



Evaluation of Parental Feeding Practices upon Autistic Children

Mustafa Salih Abdulnabi ¹

Abstract

Objective: The study aims at: the evaluation of parental feeding practices' of the children with autism, and identify the relationship between parental feeding practices and demographics' variables of parents.

Methodology: A descriptive study was conducted on parents of autistic kid in Baghdad city from the period of October 15, 2021 to April 18, 2022. A non-probability sample of 100 autistic children with 100 of their parents. A survey is constructed for the determination of the study throughout a review of relevant literature. It composed of two parts; the chief part is concerned with sociodemographic features of the parents; the next part to assess feeding practices followed by parents towards autistic child which consists of (30) questions concerning 3 domains distributed as Behavioral feeding domain, Healthy feeding domain, and Guidance feeding domain. The validity and the reliability were achieved through the application of alpha Cronbach correlation coefficient (0.88) which means that the design of the questionnaire was valid for the study. Statistical analysis methods were used to analyze and evaluate the results of the study under the application of the statistical package (SPSS).

Results: The study findings an demonstrate overall evaluation of the domains of parents' feeding practices of behavioral feeding, healthy feeding and guidance feeding show that such practices have experienced moderate level of performance.

Recommendations: The study recommends that: parents of autism children should be very well, focused on the importance of feeding practices. So, an instruction program can be designed, and implemented for such purpose.

Key words: Evaluation, Parents, Feeding, practices, Autism.

Affiliation of Author

¹ Al-Rasheed University College, Nursing Department, Iraq, Baghdad, 10044

¹Mustafa.saleh@alrasheedcol.edu.iq

¹ Corresponding Author

Paper Info.

Published: Aug. 2023

تقويم ممارسات تغذية الوالدين للأطفال المصابين بالتوحد

مصطفى صالح عبدالنبي ¹

المستخلص

أهداف الدراسة: الهدف: تهدف الدراسة إلى: تقويم ممارسات تغذية الوالدين لأطفالهم المصابين بالتوحد. وتحديد العلاقة بين ممارسات التغذية الوالدية والمتغيرات الديموغرافية للوالدين. **المنهجية:** المنهج: تم إجراء تصميم وصفي لأولياء أمور الطفل المصاب بالتوحد في مدينة بغداد من الفترة من 15 تشرين الأول 2021 إلى 18 نيسان 2022. عينة غير احتمالية من 100 طفل مصاب بالتوحد مع 100 من والديهم (الأب والأم). تم إنشاء استبيان لغرض الدراسة من خلال مراجعة الأدبيات ذات الصلة. تتكون من جزأين. يتعلق الجزء الأول بالخصائص الاجتماعية والديموغرافية للوالدين؛ الجزء الثاني لتقييم ممارسات التغذية التي يتبعها الآباء تجاه الطفل المصاب بالتوحد والذي يتكون من (30) سؤال يتعلق بـ 3 مجالات موزعة على مجال التغذية السلوكية ومجال التغذية الصحية ومجال التغذية الإرشادية. تم تحقيق الصدق الثبات من خلال تطبيق معامل ارتباط ألفا كرو نباخ (0.88) مما يعني أن تصميم الاستبيان كان صالحاً للدراسة. تم استخدام طرق التحليل

انتساب الباحث

¹ كلية الرشيد الجامعة، قسم التمريض، العراق، بغداد، 10044

¹Mustafa.saleh@alrasheedcol.edu.iq

¹ المؤلف المراسل

معلومات البحث

تاريخ النشر: آب 2023

الإحصائي لتحليل وتقييم نتائج الدراسة في ظل تطبيق الحزمة الإحصائية (SPSS). النتائج: أظهرت نتائج الدراسة التقييم العام لمجالات ممارسات تغذية الوالدين للتغذية السلوكية والتغذية الصحية والتغذية الإرشادية تبين أن مثل هذه الممارسات قد شهدت مستوى متوسط من الأداء. التوصيات: أوصت الدراسة بما يلي: يجب أن يكون آباء الأطفال المصابين بالتوحد ذوي توجهات جيدة ومدركين بشكل كبير لأهمية ممارسات التغذية. لذلك، يمكن تصميم برنامج تعليمي وبنائه وتنفيذه لهذا الغرض.

