

Development of a Scale for Assessing Fussy Eating Behaviour in Children

MEHWISH JABEEN
UMAIZA BASHIR

*Institute of Clinical Psychology
University of Management and Technology, Lahore, Pakistan
mehwishjabeen@gmail.com*

Abstract

This study aimed to investigate fussy eating behaviour in 3-9-year-old children by developing a new scale to assess its true nature in our culture. By exploring phenomenology among indigenous individuals, a scale for fussy eating behaviour was created. For this purpose, a group of people who have or are experiencing this problem (fussy eating) were asked to express their thoughts and feelings, and respond to it. Afterwards, expert's validation process involved five experts. The next stage involved creating a league table and finalizing scale's items by removing the outliers from the item list. So the final list of fussy eating behaviour scale has 37 items in total. By running factor analysis, a total of two factors "Behavioural Responders" and "General Attitude" were extracted from the fussy eating behaviour scale. The psychometric properties were revealed to be acceptable with Cronbach alpha 0.93 and test retest $r = .79$ and valid a scale with acceptable psychometric properties. The study found that fussy eating behaviour is more common in girls and in early childhood. It is also more likely to be displayed in children with more siblings. However, there were no differences between clinical and non-clinical populations. To increase reliability, fathers should also be included in interviews, as mothers may sometimes overstate their children's eating issues. More research is needed to confirm the norms of the scale and make it more practically useful.

Keywords: fussy eating behaviour, children, reliability, validity

1. INTRODUCTION

Fussy eating is a habit in which an individual has intake of an insufficient variety of food by saying no to a considerable amount of familiar as well as unfamiliar food. The problem is particularly important for the reason that the human brain requires a significant amount of energy and nutrients. Any modification in nutrient or energy intake in humans can impact brain chemistry as well as the functioning of nerves within the brain. The level of neurotransmitters which are brain chemicals can be influenced by our dietary practices (Minddisorders.com, 2015).

The Children's Defense Fund reports that inadequate access to proper nutrition considerably increases the chances of psychological disorders such as anxiety or learning disabilities in children. Consequently, these children are at a greater risk of needing mental health counseling (Fleck, 2015). In the past, research on eating behaviours has mainly focused on eating disorders rather than disordered eating behaviours. Although research on disordered eating behaviours is still limited, there has been a gradual shift in emphasis towards studying these behaviours in the past

years, especially in Western literature (Muazzam, 2009). Earlier, fussy eating behaviour was often categorized as an eating disorder and given names such as "infantile anorexia nervosa" or "sensory food inversion." etc. (Chatoor, 2002).

Recent studies have suggested that fussy eating behaviour in young children may be linked to general psycho-pathology or emotional-behavioural problems such as learning disabilities, depression, schizophrenia, and anxiety, rather than being a precursor to an eating or feeding disorder (Jacobi, Schmitz, & Agras, 2008). Though, extensive research had been done on fussy eating behaviour in the West, unfortunately, this issue has been generally neglected in the Pakistani society. Regrettably, no studies have been conducted on this important problem in Pakistan until now.

2. MATERIAL AND METHODS

The scale, Fussy Eating Behaviour (FEB) was developed in three stages:

Stage I: Exploring Phenomenology

In this stage, data was collected from 20 mothers, which consists of 45 complaints regarding the fussy eating behaviour of their children. Half of the participants were from a self-referred clinical population and the other half were from the general population. Then the exact verbatim of mothers was gathered and compiled into a list. This list was carefully examined to eliminate repeated and overlapped statements. Moreover, any vague verbatim was highlighted and modified to closely bear a resemblance to the original statements. So in the end a list of 40 fussy eating behaviour problems was formed.

Stage II: Expert Validation

During this stage, expert validation was conducted by asking 7 professionals, including nutritionists and child specialists, with a minimum of 2 years of experience dealing with fussy eating behaviour to rate the frequency of each of the 40 identified problems using a 3-point rating scale ranging from 0 ("not at all") to 3 ("extremely common").

A league table was then created based on the frequency ratings given by the experts. Any items that received an average score of less than 20% were excluded from the list. As a result, the final list of fussy eating behaviour consisted of 37 items that received higher average scores from the experts.

Pilot Study: The goal of this particular stage is to establish the reliability and validity of the scales. This scale utilizes a four-point rating system, with "0" indicating "never" and "3" indicating "often" and font and formatting of the scale is carefully chosen to ensure user-friendliness.

