ABSTRACT

Background: Pakistanis living in their host countries are more frequently overweight than in their home country. Overweight Pakistanis develop metabolic syndrome more easily than more easily than the native inhabitants, and type 2 diabetes are frequent. Objective: To describe food traditions of second-generation Pakistani mothers to attain knowledge about possible factors promoting overweight. Method: Qualitative interviews with mothers recruited by snowballing method in a Pakistani community. The individual interviews were audiorecorded and transcribed. Using text condensation and content analysis, we searched for main themes contributing to the development of overweight. Results: Nine mothers were enrolled. We identified three main themes: composition of food, organization of meals and the significance of meals for mothers and grandparents. Traditional meals contained much oil and butter and the children were less enthusiastic about this. The meals were served buffet-style throughout the day with few communal meals. Frequent “get-together parties” with plenty of food and sweets united the families. Remnant food and sweets were consumed during the week. Mothers were eager to please family members and therefore did not regulate what or how much was eaten. Grandparents were not opposed when they spoiled their grandchildren with food. Conclusion: The main factor promoting overweight in Pakistani families living in Norway seemed to be the abundance of food and sweets. Meals were served without restrictions, serving portions instead of having buffets, and limiting the assortments of sweets may be a first step to guard against overweight. The younger Pakistani generation may contribute by limiting the consumption of food with high caloric density.

INTRODUCTION

Traditionally, Pakistani women belong to a society where people are valued on a collectivistic basis [1]. In Pakistani homes, the mothers prepare the food for the family, and the family members’ gratitude for the meals reflects her status as a good mother. When moving to another country, the meals are also a tool to unite family members, the extended family and friends in a foreign country.

Pakistanis took part in the first wave of immigration to Norway in the early 1970’s, and more than half of the Pakistanis have arrived more than twenty years ago. The majority lives in Oslo in multi-family households [2].

In Norway, as well as in many other Western countries, overweight is increasing, especially among immigrants [3]. Across different European countries, adolescents with foreign ethnic background are more overweight and obese than native adolescents [4]. Overweight and high cholesterol levels occur more often among Pakistani women living in Norway than among Pakistani women living in Kharian (Pakistan), where many of the immigrant families came from [5]. Metabolic syndrome occurs to a higher extent among obese immigrants from the Middle East and South Asia compared with obese Norwegians [6]. Thus, increase in weight might endanger the health of immigrated Pakistani families more than it endangers the health of families born and raised in the host nation.

The general increase in overweight and type 2 diabetes in Pakistanis after immigrating, indicates that something may have changed for the worse when moving to a Western country. Primary health care workers including general practitioners (GPs) and public health nurses at well-child clinics and schools are concerned about how to counteract overweight among children and adolescents. Identifying overweight by measuring weight and height is straightforward, but responding to the problem, especially in the immigrant population, is not that easy. By talking with Pakistani mothers in Norway about their food and meal routines, we aim to understand better which changes in food traditions are necessary to prevent overweight.

Method

Qualitative research was conducted by using semi-structured interviews. A semi-structured interview guide was developed to gather information about food routines in the family (Table 1). The guide contained follow-up questions that allowed the interviewer to explore the material in greater depth. Throughout the interviews, we obtained additional and previously unexpected information.

| Table 1 Interview guide used to communicate about food and meal routines with Pakistani mothers living in Norway (probing questions in subsections). |
| --- |
| Please tell me something about yourself, your family and your daily life (age of mother and father, age and gender of children, years lived in Norway) |
| Describe the meals during a day |
| Frequency of eating – breakfast, lunch, dinner or snacks? |
| What do you eat for dinner (contrast Norwegian and Pakistani food, as you know it)? |
| What do you eat during other meals? |
| Who decides what to prepare for the meal? |
| Who prepares the meal (can you find the necessary ingredients)? |
| What significance do meals have for the family? |
| Do you dine together? Do you eat other meals together or separately? |
| How do you set the table? Do you prepare a buffet or do you portion out the meal? |
| Do you serve the same food to all members or special food for each member? |
| Is the Pakistani food prepared in Norway different from the food prepared in Pakistan? |
| Different ingredients, different procedures? |
| How is your and your family members’ health condition? |
| Cardiac problems, diabetes, overweight? |
| Comments from the children or adolescents in the family on food or meal routines. |
| Are the youths satisfied with the food offered? Do they wish something else? |
| Do the youths interfere with what is prepared for dinner? |
| What do you think about Pakistani food culture and its contribution to overweight? |
| Is there something I ought to know about overweight and Pakistani food culture that we have not discussed? |
| How did you feel during this interview? |

Data Collection

The first author, who conducted the interviews, is a female medical student of Pakistani origin who speaks Norwegian and Urdu. The interviewees knew her background.
The first author approached families known to her as members of the Pakistani community and asked for permission to talk with the mother in the household about daily food routines. Pakistani mothers have the main responsibility for cooking. These mothers recommended other families that could be included (snowball recruitment method). The inclusion criterion was mothers in immigrant families from Pakistan.

