

Assessing of Parental Beliefs and Practices about Child Feeding and Its Impact on Child Weight

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Abstract

Background : Prevalence of overweight, obesity and severe obesity among Saudi children of all age groups varies between 2 to 23.1%, children's obesity is an alarming issue. The problem primarily relies on the ability of parents to recognize their child's overweight/obesity, and to be aware that obesity is a risk factor for long-term health issues. Several studies showed that many parents are not concerned about their children's body weight, because they either think too little of their child's body weight or believe that obesity is inherited, thus modifiable. Parent's perception of child feeding is one of the influencing causes that contribute to child weight status. Although the prevalence of childhood obesity has increased significantly in Saudi Arabia, parents are unable to appreciate obesity in their child. Parental beliefs and practices in children's nutrition may determine deviations in the acquisition of the child's food preferences and in their self-regulation, who can influence their nutritional status. Childhood obesity and metabolic complications related thereto emerge as a challenge to global health in the 21st century, given its dramatic increase in the last decade in most countries. **Aim of the study:** to assess of parental beliefs and practices about child feeding and its impact on child weight. **Method:** Cross-sectional and descriptive study developed in a sample of (388) parents' study children aged 6-10 years. The children were recruited from the primary schools located in Al-Qunfudah region, Saudi Arabia. Child feeding, beliefs about childhood obesity, and practices about child feeding were collected. The body mass index of the children was assessed in the school, and their parents responded to a self-administered questionnaire which contained questions on parental perception of the children's weight/obesity status. Data were entered and analyzed using SPSS. **Results:** Regarding age show that is a significant relation between age and total child feeding were $f=5.880$ and $P\text{-value}=0.001$, increase (in <30 and), the mean +SD respectively were (106.500 ± 9.936) . and gender show that is a significant relation between gender and total child feeding were $t=3.141$ and $P\text{-value}=0.002$, increase (in female than male), the mean +SD respectively were $(100.593 \pm 9.568 \text{ than})$. Also Qualification show that is a significant relation between Qualification and Total Child Feeding were $f=2.402$ and $P\text{-value}=0.037$, increase (in Intermediate degree), the mean +SD respectively were (101.063 ± 9.069) .

Conclusion: Since influence's which promote obesity in children include numerous factors, this issue must be handled as one of the greatest social and public health challenges at the present time. In this study, the assessment of parental beliefs and practices about child feeding in the face of age, education and household income penalizes underprivileged sections of the society, a fact which has not been documented in other studies. On the other

hand, food-related beliefs of concern about the child's weight, practices of control and pressure to eat were related to overweight children.

Keywords: Assessing, parental, beliefs, practices, child, feeding and its impact, weight

Introduction:

1) Background:

Parental convictions and practices in children's nutrition also additionally who can impact their dietary status. Parental taking care of may promote overeating or overweight in children. The predominance pace of obesity in childhood is increasing conspicuously all over the world, including KSA. In spite of the fact that corpulence is pervasive among of children of all ages, failure to thrive (FTT) continues to be discovered at excessive charges in each developed and developing countries. Eating style is one of the distinguished elements that decide energy intake. One of the affecting variables that decide parental taking care of style is parental view of the weight status of the child.[1]

The prevention and treatment of childhood overweight is quite possibly the main public health challenges. The commonness of overweight among 6-to 11-year-old U.S. children has generally multiplied since the 1960s, with the latest recent prevalence at 15%.[2]. Comparable patterns have been accounted for among low-income preschool children [3]. These numbers are overwhelming considering the health risks chances related with childhood overweight, including raised blood pressure, dyslipidemia, weakened glucose resilience, insulin resistance, body image disparagement, and expanded mortality in men [4-5].

Both weight problems and failure to thrive have become significant general medical conditions around the globe.[6-7] To achieve successful feeding, it is vital for set a right and solid association among parent and child.[8] variables assume a significant part past hereditary features. Eating style is one of the conspicuous components that decide energy intake.[9] The danger of weight and FTT can be impacted by early life sustenance. In this period, the sort and measure of food admission are totally connected to parental (mostly maternal) insights, practices, and decisions.[10-11] One of the impacting factors that decide parental taking care of style is parental view of the dietary status of the child.[10]

Notwithstanding, the role of parenting practices in this hardly ever has seldom been explored. Weight issues in early age of life will in general proceed with sometime later the life. Past research on conduct causes during childhood which connect to parent's taking care of can give a clarification on the best way to stay away from childhood obesity.[12] However, relationships between children weight and parent's feeding have yet to be established in Al-Qunfudah region in Saudi Arabia.[13] Parental taking care of procedures may assume a role in the improvement of children's overweight.[14-15] on the grounds that unreasonable control in kid taking care of has been related with less eating guideline, which is identified with expanded body mass [14]

Concentrating on children's on external prompts, for example, food divide size, rewards [16], and cleaning the plate.[17] may subvert their capacity to react to inner signals that sign appetite and satiety. Limiting admittance to exceptionally attractive nibble food sources has additionally been appeared to expand children's' inclinations and solicitations for such taboo food sources.[18-19] Then again, a few reports have to detect significant associations between maternal feeding care of system and expanded child body mass.[20-21]

Literature Review:

Unfortunately, few studies have been carried out regarding assessing of parental beliefs and practices about child feeding and its impact on child weight the following is summary of recently done studies in this regard.

in the 2016 search was done to evaluate the initial step to identify the percentage of parents who misclassify the situation with kid's weight, and decide if there is a distinction between those parents whose kids are overweight and obese and those with children of normal weight. This cross-sectional search included 601 kids matured 6-10 years. The kids were enrolled from the grade schools situated in Al-Qassim, Saudi Arabia. The body mass index of the kids was surveyed in the school, and their folks reacted to a self-regulated poll which contained inquiries on parental view of the kids' weight/obesity status. parents with overweight/obese children had essentially more misclassification than those with typical weight kids. The vast majority of parents of the 81 overweight child misclassified and revealed that their kid had typical weight, while 65% of parents of the 61 obese kids, misclassified the kid's weight status. [22]

