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Research Article

### AWARENESS OF PARENTS REGARDING HEALTHY LIFE AND DIET FOR CHILDREN AGED 15 YEARS OR LESS IN THE KINGDOM OF SAUDI ARABIA

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**Abstract:**

**Background:** Children and adolescents healthy life and healthy diet is parents' responsibilities. Parents should provide healthy options for their children for healthy life. There is paucity of studies on the role of parents in their children healthy life. This research emerged to investigate parents' awareness regarding healthy life and diet for children aged 15 years or less in the Kingdom of Saudi Arabia.

**Methods:** A descriptive, correlational cross-sectional design was employed for this study. Since this study aimed to assess parents' awareness about healthy life and diet for children at a single point of measurement, this is the most appropriate design. Population were parents of children aged 15 years or less in KSA. Study instrument consisted of two domains. First is sociodemographic characteristics of participants. Second is awareness assessment.

**Results:** Study included 450 parents' interviews. The interview was with father among 79 participants (17.6%) while it was with the mother among 276 (61.3%) participants. Both parents were present in 95 interviews (21.1%). The mean father age was 35.96 + 5.78 years and ranged from 23 to 47 years. On the other hand, the mean mother age was 30.43 + 4.95 and ranged from 23 to 39 years. The most frequent level of education among fathers was school (n= 205, 45.6%) while among mothers was university level (n= 209, 46.4%). Participants had high knowledge regarding the frequency of dairy, fruit, vegetables and cereals and grains food groups and they lack knowledge regarding meat, fish, egg and nuts. Furthermore, most participants had good attitudes toward food groups that should be eaten more and food groups that should be eaten less. There were 11.1% of participants showed high attitude (n= 50). Knowledge and attitude were statistically significant with higher educational level (P= 0.034), rural residency (P<0.001) and high family income (P= 0.003).

**Conclusion:** Many public health initiatives aim to change how parents think about a certain issue. In this sample, families understood the importance of a balanced diet to their health. Training and professional developing of parents to take a more proactive approach to addressing juvenile obesity would be a wise use of KSA's ample resources.

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**INTRODUCTION:**

Sedentary behavior has been associated to an increased risk of several chronic diseases and a decreased lifespan [1]. In recent decades, there has been a rise in the prevalence of childhood obesity [2]. Children who are overweight are more likely to grow up to be overweight adults, and obesity is notoriously difficult to cure. Because of these trends, WHO member countries have committed to halting the rise of childhood obesity by 2025. Farooq et al. [3] showed that the advantages of moderate-intensity physical activity for the prevention and treatment of childhood obesity decline over time. Thus, moderate-intensity physical activity should be promoted throughout infancy [4].

From birth until early adolescence, childhood consists of three stages (9–11 years old). Mental, emotional, behavioral, and social development are all reflected in these stages [5]. The World Health Organization's [6] guidelines for children under five years of age regarding physical activity, sedentary behavior, and sleep acknowledge that this age group is in the midst of rapid physical and cognitive development that is characterized by the establishment of lifelong patterns of behavior. For kids and teens between the ages of 5 and 17, the Saudi Ministry of Health produced a guideline as part of their Agility Program to clarify the basic requirements for an active lifestyle [7-10]. These guidelines emphasize the need of getting enough rest, eating well, exercising regularly, and engaging in physically active pursuits.

Since the prevalence of NCDs has skyrocketed in the 21st century, efforts have been undertaken to offer dietary guidelines, encourage health counseling, and increase consumers' personal responsibility [11]. Health officials and government officials have pointed to a number of socioeconomic variables that have contributed to the current obesity pandemic [12]. These reasons include new regulations and the ways in which the food and beverage industry processes its products. Because of their association with cancer, cardiovascular disease, and overall mortality, sodium,

added sugars, saturated fatty acids (SSF), and trans fatty acids (TFA) are the primary nutrients targeted by such policies and therapies [13,14,15,16]. Efforts have been made to reduce their presence in the food supply by increasing public awareness of the risks they represent and simplifying consumer identification of them [12].

