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Perceptions of Kuwaiti Heads of Education and Health Departments Towards School Nurses in Tackling Obesity Among School Children

¹Dr. Mohammad Alresheedy, ²Dr. Lina Shahwan-AKL, ³Budoor Al Hajeri, ⁴Dr. Ali Alhaiti and ⁵Dr. Mishal Aldaihani

- ¹ Lecturer, Kuwait Nursing Institute, Public Authority for Applied Education and Training, Kuwait
² Director of Studies at Institute of Health and management, Kuwait
³ Trainer at public authority of apply training and education, Kuwait
⁴ Education consultant at King Fahad Medical City, Kuwait
⁵ Director of scholarship and Training in medical cities- Ministry of interior, Kuwait

Abstract

School nurses have been identified to be an important facilitator in helping students achieve a healthy weight. This exploratory qualitative study was conducted to examine the perceptions of officials from the Ministries of Education and Health towards school nurse in tackling obesity among children. The findings of this study show that most of the participants agreed that school nurses do not play a role in either promoting children's health or the prevention of disease. This is not in line with several studies that found that the activities of school nurses, such as delivering health education and taking body weight measurements.

Keywords: Obesity, Kuwait, school children, school nurse, perception

Introduction

Globally, the prevalence of overweight and obese children and adolescents has reached epidemic proportions (WHO, 2020) [50]. The data presented on the incidence of overweight and obesity in developed and developing countries indicate the seriousness of this issue. For instance, in developed countries, within the European region, a study conducted in 15 European countries (Spain, Italy, Belgium, Greece, Czech Republic, Hungary, Ireland, Latvia, Lithuania, Malta, Norway, Cyprus, Portugal, Slovenia and the Republic of Macedonia) presents alarming statistics showing that the rate of overweight ranged between 18% and 50% among girls and between 18% and 57% among boys (Wijnhoven *et al.*, 2014) [49].

In developing countries, the prevalence of obesity among children and adolescents was found to be 22.1 % in Brazil, 41.8 % in Mexico, 19.3% in Argentina and 22.0% in India (Gupta, Shah, Nayyar & Misra, 2013) [18]. A review in the Eastern Mediterranean Region (EMR) showed that between 7% and 45% of school children were overweight or obese (Musaiger, 2011) [31]. Several studies conducted in Kuwait show that overweight and obesity are indeed prevalent in this country, with estimates suggesting that one third of children and adolescents are overweight or obese (El-Bayoumy, Shady & Lotfy, 2009; Musaiger *et al.*, 2012; Ng *et al.*, 2011; Zaghoul, 2013) [15, 32, 53]. Research studies have shown that individuals who were overweight or obese in

childhood are more likely to have adverse health consequences during adulthood (Reilly & Kelly, 2011; WHO, 2020) [40, 50]. Several studies have also identified that obese children are more likely than healthy-weight children to become obese adults (Biro & Wien, 2010; Center for Disease Control, 2013) [7, 11].

Overweight and obesity are preventable conditions that have been identified as primary contributing factors in chronic disease (WHO, 2020) [50]. In fact, weight gain has been identified as contributing to more than 34% of mortality in people younger than 60 years of age in most Arab-speaking countries (Rahim *et al.*, 2014) [39]. Dattilo *et al.* (2012) [13] suggest that interventions must begin in the early years and focus on children who are at risk of obesity. This period of life is recognised as the best time to instil behaviours associated with a healthy lifestyle, such as food preferences and physical activity that may then extend into adulthood (Campbell *et al.*, 2014) [10]. Therefore, it can be anticipated that without early and effective interventions obesity will continue to be a public health concern in many countries.

A review of the current literature did not identify any Kuwaiti studies that examined the role of the school nurses in addressing child obesity. This is a significant gap in the literature that the current study attempts to address. A number of studies indicate that school nurses play a significant role in promoting a healthy weight for school children (Wright, Giger, Norris and Suro, 2013; National

Association of School Nurses, 2013) [51] Therefore, this study was conducted to examine the perceptions of officials from the Ministries of Education and Health towards school nurse in tackling obesity among children. Hence, this study aims to inform the development of new public health policies to respond to this serious health problem.

Method
Study Design

A qualitative method, one-to-one interviews were used to explore the role of school nurses towards obesity among school children in the state of Kuwait. with officials from the Ministries of Education and Health (six officials from the Health Department and six officials from the Education Department).

Interviews data collection

A total of 12 interviews were conducted with six government officials from the Health Department and six government officials from the Education Department in each province of the state of Kuwait. The reason for inviting officials from the departments in each province was to achieve representativeness of the two areas of responsibility across the six provinces.