A cross-sectional search was led among 426 children (1-8years old) and their parents who were enrolled from pediatric clinics from the 5 areas of Riyadh City (2016), in this investigation pervasiveness of overweight, obesity and severe obesity among Saudi children of all age bunches fluctuates between 2 to 23.1%. By and large, children obesity is not perceived as a health danger by parents, which clarifies their opposition for prevention programs. Evaluating the immediate impact of parents' perception toward their children's weight will be a viable determinant of weight the management among kids in Saudi Arabia. Socio demographics, anthropometric measures, child feeding, information and convictions about childhood obesity, and view of body image (verbal and visual) were gathered. Bivariate examination and multinomial logistic regression were conducted for correlates of knowledge and perceptions across parental characteristics. More than half (52%) of Saudi parents misperceived their kids' real weight both verbally and then visually ($P = 0.01$). Practically 26% of kids were classified as "overweight or obese". Among those, lone 5.3% (95%CI: 3.2-7.4) were seen accurately as such by their Parents. Parental information was not fundamentally connected with perception ($P = 0.70$). Child's age (6.5 years) ($P < 0.001$), child's abnormal BMI ($P < 0.001$), parents' schooling of not as much as college ($P < 0.02$), kid's PC/tablet utilization of 2 hours ($P < 0.001$), were all independent indicators of mistaken perception of kid's weight.[23]

By the end of 2013 search was done to assess the connection between maternal visual perception of their kids' weight status and their feeding of style. A cross-sectional study was finished with just moms of 380 preschool children with age of 5 to 7 (6.14 years). Visual discernment scores were estimated with a sketch and maternal taking feeding style was estimated with validated "Parental Feeding Style Questionnaire". The demographic characteristics of the children and their moms are given. The mean periods of the children and their moms were 6.14 and 31.35 years, separately. The greater part (57.9%) of moms perceived their kid's nourishing status accurately. Moms of normal-weight kids were more probable perceive their kid as ordinary (81.4%), and moms of underweight kids were almost certain than different gatherings to misrecognize their youngster's nourishing status (78%) ($p < 0.001$) . A huge relationship was found among NS and maternal visual perception (Cramer's

V). Overall, the subscale scores showed nearly undeniable degrees of EN (32 of 40) and SC (13 of 20), with lower levels of IF (9 of 20), EM (13 of 25), and PC (14 of 25). There is no typical or cut off an incentive for PFSQ subscales and we utilized all out subscale scores.[19]

A cross-sectional study was administered to a comfort sample of Saudi Arabian ladies living in the US to catch their view of their kid's weight, and to distinguish the kid taking feeding of practices they report utilizing with their child between 2-6 years old. This survey was performed during (2015). The survey populace contained an accommodation sample of Saudi moms in the US whose kids were 2 to 6 years old was reached. Moms were sent an online survey. Interior consistency for questions was figured utilizing Cronbach's Alpha. Spearman's connection coefficient was determined to test the relationship among CFQ scales, NRF, MA, and segment factors. Moms (n=108) finished the survey. The mean (SD) score for worry about child weight 1.8 (1.2) was low, but pressure to eat 3.9 (0.9) and restriction 3.8 (0.8) were high. Moms with lower incomes had more noteworthy worry about child weight ($r = -0.20$, $P = .04$), and use of restricted feeding practices reported greater NRF ($r = .19$, $P = .05$; $r = .20$, $P = .04$ individually). The more MA with feeding of, the more noteworthy obligation they revealed about feeding ($r = .20$, $P = .04$). [24]

Antoniou, E. E, (2016). done an survey to explain the bearing of the relationship between picky eating and weight status and to look at the moderating role of food parenting practices. Involved a longitudinal report on the impacts of particular eating on child weight status within the KOALA Birth Cohort Study, the Netherlands. Moms and their kids were remembered for the analyses. Children's picky eating behavior and food parenting practices were surveyed at benchmark (youngster age 5 years). Their weight status was surveyed consistently until age 9 years. Mixed effects linear and logistic regressions were used to compare picky eaters (n = 403) and non-particular eaters (n = 621) on changes in weight status throughout the long term. At pattern old enough 5 years; picky eaters were slightly shorter, more limited, more regularly underweight and less frequently overweight than non-meticulous eaters, while energy admission according to body weight (kJ kg⁻¹) was comparative. Particular eaters with a typical load at pattern had no expanded danger of getting underweight during follow-up until age 9 years, and were less inclined to get overweight contrasted with non-meticulous eaters. There were no collaborations with food nurturing rehearses. The parents of picky eaters more often reported pressuring their child to eat and restrict unhealthy food intake compared to parents of non-picky eaters.[25] The Child Feeding Questionnaire (CFQ) evaluates parental taking feeding of beliefs and practices concerned with child feeding and obesity proneness. The questionnaire has been created in the U.S., and approval concentrates in different nations are restricted. In light of records from the Swedish populace register. All moms of 4-year-olds (n = 3007) from the third biggest city in Sweden, Malmö, were reached via mail. The individuals who restored the CFQ along with a foundation questionnaire (n = 876) got the CFQ again to empower test-retest assessment; 564 moms finished the CFQ twice. We utilized corroborative factor analysis to test whether the first 7-factor model was upheld. Good fit (CFI = 0.94, TLI = 0.95, RMSEA = 0.04, SRMR = 0.05) was gotten after minor alterations like dropping 2 things on probation and adding 3 mistake covariance's. The interior dependability and the 2-week test-retest reliability quality were acceptable. The scores on probation were the most minimal at any point announced. At the point when the impact of nurturing rehearses on child BMI (subordinate

variable) was analyzed in an underlying condition model (SEM), kid BMI had a positive relationship with restriction and a negative relationship with pressure to eat. Restriction was positively impacted by worry about kid weight. The second SEM treated parenting practices as dependent factors. Parental foreign origin and child BMI effect sly affected restriction, while pressure to eat was additionally impacted by parental education. While the aftereffects of the study support the usefulness the handiness of the CFQ in Sweden.[26]