The sample of 40 participants was stratified into clinical and non-clinical populations, and they were interviewed to complete the questionnaire. The participants in the pilot study were informed about the purpose and goals of the study, as well as their rights, such as the right to withdraw and the assurance of confidentiality. Then they were asked to rate the extent to which each problem bothered them.

Stage III: Psychometric Properties

This study utilized stratified random sampling to divide participants according to gender and clinical status (self-referred) versus non-clinical status. The number of participants was determined based on the total number of items in the scale (multiplied by 3 or 5) and the feasibility of approaching parents. Efforts were made to include an

equal number of boys and girls to reduce the risk of gender bias, as well as an equal number of clinical and non-clinical participants to ensure comparable data. The study included mothers of children aged 3 to 9 years and excluded mothers whose children fell outside of this age range, as well as those who participated in the pilot study.

The study included 300 mothers with children aged 3-9 years from both clinical and non-clinical settings. The total number of participants was determined based on the number of items in the Fussy Eating Behaviour Scale (FEBS) (that is 1 item x 5 participants) and the feasibility factor. This scale consists of 37 four-point rating items (Never, Rarely, Sometimes, and Often). The FEBS showed acceptable psychometric properties with a Cronbach alpha of 0.93 and test-retest reliability of $r = 0.79$. Two factors, "Behavioural Responders" and "General Attitude," were extracted from the scale, and all 37 items were included in the final version. Data collection took place from June 2016 to July 2016.

Sample Description.

Table 1: Demographic Characteristics (Gender, Age, Class) of the Participants (N=300).

Variables	Boys <i>f</i> (%)	Girls <i>f</i> (%)	Clinical <i>f</i> (%)	Non-clinical <i>f</i> (%)	Total <i>f</i> (%)
Gender	150 (50)	150 (50)			
Boys			75 (25)	75 (25)	150 (50)
Girls			75 (25)	75 (25)	150 (50)
Age					
Early childhood (3-5)	79 (52)	87 (58)	78 (52)	88 (58)	166 (55)
Late childhood (6-9)	71 (47)	63 (42)	72 (48)	62 (41)	134 (45)
Class					
Preschool	3 (2)	6 (4)	3 (2)	6 (4)	9 (6)
Nursery-Grad 2	109 (73)	102 (68)	106 (70)	105 (70)	211 (70)
Grad 3-Grad 5	38 (25)	42 (28)	41 (27)	39 (26)	80 (27)

Note. *f* = Frequency, % = Percentage

Table 1 displays an even distribution of participants in terms of gender and clinical versus non-clinical settings. Out of 300 children, 79 boys and 87 girls were in early childhood, while 71 boys and 63 girls were in late childhood. The table also shows that more participants were in the early childhood group than in the late childhood group, regardless of their clinical status. Moreover, there were only a small number of preschool-aged participants, and the majority were in Nursery to Grade 2 classes across both settings.

Table 2: Demographic Characteristics (Birth order, Family System, Family Size) of the Participants (N=300)

Variables	Boys <i>f</i> (%)	Girls <i>f</i> (%)	Clinical <i>f</i> (%)	Non-clinical <i>f</i> (%)	Total <i>f</i> (%)
Birth order					
1 st born	61 (41)	64 (42)	57 (38)	68 (45)	125 (41)
2 nd born	25 (17)	25 (17)	27 (18)	23 (15)	50 (16)
Middle born	23 (15)	26 (17)	35 (23)	14 (9)	49 (16)
Last born	41 (27)	35 (23)	31 (20)	45 (30)	76 (25)
Family system					
Nuclear	83 (55)	96 (64)	99 (66)	80 (53)	179 (60)
Joint	67 (45)	54 (36)	51 (34)	70 (46)	121 (40)
Family size					
3-5 persons family	43 (29)	52 (35)	51 (34)	44 (29)	95 (32)

6-8 persons family	67 (45)	59 (39)	62 (41)	64 (41)	126 (42)
9 and above persons family	40 (27)	39 (26)	37 (24)	42 (28)	79 (26)

Note.f = Frequency, % = Percentage

Table 2 shows data representing that in both groups of gender, the number of first-born children (125) exceeded those who were second-born (50), middle-born (49), and last-born (76). This trend was similar in both settings clinical and nonclinical. The data also revealed that nuclear family systems (179) were more prevalent than joint family systems (121), with the majority of families consisting of 6-8 persons (126).

