

Nutritional Status and Sedentary Lifestyle of Individuals

A review

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Abstract

The nutritional status of individuals is linked with the Health status of the Individual groups and related to the balance of the Lifestyle and dietary habits of the population group. The Sedentary Lifestyle is a type of an inactive behavior status of the Individuals such as sitting, watching television, playing digital games, using Computer, Social Media and office works that result in more fast foods and high-calorie nutrient intakes, the studies, and outcomes of the Sedentary Lifestyle and behavior and its effect on the health status of the age groups have been determined as well as the prevalence of the Sedentary Lifestyle on chronic diseases such as obesity and overweight, type 2 diabetes, heart diseases, Mental health conditions, Autism, and depression[22]. The role of the Sedentary Lifestyle on the Global individuals in the developed and undeveloped countries has been observed. discussion of the relationship between a Sedentary Lifestyle and nutrient intake of the individuals within the replacement by physical activities. and analysis of the published studies and data researches that deal with the discussion of the results and connections between Sedentary Lifestyle and age, gender, BMI, level of Education, Marital Status, and change of weight during 6 months and guidelines to avoid or reduce Sedentary behavior and activities have been determined.

Key words: Sedentary Lifestyle, Nutritional Status, Chronic Diseases, Nutrient Intake, Physical Activities

INTRODUCTION

The overweight and obesity in Children, teenagers, adults are over increasing due to many factors like genetic and environmental factors including Sedentary Lifestyle and behavior, physical activities, nutritional status of individuals, and socioeconomics [8].

Sedentary Lifestyle or Sedentary behavior is considered to be the 4th highest mortality danger factors worldwide by World Health Organization (WHO)[23]. Sedentary behavior means low energy output due to the lack of physical activity that the energy expenditure does not reach the recommended levels, the most detrimental Sedentary attitudes are long time spent in work, in front of the television, play digital games and use of a computer and the activities that decrease the physical activities [7].

There are many studies that mentioned the most important factors of increasing overweight and obesity in the individual is lack of physical activities and Sedentary behavior [24]. Studies considered that the individuals that do more physical activities have lower risks to become overweight or obesity and lower risks of chronic diseases. It was also found that the main reasons of Sedentary behavior are due to the technology life that lead individuals to spend more time at the house instead of walking and cycling and

this does not balance the energy intake and energy expenditure, the energy intake will be stored as body fat in tissues[8].

The Nutrition which known as the science of food and the nutrition status of individuals, recognized as the reflection of the health status in recent years [25]. The balance between adequate nutrient intake and physical activities is important for the prevention of chronic diseases, the strength of muscles, protection against infection, immunity promotion, and good psychological status. adequate nutrition means a diet that contains required daily nutrients of “carbohydrates, proteins, lipids, Vitamins, minerals” that are required as an energy source and for the building of body, function of the body organ system, and physical activities [2].

Furthermore, essential factors of the significant changes in the individual's Lifestyle are modernization process that has been occurred in the recent years, which is changes in eating habits, lower physical activities, and long working hours that increase the Sedentary behavior, and Sedentary behavior has been detected as the main issue of the public health because it has been highlighted as the main factors of increasing the rate of detrimental health issues such as mortality, psychological depression, overweight, obesity, Type 2 diabetes, syndromes of metabolic, some types of cancer, and cardiovascular diseases, Sedentary behavior may negatively affect the health in the aging process [3].

The health indicator which is known as Body Mass Index BMI has been increased to the more than 25 kg/m² in the worldwide, another health issue is malnutrition due to the inadequate nutrient intake and deficiency in nutrition absorption, changes in use and transport that lead to the inflammatory process and weight decrease [3].

Therefore, this review is aimed to evaluate the relationship between Sedentary Lifestyle and the nutritional status of the group of individuals and discussion of the main reasons for increasing the Sedentary Behavior Lifestyle and effects of bad dietary habits with health issues[26].