Cross-sectional search was done in 2019 and completed a study to look at the psychometric properties of an Arabic rendition of the Child Feeding Questionnaire (CFQ-A) in an example of Saudi preschoolers and their moms. A sum of 209 moms and kids were selected from eight diverse pre-schools. Moms finished surveys via phone and child anthropometry was estimated dispassionately utilizing normalized methods; BMI Z-scores (BMIZ) were determined dependent on the age-and sex-explicit WHO development guidelines and reference information. Confirmatory factor investigation was utilized to analyze the first seven-factor CFQ model, just as an adjusted nine-factor model. Cronbach's α was determined to analyze the interior consistency of each factor; Spearman relationship was utilized to look at 2-week retest dependability. Factor-factor and factor-child BMIZ relationships were examined. Both the first seven-factor and adjusted nine-factor CFQ-A showed solid match (root-mean-square-mistake of guess < 0.05). Six out of nine elements had amazing inward consistency and all components showed astounding 2-week test-retest unwavering quality. There were critical connections between kid BMIZ and five out of the nine components; Perceived Child Weight, Perceived Parent Weight, Restriction and Monitoring were each emphatically associated with kid BMIZ, while Concern about Child's Diet was contrarily related with child BMIZ.[27]

1.2 Rationale

Child feeding and overweight is a major problem in our society and most parental don't seek medical advice. By conducting this study, it will help us to estimate the level of this problem in Al-Qunfudah region since there is no recent studies conducted to evaluate this problem. In addition to that, child overweight is a problem that affecting the quality of life physically and emotionally especially among the child's and parental population. There are many factors contribute to the incidence of child overweight including child feeding also parent's perception to child feeding one of the influencing causes can result in imbalance in energy which associated with both underweight and overweight, the topic of the research is an area of interest to the researcher.

1.3 Aim of the study

To assess of parental beliefs and practices about child feeding and its impact on child weight.

1.4 Objectives

- To assess of parental beliefs and practices about child feeding of primary school.
- To examine of parental perception of the children's weight/obesity status.

2. Methodology

2.1 Study area :

The study has been carried out in Al-Qunfudah region. Al-Qunfudhah (Arabic: القنفذة), also known as Kurfuda, is Saudi city in the Tihamah region on the coast of the Red Sea. Its

population is the fourth largest in Makkah Province,[28] the area of the governorate is estimated at 5,195 km²,[29] which occupies about 3.65% of the area of the region and is ranked ninth among the governorates of the region in terms of area.

There is a continuous working to improve the infrastructure of in Al-Qunfudah region for the sake of both in Al-Qunfudah citizens. In Al-Qunfudah have many hospitals. Also, it has PHC centers under supervision of Directorate of Health Affairs of in Al-Qunfudah. Umm Al-Qura University, the main campus located in Makkah has also its campus in Al-Qunfudah. Multiple colleges were established years ago included; Al-Qunfudah University College, Faculty of Medicine, Faculty of Health Sciences, Faculty of Engineering, and Faculty of Computer at Al-Qunfudah.

2.2 Study population:

the parents' of children (aged 6-10 years) from the schools from two cities (with the largest populations) in Al-Qunfudah , Al-Quoz Center, and Al-Muthilif Center , were selected throughout the period of the study and accept to participate in the study.

2.3 Study design :

Cross-sectional ,descriptive study.

2.4 Inclusion criteria:

- Saudi and non-Saudi nationality and aged between 6 and 10 years.
- All Saudi and non-Saudi parents (males and females) have children aged 6-10 years attending to primary schools located in Al-Qunfudah region.
- Parents who can write and read in Arabic Language.

2.5 Exclusion criteria:

- Being disabled (physically or mentally), a diagnosis of chronic disease, psychiatric illness, or immune-compromised disorder.
- parents who refuse to participate in the study
- parents who not have Children feeding and not have overweight children

2.6 Sample size:

Sample size was calculated using a website (raosoft.com). The resulted estimated sample size is (388) parents' study children(male: 618; female: 256) and 601 of them returned the questionnaire completed by their parents. Although the number of boys and girls in Saudi primary schools are comparable, the low involvement of girls in this study was because of the low response from their parents. Approximately, 30% of the parents of the female students did not return the questionnaire.

2.7 Sampling technique

This study adopted a random sampling procedure . The schools from two cities (with the largest populations) in the Al-Qunfudah , Al-Quoz Center, and Al-Muthilif Center , were selected. An updated list of all public primary schools was used in the sampling frame: 34 schools were randomly selected from a total of 340 schools. Thereafter, a class list was created for each of the targeted grades (from Grades I-IV) in the selected schools. Ten classes from each grade were randomly selected (40 classes). Regarding the parents' of children ' was selected (by using randomizer.org website),the data collection period is 30 days (four weeks minus weekends) in both section (male and female sections).

2.8 Data collection tool:

The researcher has been use the child feeding questionnaire The CFQ contains 31 items, loading on seven factors. Four hypothesized factors pertain to parental perception of child and parent weight, and concern about weight, which may elicit parental control in feeding: (i) Perceived responsibility (three items), assessing parents' perceptions of their responsibility for child feeding (e.g. ``When your child is at home, how often are you responsible for feeding her?"); (ii) Parent perceived weight (four items), assess-ing parents' perceptions of their own weight status history; (iii) Perceived child weight (three items), assessing parents' perceptions of their child's weight status history; and (iv) Parents' concerns about child weight (three items), assessing parents' concerns about the child's risk of being overweight (e.g. ``How concerned are you about your child becoming over- weight?"). Three additional hypothesized factors assess parents' attitudes and practices regarding their use of controlling child feeding strategies:(1) Monitoring (three items), assessing the extent to which parents oversee their child's eating (e.g., ``How much do you keep track of the high fat foods that your child eats?"), (2) Restriction (eight items), assessing the extent to which parents restrict their child's access to foods (e.g., ``I intentionally keep some foods out of my child's reach"), and (3) Pressure to Eat (four items), assessing parents' tendency to pressure their children to eat more food, typically at mealtimes (e.g., ``My child should always eat all the food on her plate"). All items were measured using a 5-point Likert-type scale, with each point on the scale represented by a word anchor. The researcher used the Arabic version of this tool since there is a study conducted to validate the CFQ-A in Arabic version. (see Appendix for girls' version)

2.9 Data collection technique:

The researcher has been use Arabic version of the questionnaire since the target parents' of children' are Saudi. The questionnaire has been distributed to all parents' of children' attending primary schools during the data collection period(which is 30 days initially). The questionnaire has been distributed equally between male and female section because it is separate departments. The researcher was train school social workers in order to optimize the inter rater reliability. The researcher has been select the parents' of children and give them the questionnaire in the waiting area in male section then waiting them to complete it and after that I has been collecting it from them while in female section, has been trained social workers was do the same in female waiting area. After that, the researcher was collecting the paper daily from the social workers for data entry and analysis after thanking the participants for their precious time and effort, the researcher has been providing the participants with gifts as an appreciation for their participation in the study, after collecting questionnaire from them.