Table 3: Demographic Characteristics (Mother’s age, Income, Mother’s Qualification) of the Participants (N=300)

Variables	Boys f(%)	Girls f(%)	Clinical f(%)	Non-clinical f(%)	Total f(%)
Family Income					
1000-50000	39 (26)	48 (32)	38 (26)	49 (32)	87 (29)
50000-100000	76 (47)	64 (42)	61 (27)	77 (51)	138 (46)
100000 and above	37 (25)	38 (25)	51 (34)	24 (16)	75 (25)
Mother’s Age					
Early adulthood (20years-30years)	80 (53)	90 (60)	75 (50)	95 (63)	170 (57)
Middle Late adulthood (31years-65years)	70 (47)	60 (40)	75 (50)	55 (36)	130 (43)
Mother’s qualification					
Illiterate	18 (12)	31 (21)	25 (16)	24 (16)	49 (16)
School/College	73 (49)	80 (53)	65 (43)	88 (58)	153 (51)
University	59 (39)	39 (26)	60 (40)	38 (25)	98 (33)

Note.f = Frequency, % = Percentage

According to Table 3, the majority of families reported a monthly income between 10000-50000 (170), with 130 participants reporting an income of 50000-100000 and only 75 participants reporting an income of 100000 and above. The number of mothers in early adulthood (170) exceeded the number of mothers in late adulthood (130). Additionally, the table indicates that the ratio of mothers who attended school/college (153) is higher than those who attended university (98) or are illiterate (49).

Table 4: Demographic Characteristics (Mother’s Profession, Father’s Age, Father’s Qualification) of the Participants (N=300)

Variables	Boys f(%)	Girls f(%)	Clinical f(%)	Non-clinical f(%)	Total f(%)
Mother’s Profession					
Working	62 (41)	52 (35)	60 (40)	54 (36)	114 (38)
Non-Working	88 (59)	98 (65)	90 (60)	96 (64)	186 (62)
Father’s age					
Early adulthood (25years-35years)	81 (54)	93 (62)	76 (50)	98 (65)	174 (58)
Middle adulthood (36years-65years)	69 (46)	57 (38)	74 (48)	52 (34)	126 (42)
Father’s qualification					
Illiterate	12 (8)	23 (15)	22 (14)	13 (8)	35 (11)
School/College	65 (43)	66 (44)	63 (42)	68 (45)	131 (43)
Secondary	73 (49)	61 (41)	65 (43)	69 (46)	134 (44)

Note.f = Frequency, % = Percentage

From the data given in Table 4, it is evident that there were more non-working mothers (114) than working mothers (186). Additionally, the number of fathers in early adulthood (174) exceeded those in late adulthood (126). Also, the ratio of fathers who were illiterate (35) was lower than those who attended school/college (131) or university (134).

Table 5 Demographic Characteristic (Relationship of child with mother) of the Participants (N=300)

Variables	Boys <i>f</i> (%)	Girls <i>f</i> (%)	Clinical <i>f</i> (%)	Non-clinical <i>f</i> (%)	Total <i>f</i> (%)
Relationship of child with mother					
Satisfactory	131 (87)	115 (77)	119 (80)	127 (84)	246 (82)
Satisfactory to some extent	15 (10)	32 (21)	26 (17)	21 (14)	47 (16)
Unsatisfactory to some extent	1 (1)	2 (1)	2 (1)	1 (1)	3 (1)
Unsatisfactory	3 (2)	1 (1)	3 (2)	1 (1)	4 (1)

Note. *f* = Frequency, % = Percentage

Table 5 indicates that the data was equally distributed among clinical, non-clinical, and gender groups. Specifically, the clinical group comprised 150 participants, evenly divided between boys (75) and girls (75), and the same distribution applied to the non-clinical group. Additionally, a large number of mothers (246) reported that their relationship with their children was satisfactory, whereas fewer reported their relationship to be satisfactory to some extent (42), unsatisfactory to some extent (3), or unsatisfactory (4)

RESULTS

Factor Analysis of Fussy Eating Behaviour Scale (FEBS)

Factor analysis was done for the reason to identify how the scale works. Factor analysis is a tool that helps in understanding the construct being measured by a scale (Khan, 2006). Thus factor analysis aids to measure inter-item correlation. To assess the factorial validity of this indigenous scale, a principal component analysis was conducted on the data collected from 300 participants, followed by a Varimax rotation. For defining the number of factors to retain in the scale, a test was conducted to confirm that the Eigenvalue was greater than 1. Likewise, the Eigenvalues were examined on a Scree plot to identify the structure of the factors.

The psychometric properties of the scales, including the item-to-total correlation and internal consistency alpha, were also evaluated. Additionally, this section will determine the prevalence rate and percentage of the sample's responses for the Fussy Eating Behaviour Scale (FEBS).

