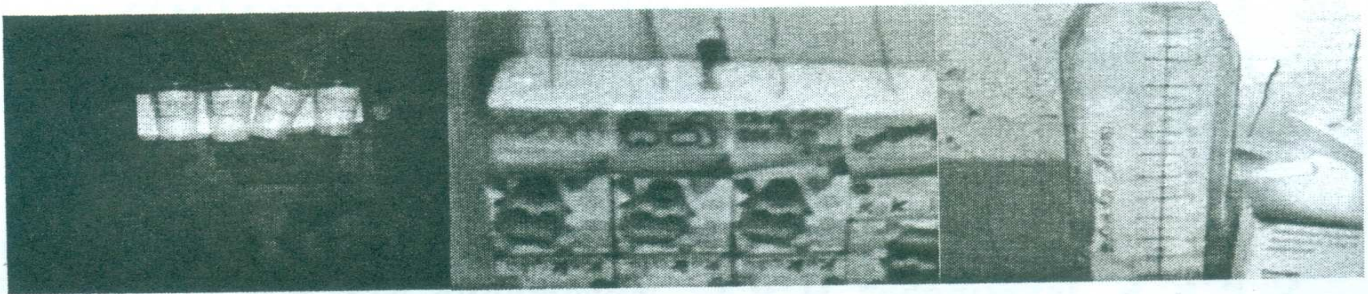
This study was objected to develop a health promotion intervention with cost effective strategies and practicable dimensions to reduce or stop unhealthy dietary habits of people while measuring the progress. Hence this intervention will be beneficial to achieve wellbeing challenges in future generations. Results and methods may be useful in designing and implementing further studies.

A quasi experimental design was conducted in Karuwalagashinna village in Mihintale MOH area in Sri Lanka. Pre and post results within the intervention group were compared to assess the effectiveness. 12 overweight

adults from the target population aged 20- 60 years participated for the intervention. It was implemented to improve knowledge, behavior, family support and to change negative attitudes on food consumption, overweight and skills on measuring BMI. Community identified the overweight as a felt need after a health camp organized by the health promotion group in order identifies health issues while building a rapport with the community. Then they were empowered to work towards reducing overweight in two cluster groups. Determinants of overweight were initially identified using a tool called '*Determinant Map*' with participants. After prioritizing them according to their preferences feasibly changeable factors were selected. Afterward interventions were planned to address them.

Within two cluster groups, group discussions were held to increase awareness and improve knowledge on overweight and its consequences. These discussions were facilitated by the health promotion group members. Power point presentations, video presentations, attractive posters and picture cards were used to simply convince the participants. Participants started to write daily oil, sugar, starch food and sweets consumption levels in order to reduce high consumptions while measuring. Later it was modified into maintaining an innovative instrument called as "*Nutritious Abacus*" which was used to measure daily consumption levels of food and activities done during the day. Tool consisted with rods like in an abacus. Each rod represented levels of each

food consumption and number of activities done within a day. When foods consumed in a day the amount was written in a piece of paper and pinned on the rods. For the convenience of measuring oil consumption, oil bottles were scaled. And already written food amounts were put in boxes and attached to the tool. Six active members maintained this tool out of twelve. Others followed their own food consumption measuring systems. Family members of the participants' gradually started to assist the intervention process by marking on the tool. In depth interviews and group discussions were used to change attitude of the participants. And those changes were measured with innovative tool called '*Attitude ladder*'. Home visits to each individual to facilitate with further inputs to continue their measuring were done apart from group gatherings. Participants maintained a common weight chart which helped them to clearly see their weight changes. It also helped in increasing enthusiasm of the members towards work.



'Abacus tool'

'Oil scale'

Comparing pre and post data, significant reduction of consumption level of unhealthy foods was seen. 33.3% (n=12) of participated adults reached accurate BMI level while 40% reduced 1-6 kg of weight. Unhealthy behavior of members' changed by 73.6% and attitudinal change was by 70%, knowledge increased by 93.6% and skills increased by 81.5%. Results achieved within a period of one and half year. Both quantitative and qualitative improvements among participants' lifestyle were shown. Number of group gatherings and home visits were limited by circumstances like unexpected accidents, busy life style of members, and lack in health promotion group facilitation due to obstacles within the university. Results showed a significant improvement in reaching accurate BMI, changes in attitudes, behavior and skills with

compared to pre stage. Therefore this intervention is effective according to analyzed pre and post results and can be applied successfully to a same setting having its characteristics.

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