2.10 Variables:

Dependent variables:

The significantly overweight and obese among normal child's weight

Independent variable :

Parents and children differed Age, Gender, Educational level,Monthly income, Occupation, Presence of chronic disease, Social problems,Family history of overweight, and obese

2.11 Data entry and analysis

Statistical analysis has been performed using SPSS software program (Statistical Package for Social Sciences), version 24.0. We descriptive the association between overweight and obesity with selected socio demographic characteristics. Using Chi-square tests, t-test to analyses the association and the difference between two categorical variables or using other statistical tests if needed. P value less than 0.05 as level of significance. We tested whether misclassification of the status of the child's weight by parents differed significantly between normal, overweight, and obese children.

2.12 Pilot Study

A pilot study on 35 on parents of overweight children, and obese in the children participants representing 10% of study sample size (out of study area) has been conducted to explore methodology tool and environment and plan to overcome these problems.

2.13 Ethical considerations

Ethical procedures were safeguarded, by obtaining prior permission from the General Directorate of education to carry out the study in schools, the authorization for data collection from the Directors of each School and free and informed consent was obtained from parents and written consents who accepted to participate

All information will be confidential, and a result has been submitted to the department.

2.14 Limitations : Possible limitations: Time limitation.

2.15 Budget : The research has been self-funded.

3. Results:

Table 1: Shows the demographic characteristics of the study participants of children and their parental . (n=388)

	N	%
Age		
<30	14	3.6
30-40	123	31.7
40-50	183	47.2
50-60	57	14.7
>60	11	2.8
Range	23-76	
Mean±SD	42.172±7.970	
Sex		
Female	81	20.9
Male	307	79.1
Social status		
Married	230	59.3
Not married	158	40.7
Nationality		
Saudi	269	69.3
Non Saudi	119	30.7
Qualification		
Primary degree	64	16.5
Intermediate degree	32	8.2
Elementary degree	94	24.2
Diploma degree	21	5.4
University degree	138	35.6

Post-graduation degree	39	10.1
Occupation		
Employee	253	65.2
Not employee	135	34.8
Physical condition		
Below average	23	5.9
Average	229	59.0
Above average	47	12.1
Capable	89	22.9
Child's age		
<8	49	12.6
8-10	137	35.3
10-12	126	32.5
>12	76	19.6
Range	6-18	
Mean±SD	9.734±2.244	

There were 388 participants, and the majority age of children parental was(47.2%) in (40-50)years, while the age(30-40)were(31.7%), were the data ranged from(23to76)by mean+ SD (42.172±7.970). The majority of them were male(79.1%), while female(20.9%). The most of the participants was married(59.3%) while not married (40.7%). The majority of nationality were Saudi(69.3%), have university degree (35.6%) while Elementary degree were(24.2%), regarding occupation (65.2%) employee, Parents of Average status of physical condition were (59.0%), and those of capable physical condition were(22.9%), regarding the Child's age the majority age was(35.3%) in (8-10)years, while the age(10-12) were(32.5%), were the data ranged from(6to18)by mean+ SD (9.734±2.244).

Table 2:Description of Child Feeding Questionnaire factors, items, and response options. To create a factor score for each of the seven factors (Perceived responsibility, Monitoring, Restriction, Pressure to eat, Perceived parent weight, Perceived child weight, Concern about child weight)

		data										% of agreement
		1 Never		2 Seldom		3 Half of the time		4 Most of the time		5 Always		
		N	%	N	%	N	%	N	%	N	%	
Perceived responsibility												
1	When your child is at home, how often are you responsible for feeding her?	4	1.0%	45	11.6%	75	19.3%	113	29.1%	151	38.9%	78.66
2	How often are you responsible for deciding what your child's portion sizes are?	15	3.9%	48	12.4%	78	20.1%	145	37.4%	102	26.3%	73.97
3	How often are you responsible for deciding if your child has eaten the right kind of foods?	7	1.8%	42	10.8%	82	21.1%	144	37.1%	113	29.1%	76.19
Monitoring												
1	How much do you keep track of the sweets (Candy, ice cream cake, pies, pastries) that your child eats?	6	1.5%	25	6.4%	116	29.9%	145	37.4%	96	24.7%	75.46
2	How much do you keep track of the snack food (Potato chips, Doritos, cheese puffs) that your child eats?	6	1.5%	32	8.2%	130	33.5%	139	35.8%	81	20.9%	73.25
3	How much do you keep track of the high-fat foods that your child eats?	13	3.4%	34	8.8%	121	31.2%	125	32.2%	95	24.5%	73.14
Restriction												
1	I have to be sure that my child does not eat too many sweets (candy, ice-cream, cake or pastries)	25	6.4%	28	7.2%	63	16.2%	108	27.8%	164	42.3%	78.45
2	I have to be sure that my child does not eat too many high-fat foods	29	7.5%	34	8.8%	57	14.7%	94	24.2%	174	44.8%	78.04
3	I have to be sure that my child does not eat too much of her favourite foods	30	7.7%	34	8.8%	88	22.7%	116	29.9%	120	30.9%	73.51