The interviews took place in the families’ homes. The interviewer audiotaped the interviews, which lasted about one hour. Because the interviewees were mainly immigrants whose parents were born in Pakistan, they preferred to speak Urdu.

**Analysis**

The first author transcribed the audiotaped interviews and summarized the responses to each question in Norwegian. Granheim and Lundman’s [7] method for content analysis was used. We considered this method to be appropriate as the purpose of this study was to understand and describe the informants’ perspectives. All the authors read the transcribed text several times to obtain a sense of the whole. Meaningful units were extracted from the text material and we made condensations and developed a common understanding of the material in several meetings. We assembled codes with similar content into subcategories and categories and agreed upon main themes. All authors decided on the inclusion of quotations from informants that would reflect these themes. We read the transcript again to ensure that no codes had been ignored.

**Ethical Considerations**

The participants received both written and oral information about the study before consenting to participate. They knew that they could withdraw from the study without any reason, and that all personal data were de-identified. The Regional Committees for Medical and Health Research Ethics (ref 2014/130) concluded that the project did not violate the Health Research Law, and the Norwegian Social Science Data Services (371712/MSS) approved the study.

**Results**

Nine mothers participated in this study. The women were aged 28-58 years and had 1-4 children. The first author approached 12 mothers, but three declined participation. By the time the nine informants had been interviewed, we were no longer gaining any new information; therefore, no further informants were recruited. Because the aim of the study was to elucidate factors that increase overweight in Pakistani families, mothers provided subjective assessments about their overweight and the overweight of other family members (Table 2).

The analysis identified three main themes in the food culture of Pakistani families living in Norway that could predispose them to overweight: 1) the composition of food, 2) the organization of meals during the day and 3) the significance of meals for mother and grandparents. Below we describe these three themes in detail with quotations from the interviews to illustrate the findings.

**Table 2 Characteristics of the nine participating Pakistani mothers and their families.**

| Age (years) | Marital status | Country of origin | Number of children | Economic life in the family | Overweight in the family |
|------------|----------------|--------------------|--------------------|-----------------------------|--------------------------|
| 37         | Married        | Pakistan           | 2                  | Part-time work              | Husband                  |
| 28         | Married        | Norway             | 3                  | Unemployed                  | None                     |
| 56         | Married        | Pakistan           | 4                  | Disability insurance       | Wife                     |
| 49         | Married        | Pakistan           | 3                  | Part-time work              | Husband and wife         |

**Composition of food**

None of the families had difficulty in obtaining the ingredients necessary to prepare traditional Pakistani food in Norway. To some, the preparation of food seemed even easier in Norway than in their home country. Very little traditional Pakistani food is prepared without oil or butter. The mothers knew it might not be healthy and the children and adolescents often asked them to limit the use of oil or butter.

**Informant I:** Pakistani foods do not get the proper look and taste as they deserve without sufficient use of oil. And their visual presentation is half their taste.

However, the recipes require the use of oil when preparing traditional food.

**Informant D:** Unfortunately, oil features frequently in Pakistani food, so we evidently use much of it in our household. My children don’t like this very much. The one who is studying medicine is increasingly concerned about the family’s diet. He has sometimes refused to eat dinner, when he discovers that it contains much oil. I thus try to accommodate his wish for reducing oil, but it is difficult, since the look and taste of our traditional foods depend on the amount of oil.

It is common to have chilled soft drinks readily available in the household. At the weekends or “get-together parties”, the family offers soft drinks to the participants of the meal.

**Informant C:** Soft drinks are served with each meal, sadly almost every day.

**Informant E:** Almost every weekend, there is a “get-together party” somewhere, and then we have soft drinks with the food.

Frequently, the family members also consume tea with plentiful sugar and milk. They enjoy sweet cakes or desserts almost on a daily basis.

**Informant D:** After dinner, my husband and I enjoy tea with some sweets, no matter whether it is a weekday or holiday. I seldom make desserts at home, but we buy cakes and biscuits that we enjoy with the tea in the evening.

**Organization of meals during the day**

In Pakistani homes, family members eat their meals buffet-style in contrast to having them portioned and dished out. In this way, family members may consume food until they are satiated. Often, surplus amounts of food are prepared to safeguard against anyone leaving the table hungry.

**Informant E:** When it is dinner time, the table is set, and the food is served buffet-style. As a rule, I make more food than we eat, since if everything is consumed, I do not know whether I made enough or not. I like to ensure that everybody is satiated. Because the informants often do not serve dinner at specific times, communal meals are unusual during the weekdays. Dinner is prepared early and is available throughout the day.
Informant A: My son on the other hand is not happy with traditional Pakistani food. Thus, I end up making different types of dishes for dinner. It is important for me, as a mother, to be able to serve my family food that I appreciate and that they do everything to satisfy the different wishes of family members. This may result in preparing several different courses. Although the mothers have the main responsibility for preparing the food, they are not completely in charge of deciding the menu. The mother prides herself in serving meals that are appreciated by the family and that tie family members together. The food she offers is a tool to help keep the members of the family at home and as part of a Pakistani community.