Psychometric properties and factor analysis of Fussy Eating Behaviour Scale (FEBS).

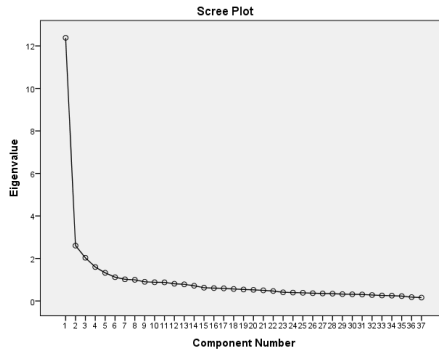


Figure 1: a SCREE plot depicting the extraction of factors of the Fussy Eating Behaviour Scale (FEBS) on 300 participants.

In Figure 1, the FEBS scale is depicted with two factors and cross-loading items of .30 or above. All 30 items were included in the list as their loading was above .30. The factor extraction process lead to the identification of two factors considering their theme and content. Factor one contained 16 items while factor two contained 21 items.

Table 6: The Factor Structure of 37 items of Fussy Eating Behaviour Scale (FEBS) with Varimax Rotation

Item No	Factor 1	Factor 2
1	.73	
2	.71	
29	.69	
24	.68	
28	.65	
4	.65	
15	.63	
5	.63	
19	.63	
8	.65	
12	.61	
18	.61	
26	.56	
27	.56	
10	.43	
14	.33	
20		.61
31		.61
33		.61
35		.60
32		.59
30		.58
11		.56
34		.56
17		.55
9		.52
7		.52
21		.51
6		.51
37		.48
16		.48
25		.46

22	.44
13	.43
36	.42
23	.38
3	.38

Note. Factor loading $>.30$ have being boldfaced. All those items with negative loading their polarity have changed subsequently.

Table 7: Eigen Values and Variance Explained by 2 factors of Fussy Eating Behaviour Scale (FEBS)

Factors	Eigen Values	% of Variance	% of Total Variance
1	7.69	20.79	20.79
2	7.29	19.71	40.50

Table 7 represents the two-factor structure of FEBS, which is also shown in the Scree plot. The given eigenvalues specify that the two factors accounted for 40.50% of the variance, with the first factor having an eigenvalue of 7.69 and the second factor having an eigenvalue of 7.29. Factor 1 explained 20.79% of the variance while factor 2 explained 19.71% of the variance.

After studying each item in depth corresponds to each factor and its theme. Factors were labeled carefully so their labels reveal their respective themes.

Factor 1: General Attitude

The first factor of the scale consisting of 16 items was named ‘general attitude’ because the items in this factor relate to the internal negative mindset or attitude that children have towards food or mealtime. For example, it comprises behaviours such as focusing more on play than on food during mealtime or refusing to eat homemade food etc.

Factor 2: Behaviour responders

The second factor of the scale consisting of 21 items was named ‘Behaviour responders’ for the reason that its items were depicting a common theme of actions of children with fussy eating behaviour for instance skipping breakfast or refusing to eat healthy food like dairy, fruits and vegetables etc.

Internal consistency of the Fussy Eating Behaviour Scale (FEBS)

To measure the internal consistency of the 37 items in FEBS, the Alpha Coefficient was calculated.

Table 8: Cronbach Alpha of 2 factors and Total of FEBS

Factors	No of items	Cronbach Alpha
General Attitude	16	.90
Behaviour Responders	21	.89
Total FEBS Scores	37	.93

Table 6 specifies that FEBS shows a high level of internal consistency. The calculated Cronbach Alpha for the factors of the scale also revealed a high level of internal consistency for the items within each factor. The values shown in the table above reveal that all the items were homogeneous.

Inter-factor Correlation

To find out the association between the two factors of the Fussy Eating Behaviour Scale (FEBS) and the total score of FEBS, an inter-factor correlation was computed.

Table 9 Summary of Inter-factor Correlation, Mean and Standard Deviation on 2 Factors and Total of Fussy Eating Behaviour Scale (FEBS)

Factors	M (SD)	Factor 1	Factor 2	Total FEBS
General Attitude	29.18 (9.40)		.67***	.90***
Behaviour Responders	30.38 (11.37)			.92***
Total FEBS	60.43 (19.23)			

Note. df= 299, *p<0.05, **p<0.01, ***p<0.001, ns= not significant

Table 9 displays a significant correlation between the two factors of FEBS and the Total Scores. The mean values reveal that the most commonly reported factor by the mothers was Behaviour Responders with a mean score of 30.38 (SD 11.37), followed by General Attitude with a mean score of 29.18 (SD 9.40).