4	I intentionally keep some foods out of my child's reach	37	9.5%	32	8.2%	57	14.7%	96	24.7%	166	42.8%	76.60
5	I offer sweets (candy, ice cream, cake, pastries) to my child as a reward for good behaviour	80	20.6%	55	14.2%	50	12.9%	126	32.5%	77	19.8%	63.35
6	I offer my child her favourite foods in exchange for good behaviour	29	7.5%	25	6.4%	51	13.1%	102	26.3%	181	46.6%	79.64
7	If I did not guide or regulate my child's eating, she would eat too many junk foods	124	32.0%	58	14.9%	46	11.9%	62	16.0%	98	25.3%	57.53
8	If I did not guide or regulate my child's eating, she would eat too much of her favourite foods	57	14.7%	38	9.8%	81	20.9%	85	21.9%	127	32.7%	69.64
Pressure to eat												
1	My child should always eat all of the food on her plate	42	10.8%	55	14.2%	75	19.3%	131	33.8%	85	21.9%	68.35
2	I have to be especially careful to make sure my child eats enough	3	0.8%	13	3.4%	42	10.8%	68	17.5%	262	67.5%	89.54
3	If my child says "I'm not hungry", I try to get her to eat anyway	100	25.8%	56	14.4%	64	16.5%	100	25.8%	68	17.5%	58.97
4	If I did not guide or regulate my child's eating, she would eat much less than she should	49	12.6%	54	13.9%	76	19.6%	95	24.5%	114	29.4%	68.81
Perceived parent weight												
1	Your Childhood (5 to 10 years old)	2	0.5%	48	12.4%	311	80.2%	23	5.9%	4	1.0%	58.92
2	Your adolescence	5	1.3%	39	10.1%	323	83.2%	18	4.6%	3	0.8%	58.71
3	Your 20s	5	1.3%	20	5.2%	329	84.8%	28	7.2%	6	1.5%	60.52
4	At present	5	1.3%	17	4.4%	278	71.6%	78	20.1%	10	2.6%	63.66
Perceived child weight												
1	Your child during the first year of life	11	2.8%	46	11.9%	313	80.7%	17	4.4%	1	0.3%	57.47
2	Your child as a toddler	5	1.3%	31	8.0%	334	86.1%	17	4.4%	1	0.3%	58.87
3	Your child as a pre-schooler	5	1.3%	28	7.2%	329	84.8%	25	6.4%	1	0.3%	59.43
4	Your child kindergarten through 2nd grade	6	1.5%	48	12.4%	313	80.7%	19	4.9%	2	0.5%	58.09
Concern about child weight												
1	How concerned are you about your child eating too much when you are not around her?	129	33.2%	73	18.8%	73	18.8%	82	21.1%	31	8.0%	50.36
2	How concerned are you about your child having to diet to maintain a desirable weight?	149	38.4%	63	16.2%	71	18.3%	68	17.5%	37	9.5%	48.71
3	How concerned are you about your child becoming over weight?	96	24.7%	60	15.5%	93	24.0%	59	15.2%	80	20.6%	58.30

Regarding the Perceived responsibility

When your child is at home, how often are you responsible for feeding almost of the parental answer is always were (38.9%) followed by most of the time(29.1%) while % of agreement (78.66%). While regarding how often are you responsible for deciding what your child's portion sizes are the majority of parental answer most of the time was (37.4%), followed by always were (26.3%) while % of agreement (73.97%). Regarding how often are you responsible for deciding if your child has eaten the right kind of foods the majority of parental answer most of the time was(37.1%), followed by always were(29.1%)while % of agreement (76.19%).

Regarding Monitoring

How much do you keep track of the sweets (Candy, ice cream cake, pies, pastries) that your child eats the parental answer most of the time were (37.4%) followed by Half of the time (29.9%) while % of agreement (75.46%). While regarding How much do you keep track of the snack food (Potato chips, Doritos, cheese puffs) that your child eats the majority of parental answer most of the time was (35.8%), followed by Half of the time were (33.5%)while % of agreement (73.25%). Regarding How much do you keep track of the high-fat foods that your child eats the majority of parental answer most of the time was(32.2%)followed by Half of the time were(31.2%)while % of agreement (73.14%).

Regarding the Restriction

I have to be sure that my child does not eat too many sweets (candy, ice-cream, cake or pastries) almost of the parental answer is agree were (42.3%)followed by slightly agree (27.8%)while % of agreement (78.45%). While regarding I have to be sure that my child

does not eat too many high-fat foods the majority of parental answer agree were (44.8%) followed by slightly agree were (24.2%) while % of agreement (78.04%). Regarding I have to be sure that my child does not eat too much of her favourite foods the majority of parental answer agree were (30.9%) followed by slightly agree were (29.9%) while % of agreement (73.51%). But regarding I intentionally keep some foods out of my child's reach almost of the parental answer is agree were (42.8%) followed by slightly agree (24.7%) while % of agreement (76.60%). While regarding I offer sweets (candy, ice cream, cake, pastries) to my child as a reward for good behaviour the majority of parental answer slightly agree were (32.5%) followed by disagree were (20.6%) while % of agreement (63.35%). Regarding I offer my child her favourite foods in exchange for good behaviour the majority of parental answer agree were (46.6%) followed by slightly agree were (26.3%) while % of agreement (79.64%). While regarding If I did not guide or regulate my child's eating, she would eat too many junk foods the majority of parental answer disagree were (32.0%) followed by always were (25.3%) while % of agreement (57.53%). Regarding If I did not guide or regulate my child's eating, she would eat too much of her favourite foods the majority of parental answer agree were (32.7%) followed by slightly agree were (21.9%) while % of agreement (69.64%).

Regarding Pressure to eat

My child should always eat all of the food on her plate almost of the parental answer is slightly agree were (33.8%) followed by agree (21.9%) while % of agreement (68.35%). While regarding I have to be especially careful to make sure my child eats enough the majority of parental answer agree were (67.5%) followed by slightly agree were (17.5%) while % of agreement (89.54%). Regarding If my child says "I'm not hungry", I try to get her to eat anyway the majority of parental answer agree were (25.8%) followed by disagree were (25.8%) while % of agreement (58.97%). But regarding If I did not guide or regulate my child's eating, she would eat much less than she should almost of the parental answer is agree were (29.4%) followed by slightly agree (24.5%) while % of agreement (68.81%).