الكلمات المفتاحية: تقويم، الآباء، التغذية، الممارسات، التوحد.

Introduction

Autism spectrum disorder; is a permanent developmental disorder, identified by distinguishing difficulties in social communication and message, the ability to think and act flexibly and the perception and management of sensory stimuli. The Diagnostic and Statistical Manual of mental disorders, fourth edition, classified autistic disorder among the pervasive developmental disorders⁽¹⁾⁽²⁾.

Selective eating intake could play an important role in the growth position of children with ASD. Kids with ASD are more possible to have food choosiness and feeding issues resultant in challenging performances surrounding nutrition intake than their characteristically developing peers⁽³⁾.

Problem nutrition behaviours in autistic kids include such activities as refusing diets, throwing bad temper or disagreeing about food, beating or stealing food, and luxury eating. Furthermore, activities that indicate early dieting or those that strength be precursors to binge consumption are of concern in teenagers and any relations with parental nourishing practices need to be determined⁽⁴⁾.

Parent feeding applies might also be influenced by family food obtainability. Whereas, many studies that have involved a measure of nourishment availability have also examined a few

parental nourishing practices, including parent modeling, parent support, and reassurance for healthy eating, very insufficient have looked at the relations between these issues⁽⁵⁾. Fruit and plant availability was shown to definitely correlate with parent modeling, help and support⁽⁶⁾.

Methodology:

Study Design

A description design was conducted on parents' of autistic child in Baghdad City from the period of October 15, 2021 to April 18, 2022.

Study Setting

A study was made in the subsequent specialized centers for autism in Baghdad, which were registered at the Ministry of Labor and Social Affairs.

Sample and Sampling

A non-probability samples of 100 autistic children with 100 of their parents.

Study Instrument.

A survey is constructed for the purpose of the study through a review of relevant prose. It is composed of two parts; the first part is concerned with socio- demographic characteristics of the parents; the second part is assess feeding practices followed by parents towards autistic child which consists of (30) question concerning 3 domains

distributed as Behavioral feeding domain, Healthy feeding domain, and Guidance feeding domain.

Data Collection

Data collected on parents of autistic child in Baghdad City from the period of October 15, 2021 to April 18, 2022.

Ethical Consideration

The study participants were informed that their participation in this study is voluntary. They were also informed that the data obtained from this study would be securely maintained and will be for the scientific research only during the data collection, analysis, and publication phases.

Data Analysis

The data were analyzed by using the Statistical Package for Social Sciences (SPSS), version 26.

Results

Table 1: Distribution of the Sample Socio-demographic Characteristics

Socio-demographic Characteristics	Groups	F	%
Father's age	20 _ 29	6	6
	30 _ 39	33	33
	40 _ 49	58	58
	50 ≥	3	3
	Mean ± SD	40.31 ± 5.82	
Mother's age	< 30	12	12
	30 _ 34	20	20
	35 _ 39	29	29
	40 _ 45	39	39
	Mean ± SD	36.63 ± 5.34	
Place of Residence	Urban	97	97
	Rural	3	3
Family Type	Nuclear	89	89
	Extended	11	11
Father's Occupation	Government Employee	62	62
	Self-employed	27	27
	Unemployed	11	11
Mother's Occupation	Government Employee	51	51
	Housewife	49	49

F: Frequency, %: Percent

Results out of this table depict that father's age of (40-49) years old (58%) and mother's age (40-45) years old (39%); the majority of them is

urban area residents (97%) and coming from nuclear families (89%); government employees; (62%) for fathers and (51%) for mothers.