Terms of Sedentary Lifestyle, Physical activity and in activity

Sedentary means inactive form also defined as the any activity behavior that determined as an energy expenditure of lower than 1.5 metabolic equivalents in the form of sitting or reclining position but sleeping is not included with a very low energy output, also physical inactivity used for the people that do not get guidelines of physical activities in other word described as the population with different age groups of young, adult, and old individual groups [11].

Physical activity is described as the body movement by skeletal muscles in the result of caloric output over resting level, parameters of physical activities includes time, type, intensity including frequency [27]. Physical activity referred to the occurrence of physical activity during a specific period of time, for instance month, week and days, while intensity relayed to the required effort to apply physical activities and described as Energy Expenditure, physical activities such as daily walking or walking, running and swimming [11].

Prevalence of Sedentary Lifestyle:

Rise of Sedentary Lifestyle population level in Europe

The study determination of Sedentary Lifestyle distribution among 15 nation members in European Union, identified of the main related reasons of a Sedentary Lifestyle [28-31]. A questionnaire of physical activity behavior, body weight status including health, Sedentary individuals were defined as two groups, first a group with less than 10% energy output in activities such as Metabolic equivalents “MET”, second group individuals with no activities [20].

The statistical model of logistic regression has been observed the relation of a Sedentary Lifestyle with the age, gender, study level, 6-month weight change, Body mass index, smoking status including marital status. Across European nations the ratio of Sedentary Lifestyles was ranged between Sweden 43.3% and Portugal 87.8%, a lower prevalence was found in northern countries concerning Mediterranean countries, a Sedentary Lifestyles were higher in obese, elder, smokers, and divorced individuals [20].

Prevalence of Sedentary Lifestyle on obesity in Asia

The prevalence of public health conditions of obesity and overweight in Asia is over rising due to the changes in dietary habits, high fat contains diets, energy-dense with a rise of Sedentary behavior and modernization in middle East Countries. Risk of obesity to the health and economy status of the population aware the individuals to face the problem, reference standards, and cut-off points correlated with lack of uniformity, integrating the strategies of Sedentary Lifestyle modification physical activities and diet management into a national program and policy can help to face the health conditions, these strategies require gathering of government with academic instructors, private sectors, food industry, none governmental organizations NGOs , community with the aid of international and bilateral agencies regarding development and implementation of these programs and policies [6].

Outcomes of Sedentary Lifestyle:

Global Sedentary Lifestyle & Physical activity effect on Mental Health

Global meta-analysis studies have observed that the level of a Sedentary Lifestyle and lack of physical activities are related to the increase in Mental health conditions. About 69 studies, self-report questionnaires were done up to 2017 that included “ n=535,682 which is 39.5% male with a mean age of 43”, they severe from Mental illness and risks of Mental conditions due to the spending 476 min /day on average having Sedentary Lifestyle during waking and working hours, and their physical activities average were 37.4 min /day[32-36]. The analytical studies have detected that the Sedentary Lifestyle behavior groups of individuals based on gender and age are significantly have risks of severe Mental illness [19].

Sedentary Lifestyle depression influence on Adults

The research articles have investigated the association between Sedentary Lifestyle and depression in adults by using several electronic databases. The observational studies show the positive relationship between a Sedentary Lifestyle and the endanger of depression in adults and the evidence of the association between them are limited by methodological weakness. Although, the studies shown an increase in the

risk of depression but still more studies required to assess different types of Sedentary Lifestyle and depression linked with the physical activities and intervention strategies to lower the risk and impact of the Sedentary Lifestyles on the endanger of depression in adults [18].

The Sedentary behavior of Children with autism spectrum disorder

The Children with spectrum disorder of autisms developing have differed from normal Children, it has been shown that the Children with autism group spent more time inactive on screen in comparison with the normal Children groups. Studies have been observed the prevalence of Sedentary behavior of Children with Autism Disorder related to the amount of the period that they spend on weekend days among these Children and its influence on Mental behavior and weight status [14].