Regarding Perceived parent weight

Your Childhood (5 to 10 years old) almost of the parental answer is normal were (80.2%) while % of agreement (58.92%). While regarding Your adolescence the majority of parental answer normal were (83.2%) while % of agreement (58.71%). Regarding Your 20s the majority of parental answer normal were (84.8%) while % of agreement (60.52%). But regarding At present almost of the parental answer is normal were (71.6%) followed by overweight (20.1%) while % of agreement (63.66%).

Regarding Perceived child weight

Your child during the first year of life almost of the parental answer is normal were (80.7%) while % of agreement (57.47%). While regarding your child as a toddler the majority of parental answer normal were (86.1%) while % of agreement (58.87%). Regarding Your child as a pre-schooler the majority of parental answer normal were (84.8%) while % of agreement (59.43%). But regarding your child kindergarten through 2nd grade almost of the parental answer is normal were (80.7%) while % of agreement (58.09%).

Regarding Concern about child weight

How concerned are you about your child eating too much when you are not around her almost of the parental answer is never were (33.2%) while % of agreement (50.36%). While

regarding how concerned are you about your child having to diet to maintain a desirable weight the majority of parental answers never were (38.4%) while % of agreement (48.71%). Regarding How concerned are you about your child becoming overweight the majority of parental answer never were (24.7%) followed by most of the time were (24.0%) while % of agreement (58.30%).

Table 3 : Descriptive statistics and internal consistency estimates for the final 7-factors

	Unsatisfied		Satisfied		Score	
	N	%	N	%	Range	Mean \pm SD
Perceived responsibility	38	9.8	350	90.2	3-15.	11.441 \pm 2.747
Monitoring	29	7.5	359	92.5	3-15.	11.093 \pm 2.563
Restriction	24	6.2	364	93.8	10-40.	28.838 \pm 5.544
Pressure to eat	19	4.9	369	95.1	5-20.	14.284 \pm 2.896
Perceived parent weight	17	4.4	371	95.6	8-20.	12.090 \pm 1.268
Perceived child weight	25	6.4	363	93.6	4-16.	11.693 \pm 1.413
Concern about child weight	178	45.9	210	54.1	3-15.	7.869 \pm 3.367
Total Child Feeding	5	1.3	383	98.7	60-125	97.307 \pm 10.705

Table 3 shows item variances, factor loadings, and direct factor-item correlations. All items were meaningful indicators of the factors, as indicated by item loadings. Factor loadings ranged of satisfied from (54.1%) to (95.6%) while the total Child Feeding satisfied were (98.7%) and the data ranged from (60- 125) by mean+SD (97.307 \pm 10.705). regarding the perceived responsibility the majority of parental in the satisfied were (90.2%) and the data ranged from (3- 15) by mean +SD (11.441 \pm 2.747). while monitoring the majority of parental in the satisfied were (92.5%) and the data ranged from (3- 15) by mean +SD (11.093 \pm 2.563). Regarding the restriction the majority of parental in the satisfied were (93.8%) and the data ranged from (10- 40) by mean +SD (28.838 \pm 5.544), regarding pressure to eat the majority of parental in the satisfied were (95.1%) and the data ranged from (5- 20) by mean +SD (14.284 \pm 2.896), regarding Perceived parent weight the majority of parental in the satisfied were (95.6%) and the data ranged from (8- 20) by mean +SD (12.090 \pm 1.268). while perceived child weight the majority of parental in the satisfied were (93.6%) and the data ranged from (4- 16) by mean +SD (11.693 \pm 1.413), regarding Concern about child weight the majority of parental in the satisfied were (54.1%) and the data ranged from (3- 15) by mean +SD (7.869 \pm 3.367)

Figure 1 Descriptive statistics and internal consistency estimates for the final 7-factors

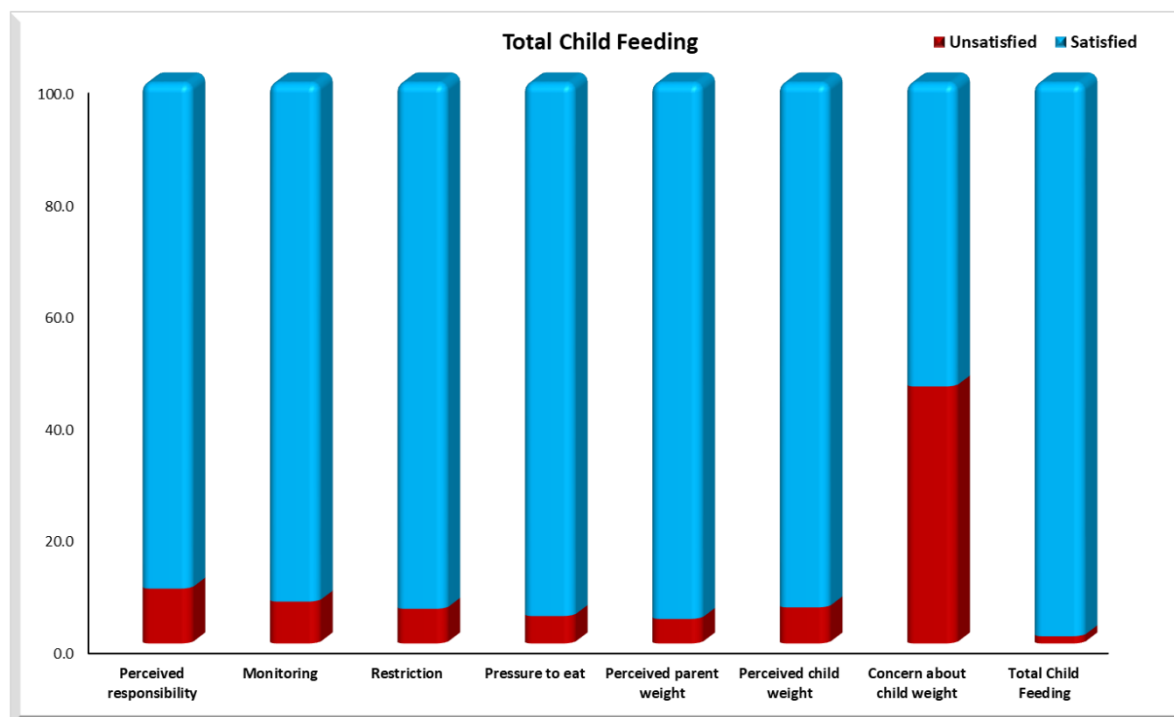


Table 4: Description of the relation between Socio-demographic data and Total child feeding