Table 2: Mean of Scores on Items of Parent's Responses Concerning Behavioral Feeding Domain

Behavioral feeding Items	Responses	F.	%	MS	RS	Ev.
My child always eats everything that exists in the dish in front of him.	Never	0	0	3.82	76.4	H
	Rarely	2	2			
	Sometimes	28	28			
	Mostly	56	56			
	Always	14	14			
When I save a favorite food for my child be good behavior.	Never	0	0	3.25	65	M
	Rarely	9	9			
	Sometimes	57	57			
	Mostly	34	34			
	Always	0	-			
I give to my child sweets (ice cream, cakes and biscuits) every day.	Never	4	4	2.97	59.4	M
	Rarely	33	33			
	Sometimes	28	28			
	Mostly	32	32			
	Always	3	3			
I give to my child fruit at every meal.	Never	73	73	1.33	26.6	L
	Rarely	21	21			
	Sometimes	6	6			
	Mostly	0	-			
	Always	0	-			
Ask my child when finishing his food to eat after that.	Never	0	0	3.56	71.2	M
	Rarely	8	8			
	Sometimes	34	34			
	Mostly	52	52			
	Always	6	6			
Give food to my child as custom times and regularly.	Never	0	0	3.46	69.2	M
	Rarely	8	8			
	Sometimes	40	40			
	Mostly	50	50			
	Always	2	2			
My child does not eat rather than his desire for the food provide	Never	0	0	3.37	67.4	M
	Rarely	9	9			
	Sometimes	48	48			
	Mostly	40	40			
	Always	3	3			
Save my child that doesn't eat a lot of sweets.	Never	0	0	3.6	72	M
	Rarely	4	4			
	Sometimes	38	38			
	Mostly	52	52			
	Always	6	6			
I used to keep different types of sweets and fruits in my house.	Never	0	0	3.44	68.8	M
	Rarely	5	5			
	Sometimes	49	49			
	Mostly	43	43			
	Always	3	3			
If I take my child too much, I'll be wasting his food in the next meal.	Never	0	0	3.49	69.8	M
	Rarely	3	3			
	Sometimes	47	47			
	Mostly	48	48			
	Always	2	2			

Ev. : Evaluation, L= Low (20 – 46.66), M= Moderate (46.67 – 73.33), H= High (73.34– 100), MS: Mean of Score; RS: Relative Sufficiency

The mean of scores on behavioral feeding domain items out of this table is moderate on (8) items, low (1) item and (1) high item.

Table 3: Mean of Scores on Items of Parent's Responses Concerning Healthy Feeding Domain

Healthy feeding Items	Responses	F.	%	MS	RS	Ev.
Most the food in House is health.	Never	0	0	4.67	93.4	H
	Rarely	0	0			
	Sometimes	0	0			
	Mostly	33	33			
	Always	67	67			
I'm not sure that my child eats food that contains fat.	Never	0	0	3.25	65	M
	Rarely	0	0			
	Sometimes	75	75			
	Mostly	25	25			
	Always	0	-			
Saving for my child healthy food in House.	Never	0	0	4.48	89.6	H
	Rarely	0	0			
	Sometimes	11	11			
	Mostly	30	30			
	Always	59	59			
I can adjust my intake of unhealthy food away from watching him.	Never	0	0	2.75	55	M
	Rarely	34	34			
	Sometimes	57	57			
	Mostly	9	9			
	Always	0	-			
I try to eat healthy food in front of my child so that I don't want.	Never	0	0	3.24	64.8	M
	Rarely	7	7			
	Sometimes	62	62			
	Mostly	31	31			
	Always	0	-			
Saving for my child's buffet of fresh fruit and vegetables.	Never	0	0	3.4	68	M
	Rarely	2	2			
	Sometimes	56	56			
	Mostly	42	42			
	Always	0	-			
Show my child I enjoy eating healthy food.	Never	0	0	4.29	85.8	H
	Rarely	0	0			
	Sometimes	18	18			
	Mostly	35	35			
	Always	47	47			

Ev. : Evaluation, L= Low (20 – 46.66), M= Moderate (46.67 – 73.33), H= High (73.34– 100), MS: Mean of Score; RS: Relative Sufficiency

The mean of scores on healthy feeding domain items out of this table is high on (3) items and moderate on the remaining ones.