Before the interviews were conducted, invitations were sent to representative officials in each province, which included a plain language letter explaining the study that provided the name and the contact details of the researcher and the supervisors. The voluntary nature of participation was explained in this letter and it was accompanied by a consent form that was signed prior to the involvement in the face-to-face interviews. Participants they were asked to indicate whether Kuwaiti schools employ school nurses and what was the attitude toward school nurses in terms of their role in contributing to contain obesity and excess weight in the schools.

Qualitative data analyses

All interviews were audiotaped and were in the Arabic language, because all the participants were Arabic speakers

from Kuwait and most did not speak English. The interviews were recorded using an MP3 device in addition to a mobile device in case there was a malfunction in the recording device, hence there was a backup. The data from the interviews was transcribed in Arabic to ensure that no data was missing and then all of this data was translated into English by a professional translation office in Kuwait. The qualitative data was analysed using content analysis. The researcher identified, coded and categorised the patterns that emerged from the data. The common statements were used to generate themes that represented the perceptions of the group. These statements were grouped, or clustered, into thematic categories. These thematic categories are presented as part of the findings along with the frequency of occurrence among the participants. In addition, textual data offered as verbatim examples from the participants discussions were included to highlight the key common responses and to clarify these concepts. Relevant data were coded by researcher throughout the document following an inductive process, which allowed for emergent categories. NVivo 10® qualitative analysis software was used during the process of coding and the development of themes. NVivo software provided an organised workspace to conduct the classification and sorting of data and the tracking of the frequency of occurrences across the data sources (Ritchie *et al.* 2013) [41].

Finally, a comprehensive review and interpretation of the data provided the conclusions of the analysis, which were revealed in the form of several overarching themes representing the perceptions of the individual interviews as a whole (Bazeley & Jackson, 2013) [6].

One-to-one interview results

The data obtained from the 12 individual interviews with government representatives from the ME and the MOH were analysed to reveal main thematic category, which were then further separated into sub-categories, the thematic category is presented individually and include main category: Presence and function of school nurses, which is described in Table 1 showing sub-category and highlighting the common themes in each.

Table 1: Categories, Sub-categories and Themes for Interview Data

Primary category	Sub-category	Themes
Presence and Function of School Nurses	(Q6) Presence of nurses in schools	Schools employ nurses through private company Nurses only in some schools-nursing shortage Yes, the schools have nurses
	Function/Role of school nurses	No role in obesity prevention, only first aid Need for more qualified nurses, need for training Focus on treatment, not prevention Trained to educate about and prevent obesity, but not used for prevention Important role in health education Language barriers Confront health problems and work for health awareness/early detection

Presence of school nurses

In discussing the presence of nurses in schools, the majority of participants (10 of 12) described a disparity between schools, where some schools had access to a school nurse, while others did not. This discrepancy was noted by five participants as being due to a shortage of available nurses to work in schools. The nurses that were employed by schools were described as being recruited through private company sources. Table 2 provides the full variety of responses and

associated frequencies.

Table 2: Availability of School Nurses

Response theme	Frequency among focus groups (n = 12)
Some, but not all, schools have a nurse	10
Some schools employ nurses through private company	6

Nurses only in some schools due to shortage of nurses	5
Schools have nurses	3

The participants generally agreed that nursing staff are not always available to all schools, which was attributed to a shortage in nurses. The following examples shed light on this problem:

Yes, the Ministry of Health used to provide nurses for the schools. We tried to cover all the schools; however, sometimes one nurse would have to cover three or four schools because of the shortage of nurses. Nowadays, school nurses are under the Ministry of Education and are employed through private companies. (A.2)

Yes. At first, these nurses were provided by the Ministry of Health; however, now they are provided by the Ministry of

Education, which tasks private companies with providing school nurses. The Ministry of Health is unable to provide these nurses because of the shortage in nursing staff. (C.2)

Role of nurses in schools

The perceived role of the school nurse-if present-is also critical. From the data, for schools in which a nurse was employed the role of the nurse was limited to first aid in most cases, and they played no role in prevention or education (9 of 12 participants). Despite the need for education and prevention and the presence of qualified nursing staff, the nurses were reportedly not used in this capacity. Table 3 illustrates the response variety and the frequency of occurrence in the interview data.

Table 3: Nursing Role in Schools

Response theme	Frequency among focus groups (n = 12)
No role in prevention; role is focused on treatment and first aid	9
Need for training and work program; need for more qualified nurses	3
Are trained and educated to handle role of reducing obesity, but not used in this capacity	2
Important role in health education, but not used in this capacity	2
Language barriers	2
Confront health problems and work for health awareness for students; role of early detection	2

Along with the problem of a shortage of nursing staff, the role of the nurses in schools was described by nine of the 12 participants as limited, primarily to first aid, and the school nurse was not utilised for prevention purposes:

Nurses are in the schools to provide first aid only. They have no role in addressing this problem. (F.1)

The school nurse does not have a role in this problem because the work of the nurse in Kuwaiti schools is only related to treatment and first aid. (J.1)