Informant B: There are always some grandparents around who allow my children to consume sweets. In my culture, we regard it as disrespectful to refuse grandparents' decisions, and therefore we do not stop those giving sweets to our children. And our children are often at their grandparents' homes for sleepovers, and I know that the grandparents frequently offer sweets.

Informant C: During the day, every family member may eat and enjoy dinner depending on when they arrive home. In fact, it is common that many in my family eat outside the home and that only my husband and I eat dinner. My youngest son is not enthusiastic about the Pakistani food that we prepare at home and he often asks me to prepare pommes frites, burgers or pastas. The next oldest son often buys kebabs or pizza on his way home.

To help keep the Pakistani community together, the informants noted that it is usual to arrange "get-together parties" frequently, where they serve plenty of food and sweet drinks. Buffets are available during the whole evening to enjoy food, desserts, cakes and biscuits. The host is very appreciative when you, as a guest, enjoy all the food.

Informant D: The participating mothers of Pakistani families living in Norway tell almost the same stories about the composition, organization and significance of meals in their homes. We now discuss these main themes and possible implications for overweight.

Discussion

The mothers in our study feel great pride in pleasing the family members by serving the food they appreciate. Acknowledgement of the food confirms her role as a worthy mother. That everyone enjoys all the foods served and eats until satisfied ensures her success as a mother. Perhaps these mothers have a low demand and high responsiveness when it comes to feeding styles. This implies that the mothers sometimes made different courses to please all family members.

High consumption of fat and sugar leads to overweight, and the women we interviewed already knew about this implication. Thus, counseling should not only include dietary advice but also focus on discussing the multitude of other implications that dietary changes might have.

Extended families, including grandparents who are close to the nuclear family, are typical in Pakistani communities. Grandparents have a significant impact on the family and feel that they have the privilege to spoil their grandchildren with food.

Informant E: We belong to a culture where relatives, families and friends have great significance. There is a "get-together party" almost every weekend, and then we enjoy sweet drinks with the meals and desserts at the end of the meal. Many different desserts are served. It is a custom to bring some sweet foods to the host, for instance, a kilo of Mathai (potion-based cake) to show that you are grateful for the invitation. After such parties, the host may be left with plenty of different desserts that are consumed during the week.

Significance of meals for the mother and grandparents

The mothers are proud to serve their family food that it appreciates and they do everything to satisfy the different wishes of family members. This may result in preparing several different courses. Although the mothers have the main responsibility for preparing the food, they are not completely in charge of deciding the menu. The mother prides herself in serving meals that are appreciated by the family and that tie family members together. The food she offers is a tool to help keep the members of the family at home and as part of a Pakistani community.

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compared with other feeding styles is positively associated with child weight status [18].

Grandparents in Pakistani families living in Norway often live in close proximity to or in the same household as the rest of the family. They are highly respected and have a considerable impact on parenting. The ability to please the child is a blessing from Heaven to them. Mothers are not in a position to refuse the grandparents’ wishes to spoil the child with food. Moreover, in Norwegian families that are overweight, parents also have conflicts with grandparents about restricting the amount of sweets [19].

At “get-together parties”, one is obliged to taste all the dishes and sweets to honour the host. A gift of food to the host shows appreciation for the invitation. Food is embedded in a symbolic interaction [20]. Parents and grandparents express their love by serving plenty of food and sweets. However, they may not recognize that this causes the development of overweight and may not know that this jeopardizes family members’ health. It has been shown that parents, in general, seldom view their overweight children as weighing too much [19,21].

Strengths and Limitations
The congruence of the stories told by the mothers and the general observation of overweight among Pakistani immigrants in different parts of the world [22] support the transferability of our observations to a wider community. The interviewer communicated with the mothers in their native language and knew their culture, and being female ensured fewer communication barriers. Respect for the generation of the mothers facilitated the interaction between interviewer and the interviewees. However, the interviewer’s background as a medical student trained in Norway may have biased the responses to questions to conform to perceived correct answers. One important issue relates to the fact that the interviews were conducted and transcribed by the first author in the mothers’ native Urdu; the other authors were therefore not able to jointly oversee this process.

CONCLUSION
The interviews elucidated several factors that promote overweight. Although the children of Pakistani immigrants request less fat in their diet, which promises an improvement in health, the mix of traditional Pakistani food with Western fast food may still result in high caloric density. It is difficult to bring together family members with different schedules at common meals like dinner. To accommodate everybody, some mothers prepare food that is served as and when is convenient during the day. Mothers do not restrict portions but serve food buffet-style with surplus food to ensure everybody is satiated. Grandparents would think it unkind (or disrespectful) were they not able to spoil the children with sweets. Thus, the most prominent finding from our interview study concerns the excess of available food. As a first step to changing a food tradition that leads to overweight, one advice that GPs and public health nurses could offer is to serve food in portions instead of buffet-style and to limit the assortments of sweets.

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