Table 4: Mean of Scores on Items of Parent's Responses Concerning Guidance Feeding Domain

Guidance feeding items	Responses	F.	%	MS	RS	Ev.
If I don't systems and educate my child's food will eat more than they should.	Never	0	0	4.42	88.4	H
	Rarely	0	0			
	Sometimes	11	11			
	Mostly	36	36			
	Always	53	53			
I tell my child that healthy food tastes is OK.	Never	0	0	3.22	64.4	M
	Rarely	0	0			
	Sometimes	2	2			
	Mostly	74	74			
	Always	24	24			
Encourage my child that deals with a variety of	Never	0	0	4.4	88	H

foods.	Rarely	0	0			
	Sometimes	14	14			
	Mostly	32	32			
	Always	54	54			
If I don't systems my child food and educate he will take a lot of meals.	Never	0	0	4.38	87.6	H
	Rarely	0	0			
	Sometimes	12	12			
	Mostly	38	38			
If take my child little food I try to encourage them to eat more.	Always	50	50	3.24	64.8	M
	Never	0	0			
	Rarely	0	0			
	Sometimes	76	76			
Prevent my child from eating candies incorrectly.	Mostly	24	24	3.28	65.6	M
	Always	0	-			
	Never	0	0			
	Rarely	0	0			
I advise my child what to eat and what not to eat without explanation.	Sometimes	72	72	2.91	58.2	M
	Mostly	28	28			
	Always	0	-			
	Never	0	0			
Prevent my child from eating junk food.	Rarely	30	30	3.4	68	M
	Sometimes	50	50			
	Mostly	19	19			
	Always	1	1			
There are some foods you should my child's disinclination for it will pile up if ingested.	Never	0	0	3.32	66.4	M
	Rarely	1	1			
	Sometimes	68	68			
	Mostly	29	29			
Determine the type of food they eat my child to control weight.	Always	2	2	3.35	67	M
	Never	0	0			
	Rarely	9	9			
	Sometimes	52	52			
Help my child to eat certain foods nutritional benefit.	Mostly	34	34	4.15	83	H
	Always	5	5			
	Never	0	0			
	Rarely	0	0			
I don't let my child eating between meals because it will pile up.	Sometimes	27	27	3.22	64.4	M
	Mostly	31	31			
	Always	42	42			
	Never	0	0			
Am trying to manifest enthusiasm to my child about eating food that contains fewer calories (Balanced).	Rarely	8	8	3.37	67.4	M
	Sometimes	65	65			
	Mostly	24	24			
	Always	3	3			
	Never	0	0			
	Rarely	4	4			
	Sometimes	60	60			
	Mostly	31	31			
	Always	5	5			

Ev. : Evaluation, L= Low (20 – 46.66), M= Moderate (46.67 – 73.33), H= High (73.34– 100), MS: Mean of Score; RS: Relative Sufficiency

The mean of scores on guidance feeding domain items out of this table is high on (4) items and moderate on the remaining ones.

Table 5: Overall Evaluation of the Studied Main Domains of Parents' Responses Concerning the Feeding Practices

Main Domains	Frequency	GMS	PSD	Min.	Max.	Range	GRS	Ev.
Behavioral feeding domain	100	2.80	0.22	2.10	3.30	1.20	55.94	M
Healthy feeding domain	100	3.66	0.20	3.10	4.10	1.00	73.20	M
Guidance feeding domain	100	3.55	0.16	3.20	3.80	0.60	70.94	M
Overall Evaluation	100	3.33	0.11	3.10	3.57	0.47	66.69	M

Ev.: Evaluation, L= Low (20 – 46.66), M= Moderate (46.67 – 73.33), H= High (73.34– 100), GMS: Grand/Global Mean of Score; PSD: Pooled Standard Deviation; GRS: Grand/Global Relative Sufficiency

An overall evaluation with reference to the studied subjects concerning the evaluation of the parental feeding practices on autistic children,

results shows a moderate level barely border to the high evaluation level.

Table 6: Relationships between Parents' Socio-demographic Characteristics and the Feeding Practices Main Domains