In Kuwait, there are roles that the school nurse is not asked to play, such as the prevention and curative role. Nurses have an important role in health education. (J.2)

However, three participants had concerns that the nurses were not qualified to fill the preventative role. For example, one participant stated:

I don't think that nurses in Kuwait have reached this stage because they are not qualified to play such a role. Currently, they only focus on treatment and not on prevention. We need courses and programs that will enable them to resolve this problem. (F.2)

Other participants felt the nurses were or could be qualified for the role and should receive training for this. This was demonstrated in the response by H.1, who stated: 'The school nurse's role is more about treatment than prevention, and this is wrong. I think that if nurses are trained well first, they could help through education and measuring weight and height.' If appropriately trained and given responsibility for prevention, school nurses could be a significant part of the solution to childhood obesity. This was expressed by participant C.1 as follows: 'If nurses were given more responsibilities, worked as a team in the schools and developed an intensive program for each school, then they could play a very important role in solving this problem.'

Discussion

A strong theme that emerged from the focus groups

demonstrated that school nurses were poorly utilised in Kuwaiti schools. All the participants reported that school nurses were limited to providing first aid rather than capitalising on the potential of nurses to serve an important role in health promotion and disease prevention. Similar findings from a qualitative study conducted in the US indicates that parents and teachers perceived that the role of the school nurse was to administer medications and provide first aid (Maughan & Adams, 2011). Similarly, studies on US parents (N = 369) indicated that the majority of parents (71%) perceived that the role of the school nurse was to provide emergency care, while 31% of parents perceived that nurses had a role to play in identifying health problems or performing health screenings (Kirchofer, Telljohann, Price, Dake, & Ritchie, 2007) [20]. Likewise, a study conducted in Greece revealed that 63.9% of teachers (N = 144) thought that the role of the school nurse was to provide first aid and 36% believed that the school nurse should provide treatment and health education (Mastrogiannis *et al.*, 2013) [26].

In contrast, several studies disagreed with the results of the current study (Bonde, Bentsen, & Hindhede, 2014; Wright, Giger, Norris, & Suro, 2013; Gonzaga *et al.*, 2014; Leibold, 2009; Mehrley & Leibold, 2011; Pbert *et al.*, 2013; Tucker & Lanningham-Foster, 2015; Wright, Giger, Norris, & Suro 2013) [8, 16, 51, 24, 28, 36, 48]. These studies indicate that school nurses can play a critical role in promoting children's health. Kubik and Lee (2013) [22] identified that school nurses are highly skilled members of staff who have been poorly utilised in the fight against obesity. The findings of a systematic review on the role and influence of nurses in US elementary schools highlighted many significant activities of school nurses that can be described as disease prevention or health promotion, including screening students' vision and BMI, educating students and school staff, and tracking student immunisations (Lineberry & Ickes, 2014) [25].

Pender, Murdaugh and Parsons (2011) [37] conclude that nurses can work with individuals, families and communities to create the optimal conditions for the expression of a high level of wellbeing.

Moreover, evidence provided in the literature indicates that school nurses can contribute to the improvement of adolescents' dietary habits (Pbert *et al.*, 2013) [36], increase children's physical activity (Leibold, 2009; Tucker & Lanningham-Foster, 2015; Wright *et al.*, 2013) [24, 48, 51], decrease sedentary activity (Wright *et al.*, 2013) [51] and help overweight children and adolescents adopt healthy habits (Gonzaga, Araujo, Cavalcante, Lima, & Galvao, 2014) [16]. O'Brien (2012) [16] identified that each point increase in school nurses' activities was associated with a 0.16% reduction in obesity in school students. Soto and White (2010) [43] point out that the first step toward obesity intervention starts with screening BMI and sending parents a notification. In fact, several studies' findings indicate that school nurses are screening children's body weight in their daily practice (Krause-Parello & Samms, 2009; Kubik, Story, & Davey, 2007; Lineberry & Ickes, 2014; Stalter, Chaudry, & Polivka, 2011) [21, 23, 25, 44].

Stoddard, Kubik and Skay (2008) [46] stated that school nurses are skilled staff and capable of measuring a child's BMI in a reliable and private manner. Likewise, Hendershot, Telljohann, Price, Dake and Mosca's (2008) study on school nurses (N = 2,629) found that 81% of nurses believed they should set a plan to address overweight in children, and up to 67% of the nurses believed they should measure BMI and send this information home.

Some participants in the current study suggest that school nurses can play an essential role in the prevention of disease, but this role would depend on the nurses' qualifications and responsibilities. It is true that the literature indicates that the school nurses perceived several barriers to addressing obesity, including a lack of knowledge, a lack of resources, time and support, as well as personal weight challenges (Steele *et al.*, 2011) [45]. In addition, a lack of privacy, high workloads and a lack of policy support were seen as key barriers to body weight assessment (Stalter, Chaudry, & Polivka, 2011) [44]. Moyers, Bugle and Jackson (2005) [30] found that school nurses perceived numerous barriers to taking a more active role in tackling childhood obesity, including a low level of competence and difficulty in providing counselling and a lack of parental support.