The United Kingdom (UK) was the first to implement a salt-reduction program using a multi-component method [17]. This strategy included public education campaigns and regulatory measures impacting the food business and restaurants to bring about sustainable, doable reductions in salt levels. Contrary to the worldwide trend toward increased sodium consumption, the United Kingdom was able to cut its salt intake by 15% over a period of 7 years [17].

The Kingdom of Saudi Arabia (KSA) is located in the Eastern Mediterranean Region (EMR), which has had some of the fastest economic development in the world. Since the start of the 21st century, when disposable incomes climbed significantly, there has been a correlation between a fast dietary shift and an increase in consumption of SSF and the rise in the incidence of obesity, food allergies, and NCD [18,19,20,21]. The Kingdom of Saudi Arabia (KSA) has one of the highest rates of obesity and diabetes in the Middle East and the world, according to new data from the World Health Organization and the Global Burden of Disease (GBD). Over 65% of the population in KSA has a high body mass index (BMI), and this is the leading predictor of YLD [22-27].

Over 900,000 people every year lose their lives due to illnesses that cannot be spread by the air. The prevalence of childhood obesity has also increased, reaching over 31% [28-33]. Annually, NCDs are estimated to cost the country 19 billion USD in direct expenditures and another 13 billion USD in indirect expenses owing to lost productivity [34]. Given the alarming rates of obesity and chronic illness in the country, the Saudi Food and Drug Authority (SFDA) developed the Healthy Food Strategy (HFS) as part of

Saudi Vision 2030 [35]. The HFS, which started its launch in September of 2018, includes many dietary adjustments and public awareness efforts. This research was conducted in the Kingdom of Saudi Arabia with the aim of illuminating the level of parental knowledge on healthy lifestyle and diet for children under the age of 15 (KSA).

## **METHODS:**

### **Study design and settings**

A descriptive, correlational cross-sectional design was employed for this study. Since this study aimed to assess parents' awareness about healthy life and diet for children at a single point of measurement, this is the most appropriate design. This enables the researcher to measure the effect and the outcome at a single point of time. This study design gives reliable results with short time and less effort. The study will be conducted in KSA. Participants will be selected during the period from January to March 2023.

### **Population**

Parents of children aged 15 years or less in KSA.

### **Sampling and sample size**

Study participants were selected by non-probability convenient sampling technique. Sample size was determined according to the total number of study population with a confidence level of 95% and marginal error of 5% using Epi-Info software. Sample size is 450 participants

### **Data collection**

Data was collected using a questionnaire filled through a self-administered approach.  
Instruments

Study instrument consisted of two domains. First is sociodemographic characteristics of participants. Second is awareness assessment.