Parents' Socio-demographic Characteristics	C.S. (*)	Behavioral Feeding	Healthy Feeding	Guidance Feeding	Overall Evaluation
Age Groups (Fathers)	C.C.	0.199	0.341	0.153	0.322
	P-value	0.250	0.004	0.493	0.009
Age Groups (Mothers)	C.C.	0.135	0.416	0.106	0.266
	P-value	0.605	0.000	0.769	0.055
Place of Residence	C.C.	0.031	0.098	0.184	0.055
	P-value	0.757	0.323	0.062	0.582
Family Types	C.C.	0.104	0.310	0.178	0.270
	P-value	0.294	0.001	0.070	0.005
Father's Education	C.C.	0.215	0.141	0.249	0.203
	P-value	0.680	0.958	0.470	0.743
Mother's Education	C.C.	0.261	0.220	0.286	0.392
	P-value	0.394	0.651	0.257	0.011
Father's Occupation	C.C.	0.230	0.086	0.085	0.059
	P-value	0.062	0.690	0.696	0.841
Mother's Occupation	C.C.	0.024	0.195	0.081	0.079
	P-value	0.814	0.047	0.416	0.426

(*) HS: Highly Significant at $P \leq 0.01$; S: Significant at $P \leq 0.05$; NS: Not Significant at $P > 0.05$

Results out of this table present that there is a significant relationship between healthy feeding and father's and mother's age, family type and mother's occupation. Further, there is a significant relationship between overall evaluation and family type and mother's education.

Discussion:

Discussion of the Distribution of the Sample Socio-demographic Characteristics

Investigation of such appearances presents that parents are middle age adults. Almost half of them are government employees and one fifth of

them has college education. The greater number of them is nuclear family members and living in urban areas (Table 1).

Table (1) shows those 100 mothers and 100 fathers who participated in this study. This result was consistent with Schoppe and his colleagues (2020) who reported that the sample was comprised of equal number of males and females. In the present study, the number of fathers' and mothers' is equal because of the selection criteria which include both parents who lived together in the same household ⁽⁷⁾.

In this study 39% of mothers who were aged between (40 _45) years with mean=36.63 years, and 58% of fathers who were aged between (40 _ 49) years with mean=40.31 years, Table (1). This result was incongruent with Marí-Bauset and his colleagues (2007) who found that the parents aged between 30-39 years with mean=37 years ⁽⁸⁾.

Table (1) indicated that the highest percentage of parents had bachelor's degree as their educational level, (23%) for fathers and (20%) for mothers. This result was congruent with Kheir and his colleagues (2020) who found that the majority of participants had bachelor's degree. The result of the current study may be due to those parents with high educational level having more awareness about autism and search for help and entering their children in rehabilitation centers for autism care ⁽⁹⁾.

The result of this study indicated those government employees; (62%) for fathers and (51%) for mothers; 49% of mothers and 38% of fathers were unemployed. This result was consistent with Kheir and his colleagues (2020) who reported that the majority of the respondents held professional jobs ⁽⁹⁾.

(Table,1) shows that the greater amount of them is nuclear family members (89%) and living in urban areas (97%). This may be explained by the study which was conducted in Baghdad City, and all centers for autism care were located in the center of city. This result was consistent with Schoppe and his colleagues (2020) who reported that all their participants were belonging to urban domicile ⁽⁷⁾.

Discussion the Overall Evaluation of the Studied Main Domains of Parents' Responses Concerning the Feeding Practices

Such an overall evaluation depicts that all the domains of parents' feeding practices of behavioral feeding, healthy feeding and guidance feeding are moderate (Table 5). This level of evaluation is very obvious in the moderate and low mean of scores on items of behavioral feeding domain (Table 2); high and moderate mean of scores on items of healthy feeding domain (Table 3) and high and moderate mean of scores on items of guidance feeding (table 4).

Given' the part of parental feeding' practice in founding children's consumption conducts, understanding foundations of individual alterations in feeding' performs is significant. A training examines the role of some mental variables (i.e., parents perceived responsible for child's intake, parental insights of the child's mass, and parents' private eating decorations) in individual's differences' in a change of feeding applies in France and the United States. Parents of kindergarten-aged children comprehensive studies in a cross sectional training. Double cultural circumstances (i.e., United' States, n=97, parents; and France' n=122 parent) are involved to evaluate the irritable-cultural generalizable of the results. Checking was associated with parents' perceived responsible for child's intake, parental restrained eating, and parents' desire for their child to be thinner, especially in France. Restraint for weight causes is more prevailing' in France and was

related with parents' professed duty for Childs' ingestion, insight of child's body' bulk, and parents restrain consumption. Parentally used of nutrition for non-nutritive resolves is more prevailing's in the United States and were connected with parental' unrestrained or emotive eating'. Lastly, parents' apparent responsibility for child consumption is strong which is related to child regulator over feed, instruction about nutrition's, encouragement of stability, and variability and showing. These relations between mental variables and parents feeding practice shed the light on the foundations of individual's alterations in feeding' performs and suggest likely opportunities for interference when nourishing practices' are suboptimal ⁽¹³⁾.