		N	Total Child Feeding	F or T	ANOVA or T-test	
			Mean \pm SD		test value	P-value
Age	<30	14	106.500 \pm 9.936	F	5.880	<0.001*
	30-40	123	98.000 \pm 9.261			
	40-50	183	97.437 \pm 10.651			
	50-60	57	92.632 \pm 12.610			
	>60	11	99.909 \pm 6.978			
Sex	Female	81	100.593 \pm 9.568	T	3.141	0.002*
	Male	307	96.440 \pm 10.835			
Social status	Married	230	97.717 \pm 10.648	T	0.912	0.363
	Not married	158	96.709 \pm 10.794			
Nationality	Saudi	269	96.770 \pm 10.951	T	-1.488	0.137
	Non Saudi	119	98.521 \pm 10.067			
Qualification	Primary degree	64	94.313 \pm 11.667	F	2.402	0.037*
	Intermediate degree	32	101.063 \pm 9.069			
	Elementary degree	94	96.096 \pm 10.895			

	Diploma degree	21	99.000 ± 9.508			
	University degree	138	98.210 ± 10.559			
	Post-graduation degree	39	97.949 ± 9.934			
Occupation	Employee	253	97.858 ± 10.261	T	1.390	0.165
	Not employee	135	96.274 ± 11.459			
Physical condition	Below average	23	98.000 ± 9.249	F	4.887	0.002*
	Average	229	96.559 ± 10.314			
	Above average	47	94.170 ± 12.136			
	Capable	89	100.708 ± 10.556			
Child's age	<8	49	96.592 ± 10.966	F	0.097	0.961
	8-10	137	97.277 ± 11.308			
	10-12	126	97.556 ± 10.109			
	>12	76	97.408 ± 10.572			

Regarding age show that is a significant relation between age and total child feeding were $f=5.880$ and $P\text{-value}=0.001$, increase (in <30 and >60 years), the mean +SD respectively were (106.500±9.936, 99.909±6.978). Regarding gender show that is a significant relation between sex and total child feeding were $t=3.141$ and $P\text{-value}=0.002$, increase (in female than male), the mean +SD respectively were (100.593±9.568 than 96.440±10.835). Regarding social status show that is no significant relation between social status and total child feeding were $t=0.912$ and $P\text{-value}=0.001$. Regarding Nationality show that is no significant relation between nationality and total child feeding were $t=-1.488$ and $P\text{-value}=0.137$, increase (in Non –Saudi than -Saudi), the mean +SD respectively were (98.521±10.067 than 96.770±10.951). Regarding Qualification show that is a significant relation between Qualification and Total Child Feeding were $f=2.402$ and $P\text{-value}=0.037$, increase (in Intermediate degree, Diploma degree and University degree than primary degree), the mean +SD respectively were (101.063±9.069, 99.000±9.508, 98.210±10.559 than 94.313±11.667).

Regarding Occupation, Child's age, show that is no significant relation between Occupation, Child's age and Total Child Feeding were respectively ($T=1.390$ and $F=0.097$) and respectively $P\text{-value}=0.165$, 0.961). Regarding Physical condition show that is a significant relation between Physical condition and Total Child Feeding were $f=4.887$ and $P\text{-value}=0.002$, increase (in Capable and below average), the mean+SD respectively were (100.708±10.556, 98.000±9.249).

4. Discussion

A total of sample participated in the study invited (388). The researcher selected parents of children 6-10 years in Al-Qunfudah region, to assess of parental beliefs and practices about child feeding and its impact on child weight. Cross-sectional and descriptive study developed. The children were recruited from the primary schools located in Al-Qunfudah region, Saudi Arabia, questionnaire which contained. The CFQ was designed based on Costanzo and Woody's (1985) model, and includes seven factors; four factors measuring aspects of parents' perception and concerns regarding child risk for obesity, and three factors assessing parents'

use of controlling feeding practices. Following initial scale development, confirmatory factor analysis revealed that the 7 factor model fit the data well.

Parental age was range (23-76) and Mean \pm SD (42.172 \pm 7.970), and about more than half of the sample (79.1%) was male. The majority (approximately 69.3 %) of children and parental were Saudi, In addition, the majority of parental (35.6 %) had a University degree education and about more than half (65.2 %) reported that they were employee, the Child's age the majority age was (35.3%) in (8-10) years the data ranged from (6 to 18) by mean \pm SD (9.734 \pm 2.244). (See Table 1).

Our results that description of Child Feeding Questionnaire factors, items, and response options of the factor score for each of the seven factors (Perceived responsibility, Monitoring, Restriction, Pressure to eat, Perceived parent weight, Perceived child weight, Concern about child weight) Parents' feeding practices that are shaped by the child's weight status provide an example of these non-shared environmental effects, and there is some evidence that these feeding practices can promote deregulation of intake, problems of energy balance, and possibly, increasing childhood weight status. the Arabic version of the Child Feeding Questionnaire (CFQ-A), with the factors Perceived Responsibility, Perceived Parent Weight, Perceived Child Weight, Concern about Child Weight, Restriction, Monitoring and Pressure to Eat (see Table 2 for a description of the factors and subscales.)