### **Statistical analysis**

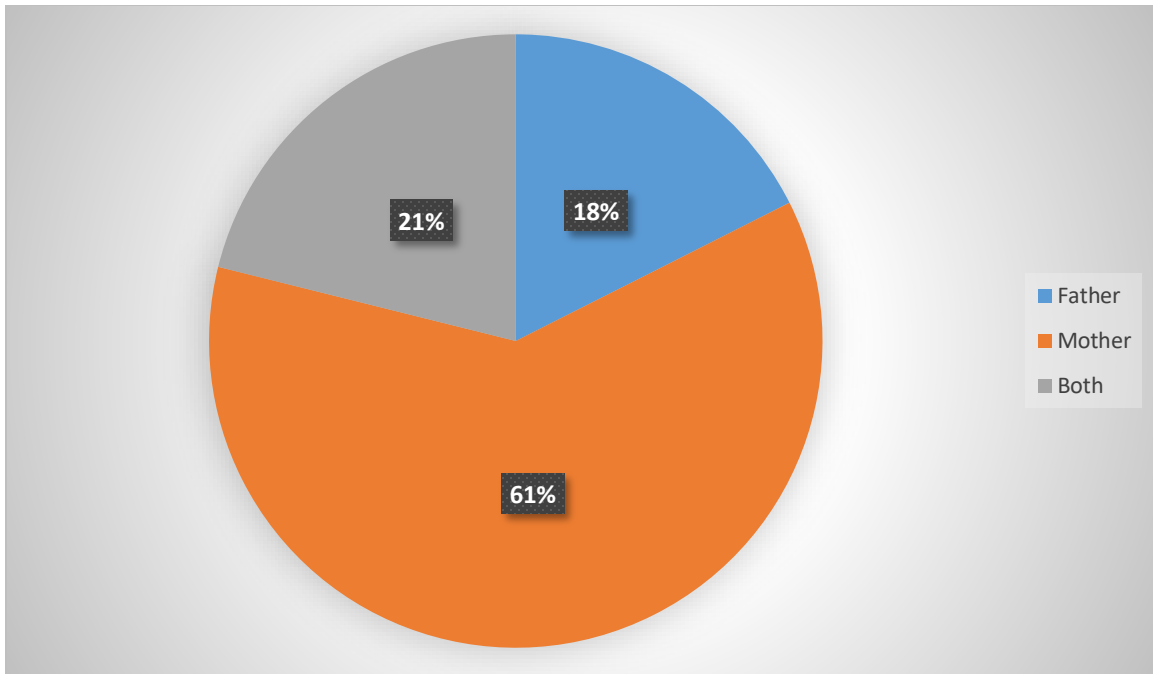
Data obtained from questionnaire were entered and analyzed using SPSS program version 23 computer software. Sociodemographic data are presented using descriptive statistics as means, median, percentages and standard deviation. Independent T test and one-way Anova are used to show statistical significance among participants characteristics. Chi square test is used to show relationship between categorical variables.

Ethical consideration

An approved permission was gained from (institution) to collect quantitative data from parents. After explanation of study objectives, participants were asked to volunteer to participate at our study. In addition, verbal informed consent was gained from participants before asking questions.