A study was conducted in New Zealand to evaluate the relationship among dietary behaviors' of problems', nutritional intakes and parents feeding' practice for overweight children age 4-8 years. Members were employed for lifestyle interference (n 203). In essence, the body mass' index was measured for children' and parents' who finished comprehensive forms about the feed practice they use, for the dietary behaviors of their children expression, and the diets their children eat. An elaborate eat scale was industrialized and association were resolute by using correlation' and regression' analysis, which include connections. Healthy consumption leadership and checking by parents were associated to the consumption of less unhealthy diets ($B=-0.4$, $P=0.001$ and $B=-0.4$, $P<0.001$). Converse, an absence of parental controller (child regulator) was related to an advanced eating of unhealthy nutriment (B = 0.5, $P<0.001$). Parentages of children who stood busy eaters checked their child's diet intake fewer ($P<0.001$) and allowable the child additional freedom above what s/he ate ($P<0.001$). These children expended less fruit and vegetable' than those who were not elaborate eaters' ($P<0.001$). Though, elaborate eater with food limiting parents ate extra fruit and vegetable, ($B=2.9$, $P<0.001$). These outcomes suggest that a more organized diet setting might be useful for the food and diet behaviors of early overweight children' ⁽¹²⁾.

Though, elaborate eater with food limiting parents ate extra fruit and vegetable, ($B=2.9$, $P<0.001$). These outcomes suggest that a more organized diet setting might be useful for the food and diet behaviors of early overweight children' ⁽¹⁰⁾.

Discussion the Relationships between Parents' Socio-demographic Characteristics and the Feeding Practices Main Domains

Throughout the course of data analysis, the study findings depict that healthy feeding practices are affected by father's and mother's age, family type and mother's occupation (table 6). Such findings can be interpreted in a way that the older the parents the better are the feeding practices and the older the age of marriage the better the feeding practices. Furthermore, being parents of nuclear family increases the opportunity of presenting much better feeding practices and being housewife is presenting greater chance for best feeding practices.

A study has verified if: (1) parents feeding' practice differed by society, (2) parents force to have and parental constraint were associated with obese levels, and (3) to examine the association between parents feeding' practice and child obese with socio-economic status. Operational equations forming was showed to test the models in (267) children age (7-12) years self-known as African' American', European American', or Hispanic American after economic diverse circumstances. Double energy X-ray absorptiometry and calculated tomography skimming were castoff to determine body structure and abdominal overweight distribution, correspondingly. Parental restraint is a significant analyst of child obese while parental burden to eat has converse relationships with child obese. HA parents' report

knowingly higher levels of restrictions and pressures to have, while EA parents described the lowest'. SES was associated with child obese and inversely linked to parental control and forces to eating. Therefore, parental nourishing practice' differs across national groups and SES and may subsidize to people differences in child obesity ⁽¹¹⁾ ⁽¹⁴⁾.

Conclusions:

The present study concludes that: Overall evaluation of the domains of parents' feeding practices of behavioral feeding, healthy feeding and guidance feeding shows that such practices have experienced moderate level of performance; The study confirms that the older the parents the better are the feeding practices. Besides, being parents of nuclear family increases the prospect of presenting much better feeding practices and being housewife is presenting greater coincidental for the best feeding practices; and the study approves that parents' behavioral feeding practices are pretentious by absence/presence of autism child and the guidance feeding practices are inclined by child's diagnosis with autism

Recommendations:

The study recommends that; parent of autism kids should be very well oriented and greatly aware about the significance of feeding practices. So, an education database can be planned, constructed and applied for such purpose; Families of autism children would be supported in order to assist them for dealing well with such public wellbeing problem; and additional research studies can be approved out with respect to big sample size and wide range variables, particularly, national studies.

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