The studies found that the Children with Autism Spectrum disorder “ASD” which is a lack of developmental have been increased in last decades, the Children with ASD have lower physical activities than typical or normal Children, the joining of the ASD Children in formal and other physical activities is difficult and they prefer to watch television and leads to increase the amount of the period that they spend in Sedentary behavior [14].

Effect of Sedentary Lifestyle on Body mass index BMI

The Impact of a Sedentary Lifestyle, dietary habit, and physical activity on body mass index BMI have been examined. In the study conducted by (Shailesh Agrawal, 2013) on 325 females aged “15-49 years” from 1998 to 1999 in Delhi and re intervened after 4 years in 2003 from the survey samples of national health family and the data about height, weight, dietary style, and Sedentary behaviors were collected by interviewing face to face with females, they found an increase in BMI by 2.0 point in overall mean after 4 years in modified analysis and low effect evidence of relation with dietary habits. These studies found that a high Sedentary behavior is a factor of weight gain with adult females in India [1].

The National Institute of Child Health & Human Development (NICHD) has been studied about determination of measured time spent of Sedentary behavior within increasing body mass index “BMI” of Children between 9-15 years. In the study 789 Children (male and female) analyzed. concerning gender, education level, healthy diet habit, and hours of sleep with measuring of the Sedentary Lifestyle shown the increase in BMI with every percentile, results the association of Sedentary Lifestyle with the prevalence of BMI percentile of 90th, 75th, and 50th of the 9 to 15 years of Children age [13].

The most Sedentary group that has been found in the United States by (Matthews) was the Adult group aged between (16-19 years) and the older adults group aged ≥ 60 year, also, he observed that the American adults of America had less Sedentary Lifestyle than other adults of America, also determined that females before age of 30 were more Sedentary behavior than males but after the age of 30 the pattern reversed [12].

The Sedentary Lifestyle of Children and adults based on digital games, watching Television and using a

computer, which are all patterns related to obesity, but not all Sedentary behavior has observed the same effect and correlates with obesity. A published review of researches that found in PubMed within other medical journals arranged the age of Children and adults that were an object of research between 2-18 years, the watching television has shown the higher risk of Sedentary Lifestyles than digital games and computer, also 28 studies and 14 of them have shown that the Children under ten years have a positive significant effect between Sedentary Lifestyles and obesity/overweight condition [16].

The main public health conditions in developed countries are increasing childhood overweight and obesity health issues, Obesity often influences in adulthood ages and increasing the risk of cardiovascular and type2 diabetes diseases including other chronic diseases in other life stages of Children, the researchers have shown that most of the Children and adults not follow the recommended guidelines of balanced diet intake and restricting the Sedentary behavior activities [10].

Sedentary Lifestyle influence in older Adults and Children

Older adults is the most inactive behaving group of individuals in the community, because of the poor health outcomes of older adults they spend much more time in Sedentary activates which is about 8-9 hours per day, specific recommendations have been provided by the national and international guidelines in order to decrease the Sedentary behavior and Lifestyle of older adults, that's why interventions are required to lower Sedentary behavior in older adults, in accordance to the behavior theories of health such as the theory of dual-process and model of sociological, the choices of behavior and people are detected by the social and physical activities [9].

The researchers have been observed that the Children groups that spent more than 3 hours per day by sitting and watching television within examination survey of national health and nutrition that has been reported the mean of Sedentary time which is 8 hours per day in Children group ages of 2 to 18 years [22]. black Children also have been determined that they have a higher Sedentary Lifestyle. The levels of Sedentary Lifestyles of the low socioeconomic status and Children with limitation rules of spent time on screen time have a lower Sedentary behavior. Moreover, the studies have been determined the Sedentary behavior levels and pointing the factors that are related to the Sedentary Behavior in Children and adolescents, by understanding this behavior then the development of Sedentary time can be limited or reduced that can affect the intervention [15].