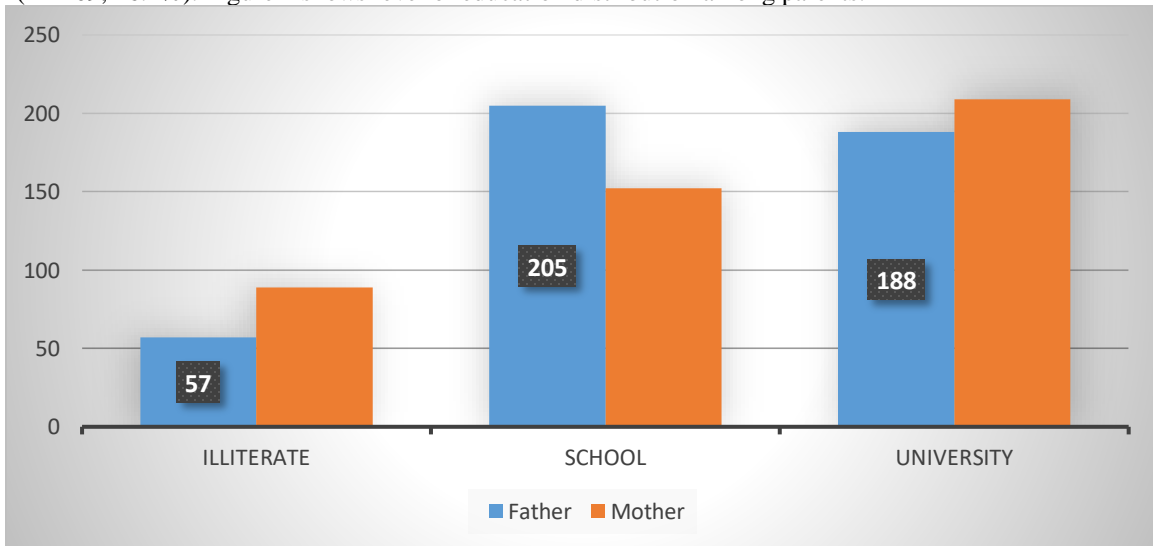
## **RESULTS:**

Study included 450 parents' interviews. The interview was with father among 79 participants (17.6%) while it was with the mother among 276 (61.3%) participants. Both parents were present in 95 interviews (21.1%) (Figure 1). The mean father age was 35.96 + 5.78 years and ranged from 23 to 47 years. On the other hand, the mean mother age was 30.43 + 4.95 and ranged from 23 to 39 years. There were 180 consanguineous parents among study participants (40%) and two thirds of participants lived in urban area (n= 298, 66.2%).



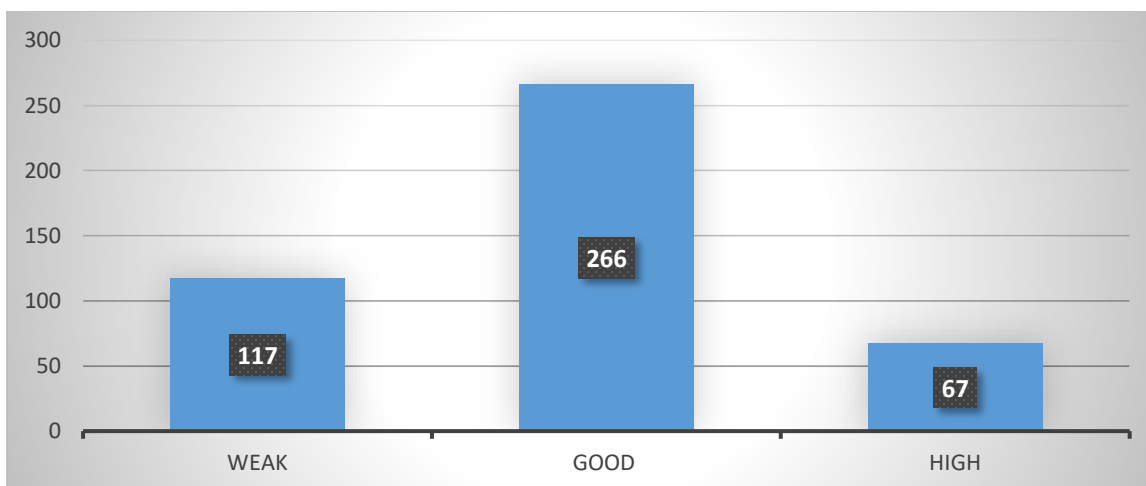
**Figure 1: Parent present at time of data collection**

The most frequent level of education among fathers was school (n= 205, 45.6%) while among mothers was university level (n= 209, 46.4%). Figure 2 shows level of education distribution among parents.



**Figure 2: Parents' level of education**

Most of participants reported having good monthly income (n= 266, 59.1%). Family income is presented in figure 3. The number of sons and daughters ranged from 1 to 9 while who was less than 15 years of age ranged from 1 to 7.



**Figure 3: Family monthly income**

Participants were asked about the frequency of certain food groups and how frequently should be given. Their answers are presented in table 1.

Food/frequency	Never or almost never	1-3 month	1 week	2-4 week	5-6 week	1 day	2-3 day	4-6 day	>6 day
Dairy	6.4%	12.9%	5.3%	4%	4.7%	3.3%	54.7%	3.3%	5.3%
Fruit	4%	3.8%	3.8%	4%	4%	4.7%	65.8%	6.7%	3.3%
Vegetables	4%	3.8%	3.8%	4%	4%	4.7%	65.8%	6.7%	3.3%
Cereals and grains	7.8%	8%	4.7%	6%	2.7%	8.7%	6%	50.2%	6%
Meat	27.6%	18.7%	24%	29.8%	-	-	-	-	-
Fish	28.4%	17.6%	24.2%	29.8%	-	-	-	-	-
Eggs	29.6%	10.9%	15.1%	34.7%	5.3%	4.4%	-	-	-
Pulses	23.1%	18%	14.9%	28.7%	4.7%	5.3%	5.3%	-	-
Nuts	22.2%	14.2%	9.8%	38%	3.6%	2.7%	1.8%	4.4%	3.3%
Olive oil	3.3%	6.2%	5.8%	7.8%	5.8%	10.9%	17.3%	32.4%	10.4%