Split-half Reliability

Scale was divided in terms of odd and even item numbers to examine its split half reliability.

As FEBS consists of a total of 37 items, this division divided it into two parts with the first part containing 18 items and the second part containing 17 items. The analysis depicts that the reliability value for the first half was .89 and the reliability value for the second half was .86. The total split-half reliability was .93, indicating a high correlation between the two parts.

Test-Retest Reliability

To assess the test-retest reliability of FEBS, 20 participants were administered the scale again after a one-week interval. The obtained correlation of r=0.79 (p<0.001) was considered acceptable.

Prevalence of Fussy Eating Behaviour (FEB)

The prevalence of Fussy Eating Behaviour (FEB) in children between the ages of 3-9 years, as categorized into mild, moderate, and severe, was calculated by evaluating the frequency of problems related to fussy eating behaviour in children, as itemized on the two factors of the Fussy Eating Behaviour Scale (FEBS).

Table 10 Percentile Points and Raw Scores on the two factors and the total of Fussy eating Behaviour Scale (FEBS)

Percentile Points	Factor I	Factor II	Total
10	17	14	31
20	20	19	39
30	23	23	46
40	27	28	55
50	31	32	63
60	33	34	67
70	35	38	73
80	37	40	77
90	42	44	86

Note. Factor I= General Attitude, Factor II=Behaviour Responders

Table 10 depicts the percentile scores for both factor scores and the total of the Fussy Eating Behaviour Scale (FEBS), which represents the severity level of the problem. The results show that the number of mothers who reported factor two (behaviour responders) exceeds the number of mothers who reported factor one (general attitude). Based on the above information, the three categories that would be used to evaluate the prevalence of Fussy Eating Behaviour in children in our culture are mild, moderate, and severe, as determined by the total score of FEBS

Table 11 Percentage of Sample (N=300) falling on 'Mild', 'Moderate', and 'Severe' Categories on the Total Score of Fussy Eating Behaviour Scale (FEBS)

	Mild %	Moderate %	Severe %
Total FEBS	49.0	33.0	18.0

The table above indicates that among the 300 participants, 49% of mothers reported their children as exhibiting mild fussy eating behaviour, 33% reported moderate fussy eating behaviour, and 18% reported severe fussy eating behaviour.

3. RESULTS AND DISCUSSION

The aim of this study was to examine Fussy Eating Behaviour in children between the ages of 3-9 years, as it is a prevalent issue in our society. For this purpose, the researchers aimed to develop an indigenous scale that would precisely assess the true nature of Fussy Eating Behaviour and explore how it manifests in our culture. Fussy eating behaviour is a factor that impacts all aspects of a child's life, including biology, psychology, and sociology.

Although there are plenty of studies on fussy eating behaviour in Western cultures, this topic has received little attention in our culture, consequently, there is a lack of data and indigenous tools to assess and manage this problem. For that reason, the objective of this research is to address this gap by developing a culturally relevant tool to assess and manage fussy eating behaviour, which is of great concern to caregivers, particularly mothers.

The study tested quite a few demographic variables including gender, age, number of siblings, birth order, family system, family income, mother's age, mother's education, and mother's profession.

The literature on the topic of gender and fussy eating behaviour presents conflicting information. While some researchers depict that there is no difference between boys and girls, others suggest that boys may be a little more vulnerable to fussy eating than girls, while still, others report the opposite. (Cardona Cano et al., 2015, Moroshko & Brennan, 2012, Blissett, Meyer, Farrow, Bryant-Waugh, & Nicholls, 2005). According to research, fussy eating behaviour has a high occurrence in first-born children compared to those born later and typically decreases with age. (Cardona Cano et al., 2015). Moreover, with regard to socioeconomic status, most researchers have concluded that fussy eating behaviour is more common in people from lower socioeconomic backgrounds (Hafstad, Abebe, Torgersen, & Soest, 2013). Regarding the number of siblings, research suggests that maternal stress can be a cause or a result of fussy eating. Therefore, with an increase in the number of children, maternal stress also increases, which may lead to fussy eating behaviour in children (Amato, 2005).

The major finding of the study is the prevalence of Fussy Eating Behaviour among children in Pakistan. Child development and risk factors that hinder growth has been extensively researched for years. This is because the first few years of life are critical for a vital development in all domains (Jan, 2014). Fussy eating is closely associated with various behavioural issues for instance anxiety, psychosocial problems, and parental stress etc, during a child's early years (Cardona Cano et al., 2015)

Several factors may contribute to the high prevalence of fussy eating behaviour, such as mothers' excessive concern for their children due to their own personality traits or the fact that children between the ages of 3 and 9 have just begun to express their rejection verbally, causing mothers to perceive fussy eating more strongly. As a result, children who exhibit only a few features of fussy eating behaviour may be classified as fussy eaters.