Unhealthy diet and Sedentary behavior effect on Health

Unhealthy nutrition status and physical inactivity are the main risk factors for developing and cause of chronic diseases, as diabetes and cardiovascular. These types of chronic diseases often initiate in adults and appear during adulthood ages, the main reasons are unhealthy dietary habits and physical inactivity. The studies have been informed that the mains issues and factors are the unhealthy food choices and Sedentary activates, and prevention and treatment of these risk factors can be decreased by access to the nutritious foods such as fruits, animal proteins, and vegetables. Unfortunately, the individuals prefer and have more tendency to consume unhealthy and unbalanced diets including high sugar, fat, protein content [17].

Adults with human immunodeficiency virus “HIV” diseases cannot indicate any of the mentioned factors related to the diet and physical activities, but health conditions of asthma, medication, Low body weight are a risk point for a Sedentary Lifestyle which are body physiological image, behaviors and unhealthy habits, presence of unhealthy foods and high-cost price for beneficial nutritious foods [17].

In the united states the chronic diseases such as obesity and type two diabetes have achieved an epidemic proportion rate[39-41]. The studies determined that the increase in physical activities have an essential role in reducing the risk factor of obesity and diabetes in the community, they have demonstrated that the prolonged watching television period more than 40 hours per week in a comparison with an individual with watching 1 hour per week have more risk for chronic diseases and obesity. the studies explained the association between an unhealthy diet and watching television or any other Sedentary behavior activities on health status and its effect in increasing the obesity and diabetes and to achieve a healthy status the individuals should decrease the prolonged Sedentary behaviors within increasing the physical activities and adequate dietary intake [5].

Worldwide Guidelines for the Adult to avoid Sedentary Behavior

The new guidelines for the adults have been studied and published by (Dempsey) because of the increasing of the Sedentary Lifestyle behavior among adults due to the long period of working hours, sitting, using the computer, and most Sedentary activities of the Adults which became a factor of increasing of many chronic diseases and rise of obesity[42-44]. To avoid this Century’s public health, the new guidelines have been published [4].

They guide Adults to dedicate time for physical activities for example doing exercise minimum about 3 hours per week walking or any other types of Physical Activity and exercises especially for adults with long working hours with balancing Diet and avoid fast food portions in their diet to balance the energy input and energy expenditure [4].

Implication of COVID-19 in bringing Sedentary Lifestyle

The effect of coronavirus diseases that known as the public pandemic diseases or COVID19 on the Sedentary Lifestyle of young adults has been determined in the study of (Zheng et al., 2020), in an offline study and about 600 young adults aged between “18 to 35” participated in the survey. The study results in an increase of the Sedentary Lifestyle among young adults due to the quarantine and social distance isolations that increases the Sedentary behavior such as long duration of sleeping and other Sedentary activities have been determined. In addition, determination of the significant decrease in the number of Physical Activities due to the closing of gyms and limitation of the activities [37-38].

CONCLUSIONS

The Nutritional status is related to the health status of individuals and during Sedentary activities and Sedentary Lifestyles and bad Dietary habits, it causes a bad health status because of the high energy intake and low energy expenditure which is a danger factor of the cause of Chronic Diseases among worldwide individuals such as obesity and change of BMI, Diabetes, Cardiovascular diseases, and other Mental health issues as well as psychological conditions such as depression, anxiety.

Nowadays, Sedentary Lifestyle became a public Lifestyle of individuals worldwide and especially in the developed countries due to the high inactive behavior and lower physical activities among the Children, youth, adults, as well as older adults because of the long period of working hours, using digital games, Watching Television, using of the Computers, Social media, and other Sedentary activities.

Furthermore, the Sedentary Lifestyle is a risk factor for developing Autism disorder syndrome in Children. parents should take care of the long Sedentary activities such as watching television or playing digital games because Children need physical activity and a Sedentary Lifestyle prevents brain development. In Addition, the individuals should balance the nutritional status and Sedentary behavior for a healthy life and prevention of the diseases.

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