Highlighted cells mean correct frequency

It is notice from the table that participants had high knowledge regarding the frequency of dairy, fruit, vegetables and cereals and grains food groups and they lack knowledge regarding meat, fish, egg and nuts.

Participants were also asked about healthy food attitudes and which food groups should be eaten more and which should be eaten less. Their responses are illustrated in table 2.

I try my child to eat more	Yes	No
Fruit	100%	-
Fiber	68.2%	31.8%
Vegetables	100%	-
Fish	79.3%	20.7%
I try my child to eat less	Yes	No
Butter	44%	56%
Fat	79.3%	20.7%
Meat	62.4%	37.6%
sweet	93.8%	6.2%

It is noticed from table two that most participants had good attitudes toward food groups that should be eaten more and food groups that should be eaten less. There were 11.1% of participants showed high attitude (n= 50).

Knowledge and attitude were statistically significant with higher educational level (P= 0.034), rural residency (P<0.001) and high family income (P= 0.003).

**DISCUSSION:**

The pandemic of childhood obesity is a serious public health problem [36-37] due to its link with a variety of chronic and often deadly physical and mental health concerns. According to the Child Growth Standards of the World Health Organization, obese children have a weight-to-height ratio more than three standard deviations over the median between the ages of five and nineteen. More than 41 million children under the age of 5 and more than 340 million children and adolescents globally between the ages of 5 and 19 are overweight or obese [38]. Located in the Arabian Gulf, the State of Qatar consists mostly of urban and semi-urban regions, with just a minor rural population [39]. Researchers find an increase in pediatric obesity in Qatar [40]. According to World Health Organization criteria, 16% of Qatari children had an abnormally high BMI in 2006. A recent study conducted by the Ministry of Public Health in Qatar indicated that the incidence of children obesity in schools might be as high as 33 percent [40-42]. Children's obesity is impacted by several factors. Due to the country's precipitous climb to riches, many Qataris have adopted unhealthy habits, such as eating fast food [43]. Fast food, soft drinks, sugary snacks, and sugary beverages are highly advertised to children and are affordable for the majority of children to purchase. More than half of Qatari adolescents consume fast food at least twice per week [43-45], and almost all of them snack on unhealthy foods between meals [46]. The issue of overweight and obese children is aggravated by sedentary lifestyles, a lack of physical activity, contemporary comforts, and expanding urbanization [44].

There are consequences associated with the disturbingly high incidence of childhood obesity. Obesity may result in insulin resistance, type 2 diabetes mellitus (DM), cardiovascular disease, hypertension, obstructive sleep apnea, nonalcoholic steatohepatitis, musculoskeletal problems, and some cancers [47-54]. Children who are overweight are more susceptible to bullying and teasing, and as a consequence, they are more prone to suffer depression, social isolation, and low self-esteem [55-57]. Obese individuals spend an average of \$1,429 more year on medical costs than those with a normal body mass index, which adds up to a substantial amount [58]. This is only one illustration of the immense financial burden obesity causes on society [59]. Obesity affects the world GDP by around 3%, or \$2 trillion [60]. There is a relationship between permissive parenting and obesity.

Many young children and babies cry for reasons unrelated to hunger, but [26] parents may use food to calm or control behavior [61-63], and parents may provide food to a screaming infant. Through associative learning and the use of healthy meals as rewards, it is possible to affect children's food choices [64].