The sample under study was divided into clinical and non-clinical populations, so the comparison between the two groups is a key finding. The results showed that there was no difference in the manifestation of fussy eating behaviour in children in clinical and non-clinical settings.

This study indicates no major gender differences in fussy eating behaviour, but a slight difference was observed in which fussy eating behaviour was slightly more prevalent in girls than boys. There could be many explanations for this finding. It has been examined that parents exert more control over girls' eating habits than boys, and this pressure on eating could lead to fussier eating behaviour in girls (Blissett, Meyer, Farrow, Bryant-Waugh, & Nicholls, 2005). Furthermore, in our society, there is a widespread fashion of slim body size for girls, which often makes mothers more worried about their daughters' eating habits, and over-involvement in their child's food choices can also increase the fussy eating behaviour (Blissett, Meyer, Farrow, Bryant-Waugh, & Nicholls, 2005). Additionally, girls have to go through an energy-consuming process of childbearing and lactation, which could make mothers more mindful of their daughters' health from an early age.

The study also revealed that there is only a small variance in the manifestation of fussy eating behaviour in children when we compare different age groups. Though, there is a marginally higher occurrence of fussy eating in early childhood, which is consistent with previous research representing that fussy eating tends to fade away as children grow (Chatoor, 2002). The evolutionary advantage of being a fussy eater in toddlers may be that it reduces the risk of ingesting unsafe food. As the child's cognitive development progresses, they are able to differentiate between safe and dangerous foods, and their food choices expand. However, when this process is disrupted, persistent fussy eating may develop (Breen, Plomin, & Wardle, 2006). Additionally, mothers tend to pay more attention to the needs of younger children and be more protective of them. They may use emotional-focused coping strategies more often with younger children because their cognition is not yet fully developed, making it more challenging for them to understand their emotions.

In addition, the research findings suggest that the number of siblings a child has does not have a significant impact on the child's tendency to exhibit fussy eating behaviour.

4. CONCLUSION

This article provides a unique contribution by highlighting this important issue and coming up with a tool to measure it. Fussy eating behaviour among children is a

prevailing issue in our society. It has been concluded that girls exhibit this behaviour more than boys, and it is more common in early childhood than in later stages. Additionally, children with more siblings tend to display fussy eating more often than those with fewer siblings or none at all.

The data for developing the scale was collected from only one city, further research with samples from different cities is necessary to increase generalizability. Furthermore, to increase reliability in future studies fathers should be part of interviews too as mothers tend to be more concerned about anything related to their children, and feeding them is one of their primary concerns. As a result, mothers may sometimes overstate the eating issues of their children while discussing them. Therefore, interviewing fathers could be advantageous for studies to verify the information provided by mothers. Moreover, to make this scale practically more valuable and useful more researches with a similar problem are needed in order to confirm the norms of this scale.