Regarding the Perceived responsibility, the parental answer is always were % of agreement (78.66, 73.97, 76.19%). Regarding Monitoring the parental answer is most of the time (37.4%, 35.8%, 32.2%), but regarding the restriction the parental answer is slightly agree (27.8%, 24.7%, 32.5%, 26.3%, 21.9%). These studies supported our study where little obese children are subject to early weight control and restrictive dietary practices. [30] El Mouzan et al., (2012) report the prevalence of overweight and obesity among Saudi children is almost double the prevalence reported ten years ago by El Hazmi and Warsy [31-32]. Many factors influence children's eating habits and weight in SA among the many factors that influence childhood obesity are family and parents who impact children's eating habits and weight [33]. Concerns for childhood obesity in Saudi Arabia are evident [30], and a lack of information is available related to childhood obesity and parental feeding practices and feeding styles. [34] also this results supported our result the restriction subscale and including a separate subscale to assess using food as a reward may be suitable for Saudi mothers. This approach has previously provided satisfactory results among a sample of Chinese mothers of preschoolers. [35] suggesting that parenting/feeding strategies among Middle-Eastern and Asian families might be comparable. Indeed, when comparing our restriction factor mean with that of the study involving Chinese mothers. [35] (total mean scores out of 5), we observed that they are almost similar (mean = 4.40, SD = 0.94 and mean = 4.18, SD = 0.80, respectively).

Among the many factors that influence childhood obesity are age that is a significant relation between age and total child feeding were $f=5.880$ and $P\text{-value}=0.001$, increase (in <30 and), the mean \pm SD respectively were (106.500 \pm 9.936), gender that is a significant relation between sex and total child feeding were $t=3.141$ and $P\text{-value}=0.002$, increase (in female), the mean \pm SD respectively were (100.593 \pm 9.568), qualification that is a significant relation between qualification and Total Child Feeding were $f=2.402$ and $P\text{-value}=0.037$, increase (in Intermediate degree, the mean \pm SD respectively were (101.063 \pm 9.069) and Physical

condition that is a significant relation between Physical condition and Total Child Feeding were $f=4.887$ and $P\text{-value}=0.002$, increase(in Capable), the mean \pm SD respectively were (100.708 ± 10.556) . (see table 4)

Other study supported our result the family and parents who impact children's eating habits and weight. Concerns for childhood obesity in Saudi Arabia are evident [33], and a lack of information is available related to childhood obesity and parental feeding practices and feeding styles.[34] In the present study, child weight concern was negatively connected with household income indicating greater concern about child's weight for Saudi mothers with a lower income. Children from low-income families have reported a higher risk of childhood obesity [36]. Income influences the type of food purchased, low income families may be more concerned about offering healthy foods to their children. Low-income families with overweight children, or at risk of being overweight, are likely to specify the cost of their children's diet as one factors influencing their children's weight [36].

The present study showed factor loadings ranged of satisfied from (54.1%) to (95.6%), while the total Child Feeding satisfied were (98.7%) and the data ranged from(60- 125)by mean \pm SD(97.307 ± 10.705), regarding the perceived responsibility the majority of parental in the satisfied were (90.2%) and the data ranged from(3- 15)by mean \pm SD(11.441 ± 2.747)(see table3). Birch et al. did not find a correlation between perceived responsibility and restriction[37], our findings are consistent with those of a study involving Turkish mothers[33]. In line with our findings, both the original CFQ study and the Turkish study reported a positive correlation between perceived responsibility and monitoring.[33]. Additionally, our findings suggest that mothers who perceive their children to have a higher weight status may apply higher restriction and monitoring, and mothers who are more concerned about their children's weight may be more concerned about their diet. This is probably due to these mothers exerting higher restriction and monitoring, leading them to feel more in control of what their children eat. [38]

Our results showed a satisfied correlation between Child Weight and Pressure to eat the majority of parental in the satisfied were (95.1%) and the data ranged from(5- 20)by mean \pm SD(14.284 ± 2.896)(see table3) which is consistent with results from previous studies in Western samples.[38]Saudi parents are seemingly aware obesity is unhealthy and are aware of the need to address obesity in their children, which was indicated in the present study.[33] This is present in our study of the high percentage of satisfaction our study the perceived parent weight the majority of parental in the satisfied were (95.6%) and the data ranged from(8- 20)by mean \pm SD(12.090 ± 1.268). while 3erceived child weight the majority of parental in the satisfied were (95.6%) and the data ranged from(4- 16)by mean \pm SD(11.693 ± 1.413), regarding Concern about child weight the majority of parental in the satisfied were (54.1%) and the data ranged from(3- 15)by mean \pm SD(7.869 ± 3.367) (see Table3), supported our study Saudi mothers reporting their child with a lower weight reported a higher picky eating score. Picky eaters are often underweight; hence, parents may have less concern of overweight. Overweight children receive less pressure to eat but experience more restriction with certain kinds of food than normal and underweight children.[37]. Parents of picky eaters may have greater concern for their child not consuming sufficient amounts or types of food and being susceptible for underweight [30]. Another study showed excessive use of restrictive feeding practices affiliated with negative reactions to food. Previous

literature has identified negative outcomes of restrictive feeding practices: increasing the consumption of restricted foods, eating in the absence of hunger, and the high vulnerability of obesity [36]. Concerned mothers of overweight children are likely to use restrictive feeding practices with their child. [17] While mothers using restrictive feeding practices were not concerned about weight in the participants frequently reported use of restrictive feeding practices with their children.

These cross-cultural similarities/differences might be attributed to societal norms regarding the role and responsibility of mothers in feeding their children, as well as availability and access to quality early childhood care centers (e.g. daycare centers and pre-schools), which affects the amount of time mothers spend being in charge of feeding their children.

5. Conclusions

Since influences which promote obesity in children and adolescents include numerous factors, this issue must be handled as one of the greatest social and public health challenges at the present time. In this study the assessment of parental beliefs and practices about child feeding and its impact on child weight. Parental beliefs and practices about child feeding in the face of Age, Sex, Qualification, Physical condition. On the other hand, food-related beliefs of concern about the child's weight, practices of control and pressure to eat were related to overweight children. More specifically, the higher the level of concern about the child's weight, the higher the control and the lower the pressure to eat are linked to increase overweight, guidance and support of families for the adequacy of feeding practices and, even not considering specific recommendations for prevention of childhood obesity, teaching parents to adjust feeding practices in a perceptive and healthy manner to the growth pace and profile of children, regardless of the underlying risk factors, will certainly be beneficial for parent-child interaction and for promotion of nutritional health in preschool children.

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