Both children's media exposure and their educational environments (such as kindergarten or childcare) may influence their food choices [65]. Parents primarily control the setting in which food is acquired, prepared, consumed, praised, rejected, or denied [66, 67]. A parent's feeding practices, or the "unique behavioral methods parents employ to govern what, how much, or when children eat" [68], are one of the most influential factors on their children's eating habits and patterns throughout time [68-70].

There is a relationship between how parents feed their children and whether their children establish healthy eating habits [71]. Parental feeding techniques associated with the development of healthy eating [72] include repeated exposure to nutritious and novel meals, vocal praise for healthy food selections, positive role modeling, and monitoring of highly appealing, low-nutrient items. Restricting a child's nutritional intake or snack food consumption [73], exerting pressure to eat [74], and using food as a reward or pacifier [73] are examples of non-nutritive instrumental practices associated with obesity, eating disorders, and bad eating habits. Though parents may use the latter strategies with the purpose of encouraging healthy eating or preventing weight gain, they may have unintended impacts on their children's food preferences, behavioral inhibition, and self-regulation. The ability of parents to support healthy eating and weight maintenance in their children may thus be enhanced by interventions that target particular feeding behaviors [75].

According to studies evaluating parental knowledge with and adherence to national dietary guidelines [76-80], parents have a solid understanding of what they should be feeding their children, but a far more restricted understanding of how to persuade their children to eat healthily. According to an assessment of programs designed to prevent childhood obesity, the most effective programs place a greater emphasis on the child's health than on their weight, and they include the parents as essential agents of change [81]. However, the bulk of current interventions adopt a weight-centered strategy, with a primary focus on

reducing child BMI (i.e. weight) [80, 82], without addressing possible iatrogenic effects on child body image [74].

The development of body dissatisfaction should be as important to public health as poor eating habits and childhood obesity. There is a correlation between dissatisfaction with one's physical appearance and an increased likelihood of developing eating disorders [83, 85]. These disorders include fad dieting, binge eating, and the management of emotions via food. It has been documented that discontent with one's physical appearance moderates the association between body mass index and depression [86, 87] and between overweight/obesity in teenagers and hazardous behaviors linked with the development of chronic illnesses, such as smoking [88]. Due to the harm it may do to an individual's psychological fortitude and health-related behaviors, dissatisfaction with one's physical appearance has been declared a public health concern [89, 90].

Numerous studies [91, 92] have examined the impact of parental feeding methods and eating behaviors on the development of body dissatisfaction in children. Girls whose parents restrict snack foods, for example, are more likely to have low self-esteem [93] and erroneous assessments of their athletic ability [94]. Dieting moms have been connected to lower levels of body satisfaction in daughters [95]. Girls as young as 5 or 6 years old have shown a desire to lose weight and a knowledge of diets [96, 97], suggesting that early childhood is a crucial period for intervention.

According to a recent comprehensive review of parent treatments aimed to prevent body dissatisfaction or eating disorders, there are presently no accessible therapies or evaluations for parents of children less than six years old [82]. According to the research, academics place more emphasis on therapies performed inside schools, while the role of parents is often given less weight. Because earlier studies had difficulty enrolling parents for preventive programs and had limited sample sizes, further research is required to better understand what parents need and what motivates them.

To successfully include parents in programs intended to promote healthy eating and a positive body image in children, it is necessary to first determine what parents already know and what they want to gain from participation. This research seeks to investigate parents' awareness of healthy eating and body image as a first stage in the creation of an intervention to educate parents about feeding practices that promote

healthy eating and positive body image in preschoolers. A focus group structure was used to encourage conversations amongst parent groups.

### CONCLUSION:

It is notice from the study results that participants had high knowledge regarding the frequency of dairy, fruit, vegetables and cereals and grains food groups and they lack knowledge regarding meat, fish, egg and nuts. Furthermore, most participants had good attitudes toward food groups that should be eaten more and food groups that should be eaten less. Knowledge and attitude were statistically significant with higher educational level, rural residency and high family income.

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