REFERENCES

1. Alice, H., Eagly, Steffen and Valerie, J. (1986). Gender and aggressive behaviour: A meta-analytic review of the social psychological literature, *Psychological Bulletin*, 100(3), 309-330.
2. Amato, P. R., (2005). The impact of family formation change on the cognitive, social, and emotional well-being of the next generation. *The Future of Children*, 15(2), 75-96.
3. Ballenger, J. (2009). Depression and Generalized Anxiety Disorder: Cumulative and Sequential Comorbidity in a Birth Cohort Followed Prospectively to Age 32 Years. *Yearbook of Psychiatry and Applied Mental Health*, 2009, 214-215.
4. Batsell, R.W., Brown, A.S., Ansfield, M.E., and Paschall, GY. (2002) "You Will Eat All of That!": A Retrospective Analysis of Forced Consumption Episodes. *Appetite*. 38 (3), 211-219.
5. Blissett, J., Meyer, C., Farrow, C., Bryant-Waugh, R., & Nicholls, D. (2005). Maternal core beliefs and children's feeding problems. *Int. J. Eat. Disorder*. 37(2), 127-134.
6. Breen, F., Plomin, R., & Wardle, J. (2006). Heritability of food preferences in young children ☆. *Physiology & Behaviour*, 88(4-5), 443-447.
7. Brown, A. & Lee, M. (2011). An exploration of experiences of mothers following a baby-led weaning style: developmental readiness for complementary foods. *Maternal & Child Nutrition*, 9(2), 233-243.
8. Cardona Cano, S., Tiemeier, H., Van Hoeken, D., Tharner, A., Jaddoe, V., & Hofman, A. et al. (2015). Trajectories of picky eating during childhood: A general population study. *Int. J. Eat. Disord.*, 48(6), 570-579.
9. Chatoor, I. (2002). Feeding disorders in infants and toddlers: Diagnosis and treatment. *Child and Adolescent Psychiatric Clinics of North America*, 11(2), 163-183. doi:10.1016/s1056-4993(01)00002-5
10. Dellava, J. E., Trace, S. E., Strober, M., Thornton, L. M., Klump, K. L., Brandt, H., Bulik, C. M., et al. (2011). Retrospective Maternal Report of Early Eating Behaviours in Anorexia Nervosa. *European Eating Disorders Review Eur. Eat. Disorders Rev.*, 20(2), 111-115. doi:10.1002/erv.1153
11. Denial G. & Jacob A. (2012). Perception of picky eating among children in Singapore and its impact on caregivers: a questionnaire survey, 11(1): 5. doi: 10.1186/1447-056X-11-5
12. Dovey, T., Staples, P., Gibson, E., & Halford, J. (2008). Food neophobia and 'picky/fussy' eating in children: A review. *Appetite*, 50(2-3), 181-193.
13. Farrow, C. & Blissett, J. (2006). Maternal cognitions, psychopathologic symptoms, and infant temperament as predictors of early infant feeding problems: A longitudinal study. *Int. J. Eat. Disord.*, 39(2), 128-134.
14. Fleck, A. (2015). Children with Poor Nutrition. Healthy Eating | SF Gate. Retrieved 9 August 2015, from <http://healthyeating.sfgate.com/children-poor-nutrition-6555.html>
15. Jacobi, C., Schmitz, G., & Agras, W. (2008). Is picky eating an eating disorder?. *Int. J. Eat. Disord.*, 41(7), 626-634.
16. Galloway, A., Fiorito, L., Francis, L., & Birch, L. (2006). 'Finish your soup': Counterproductive effects of pressuring children to eat on intake and affect. *Appetite*, 46(3), 318-323.
17. Goh, D. & Jacob, A. (2012). Perception of picky eating among children in Singapore and its impact on caregivers: a questionnaire survey. *Asia Pacific Family Medicine*, 11(1), 5.
18. Gull, S. & Mahmood, K. (2015). Life Satisfaction among Working and Non-working Women. *European Journal of Research in Social Sciences*, 3(1), 2056-5429. Retrieved from <http://www.idpublications.org/wp-content/uploads/2014/10/Life-Satisfaction-among-Working-and-Non-working-Women-Full-Paper.pdf>
19. Hafstad, G., Abebe, D., Torgersen, L., & von Soest, T. (2013). Picky eating in preschool children: The predictive role of the child's temperament and mother's negative affectivity. *Eating Behaviours*, 14(3), 274-277.