Quelly (2014) [38] summarised that school nurses need further education, policy support and professional mentoring to take part in childhood obesity intervention. Moreover, Melin and Lenner (2009) [29] found that trained school nurses with sufficient knowledge working in a collaborative team were more effective in tackling overweight and obesity in their schools. Another important barrier noted by two focus groups in the current study was a lack of communication. One participant commented that nurses do not speak Arabic, and that they faced difficulties in communicating with nurses. This is common in the Arabic world (Al-Khathami, Kojan, Aljumah, Alqahtani, & Alrwaili, 2010; Al-Jarallah, Moussa, Hakeem, & Al-Khanfar, 2009; Almutairi, McCarthy, & Gardner, 2014) [2, 3, 5], since the majority of nurses are foreign and they are not Arabic speakers. Indeed, barriers to communication are

considered a serious matter that needs to be addressed to provide a high quality of service and ensure client satisfaction.

Divi, Koss, Schmaltz and Loeb (2007) [14] mentioned that a language barrier can seriously harm patient safety-this harm ranging from moderate to death. Therefore, health providers are often obligated to provide an interpreter service (Green *et al.*, 2005; Suliman & Tadros, 2011) [17, 47]. For instance, Suliman, and Tadros (2011) [47] stated that nursing administrations in Saudi Arabia have addressed the language barrier by appointing bilingual staff as interpreters to facilitate effective communication between patients and nurses.

Finally, it was noted in the present study that there are shortages of school nurses. Not surprisingly, this is a global issue and has been reported in many countries, for example, in China (Yun, Jie, & Anli 2010) [52], in India (Saeed, 2010), in Iran (Zarea, Negarandeh, Dehghan-Nayeri, & Rezaei-Adaryani, 2009) [54] and in Saudi (Almalki, FitzGerald, & Clark, 2011) [4]. Chan, Tam, Lung, Wong and Chau (2013) [12] attribute the shortage of nurses to individual factors, including job satisfaction, demographic factors, burnout and organisational factors such as work commitment, environment, social support, culture and work demands.

Al-Kandari and Lew (2005) [1] attribute the shortage of nurses in Kuwait to the high turnover rate among foreign nurses, low production of indigenous nurses and the expansion of health care services. In contrast, Almalki, FitzGerald and Clark (2011) [4] point out that the mass media in Saudi Arabia should engage in promoting nursing as a career, and the education sector should support students financially and reduce the length of nursing training to 3 years, rather than 5 years, to encourage Saudi youth to study nursing as a specialty. Similarly, Chan, Tam, Lung, Wong and Chau (2013) [12] suggest that enhancing the work environment and increasing nurses' external rewards is needed to address the nursing shortage.

In conclusion, the findings of the current study indicate that the role of school nurses in Kuwait is under-recognised and, not surprisingly, the majority of school nurses in Kuwait are employed from private companies who look for profit rather than the quality of work. The findings of this study show that most of the participants agreed that school nurses do not play a role in either promoting children's health or the prevention of disease. However, this is not in line with the evidence provided in the literature. It seems that the shortage of nurses, language barriers and qualifications result in the underestimation of the role of school nurses.

Recommendation

The literature review provided evidence to indicate that school nurses can play an important role in designing and implementing intervention strategies to prevent obesity and promote healthy lifestyles to students (Gonzaga, Araujo, Cavalcante, Lima, & Galvao, 2014; Kubik, Story, & Davey, 2007; O'Brien, 2012) [16, 23, 35]. Therefore, it was felt that it was important to produce particular recommendations for school nurses to help nurses take part in the obesity prevention program. It is recommended that the MOH and Ministry of Education should cooperate with nurses to address all the barriers currently facing school nurses, such

as a lack of knowledge, a lack of time, a lack of resources and a lack of support. For instance, the ME has the responsibility for the education of nurses in Kuwait, so they should rethink this and provide a comprehensive education program to help nurses be more effective in terms of health education. Also, they should ensure that school clinics are adequately equipped and resourced with the necessary materials to help nurses engage in child obesity prevention programs.

Another recommendation is for the ME to recruit school nurses according to their experience and qualifications. This recommendation will ensure that nurses are able to effectively perform their duties in relation to obesity prevention in school children. In addition, the MOH has a role to play in helping nurses improve their skills and knowledge by providing intensive programs that will restore nurses' confidence in being involved in primary, secondary and tertiary intervention. The MOH also needs intervention for follow-up.

Conflict of interest

The authors declare that they have no conflict of interest.

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