20. Kahn, J. H. (2006). Factor analysis in counseling psychology research, training, and practice: Principles, advances and applications. *The Counseling Psychologist*, 34, 684-718.
21. Kreipe, R. & Palomaki, A. (2012). Beyond Picky Eating: Avoidant/Restrictive Food Intake Disorder. *Current Psychiatry Reports*, 14(4), 421-431.
22. Kristeller, J. & Wolever, R. (2010). Mindfulness-Based Eating Awareness Training for Treating Binge Eating Disorder: The Conceptual Foundation. *Eating Disorders*, 19(1), 49-61. <http://dx.doi.org/10.1080/10640266.2011.533605>
23. Mascola, A., Bryson, S., & Agras, W. (2010). Picky eating during childhood: A longitudinal study to age 11 years. *Eating Behaviours*, 11(4), 253-257.
24. McLeod, S. (2015). Stress management. Retrieved August 25, 2016, from <http://www.simplypsychology.org/stress-management.html>
25. Minddisorders.com., (2015). Nutrition and mental health - children, causes, functioning, effects, therapy, person, people, used. Retrieved 9 August 2015, from <http://www.minddisorders.com/Kau-Nu/Nutrition-and-mental-health.html>
26. Moroshko, I. & Brennan, L. (2012). Maternal controlling feeding behaviours and child eating in preschool-aged children. *Nutrition & Dietetics*, 70(1), 49-53. <http://dx.doi.org/10.1111/j.1747-0080.2012.01631.x>
27. Pliner, P. & Pelchat, M. (1986). Similarities in food preferences between children and their siblings and parents. *Appetite*, 7(4), 333-342.
28. Ramos-Paúl, R., J. Marriage, B., Ruiz Debeza, R., Oliveros Leal, L., Ros Mar, L., Torres Cardona, L., & A. Williams, J. (2014). Impact of Picky Eating on Level of Family Stress in Healthy Children between the Ages of 3 and 6 Years. *TONUTRJ*, 8(1), 13-18.
29. Rocío R., Barbara J. M., Roberto R. D., Liliana O. L., Luis R.M., Luis T. C. and Jennifer A. W. (2014). Impact of Picky Eating on Level of Family Stress in Healthy Children between the Ages of 3 and 6 Years, *The Open Nutrition Journal*. 8: 13-18. DOI: 10.2174/1874288201408010013
30. Saleem, S. & Mehmood, Z. (2011). Development of a Scale for Assessing Emotional and Behavioural Problems of School Children. *Pakistan Journal of Social and Clinical Psychology*. 9, 73-78.
31. Taylor, C., Wernimont, S., Northstone, K., & Emmett, P. (2015). Picky/fussy eating in children: Review of definitions, assessment, prevalence and dietary intakes. *Appetite*, 95, 349-359.
32. Tharner, A., Jansen, P., Kiefte-de Jong, J., Moll, H., van der Ende, J., & Jaddoe, V. et al. (2014). Toward an operative diagnosis of fussy/picky eating: a latent profile approach in a population-based cohort. *Int J Behav Nutr Phys Act*, 11(1), 14.
33. Wardle, J., Guthrie, C., Sanderson, S., & Rapoport, L. (2001). Development of the Children's Eating Behaviour Questionnaire. *J Child Psychol & Psychiat*, 42(7), 963-970.
34. Webber, L., Cooke, L., & Wardle, J. (2010). Maternal perception of the causes and consequences of sibling differences in eating behaviour. *European Journal Of Clinical Nutrition*, 64(11), 1316-1322.
35. Williams, A., J. (2013). Picky Eating Behaviours in Children and Family Stress, *Abbott Nutrition Health Institute (ANH)*, Retrieved from <http://static.abbottnutrition.com/cms-prod/anh/img/Picking%20Eating%20Behaviours%20in%20Children%20and%20Family%20Stress.pdf>

FUSSY EATING SCALE

Directions:

The following statements have been given regarding the issue of fussy eating in children. Please read them carefully and tell to what extent this issue is relevant to your child.

Rate the scale on the following points

1: Never	2. Rarely	3: Sometimes	4: Often
1.	To eat only if the food is of own preference, otherwise skip		_____
2.	To pay more attention to play than eating		_____
3.	To not eat a full meal at appropriate time, and then complaining of hunger a little later		_____
4.	To be finicky about eating homemade food		_____
5.	To prefer to eat the market food		_____
6.	To be fussy about eating/drinking a particular thing		_____
7.	To refuse to consume healthy foods such as milk or fruits		_____
8.	To have to force oneself (child) to eat during a meal		_____
9.	Not having breakfast		_____
10.	To insist on eating junk food such as pizza or burger		_____
11.	To agree to eat after given some temptation		_____
12.	To filling the stomach with unnecessary things before eating bread (meal)		_____
13.	To interference of others in children's food matters		_____
14.	To get rid of food eating quickly		_____
15.	To eat compulsively		_____
16.	To insist to eat something particular		_____
17.	To not eat while staying at one place		_____
18.	Hard to convince to eat		_____
19.	To request or plead with a child to eat food		_____
20.	To Point out defects by the child in the food while eating		_____
21.	Complaining of vomiting or pain in any part of the body during or after eating		_____
22.	To insist to watch TV and Mobile while eating		_____
23.	To eating lazily and not chew the bread in mouth		_____
24.	To not finish the food by yourself		_____
25.	To get the mother criticized by others when the child do not finish his food properly		_____
26.	To spend too much time by mother on the child's feeding problems		_____
27.	To not eating at the scheduled time		_____
28.	To get full after eating a little		_____
29.	To not care about one's own hunger		_____
30.	To demand for different kinds of food items		_____
31.	To not eating the available food and insisting for which is not available		_____
32.	To shouting and cry over not getting the desired food		_____
33.	To refuse to eat something new without tasting it		_____
34.	To misbehave on forced feeding		_____
35.	To drink plenty of water with meals to fill the stomach		_____
36.	To Refuse to eat the food upon not liking its appearance		_____
37.	To eat only in one's own special utensils		_____