

## **Knowledge & Practice of Mothers Regarding Weaning Practices & Frequency of Common Dental Problems among School Going Children of District Peshawar Pakistan**

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### **ABSTRACT**

**Background:** Weaning practices have strong role in the growth and development of children. Moreover, the common dental problems reflect the weaning practices and food patterns among the children and community.

**Objective:** To assess the knowledge and practice regarding weaning practices, and to estimate the frequency of common dental problems.

**Place and duration of study:** By the Department of Community Medicine, Khyber Medical College, Peshawar, in collaboration with THQ Hospital Shujabad Multan, Pakistan, from September 2019 to February 2020.

**Study Design:** A cross-sectional descriptive study

**Methodology:** A total of n=211 mothers were included to assess the knowledge, and weaning practices. Due to patient compliance, a convenience sampling technique was used. The data was collected through structured questionnaire and results were analyzed and presented in form of tables.

**Results:** Among the study participants (n=211); 53.55% were in age range of 25-35 years, 68.72% were house-wives; and 80.09% were literate. Approximately, 80.09% were practicing weaning, 90.52% started weaning at 4 to 6 months, 43.13% continued weaning for 2 years, 59.24% gave mixed weaning food; 83.41% and 55.50% of mothers knew the importance and correct timings for starting weaning practices respectively; and 43.13% know the correct duration of weaning. Moreover, 84.98% of school going children had common dental health problems.

## **Conclusion**

Most of the mothers had satisfactory knowledge, and were following adequate weaning practices. Moreover, most of the school going children showed common dental problems of tooth decay, peri-odontal diseases, tooth erosion, and tooth sensitivity. Furthermore, it was revealed that age of mothers, and their education status has strongly influenced the knowledge, and weaning practices of mothers; and thus comprehensive interventions are needed from the relevant sectors to increase the knowledge of mothers regarding weaning practices and to reduce morbidity and mortality among going children.

**Keywords:** Knowledge, Practice, Mother, Weaning, Children, Pakistan.

## **INTRODUCTION**

According to the World Health Organization (WHO), complementary feeding should be timely, adequate, appropriate, and given in sufficient quantity<sup>1, 26</sup>. The World Health Organization and UNICEF recommended that supplementary semi-solid food items were added into infant diet at six months of age along with breast feeding for the first two years of life<sup>3, 4</sup>. Weaning has been one of the most wrongly practiced processes in the early years of life. Initiating complementary feeds too early or too late can lead to malnutrition<sup>5, 6</sup>. Many studies also found that introduction of weaning after 8 months was associated with high risk of allergic sensitization and can result in improper growth and development<sup>7</sup>.

In a study published by Akpor et al., in 2020; was found that 41.6% of mothers started weaning below 4 months and was supported by the findings of a similar study of Ghure et al., 2018;

reported that approximately 62.75% of mothers initiated weaning below 6 months of age<sup>8</sup>.<sup>9</sup> Research found that babies are given solid foods before four months and revealed a strong relationship of early weaning and its impacts like food intolerance, excess weight gain and Diabetes. Moreover, delayed weaning can lead to serious health complications for the infants<sup>10</sup>.

Poor quality of weaning foods and improper weaning practices predispose infants to malnutrition, growth retardation, infectious diseases and thus resulting in high mortality and morbidity<sup>11</sup>. The most vulnerable period for developing malnutrition remains the weaning time<sup>12</sup>. Adequate nutrition during infancy and early childhood is essential for growth, health and development of children<sup>13</sup>. Thus proper weaning plays a vital role in child development whereas poor weaning practices showed significant association with infant's morbidity and mortality rates<sup>11, 14, 15</sup>. A study conducted by Ikobahet al, in 2020, showed moderate knowledge of mothers regarding weaning practices and also revealed a significant relationship between mother's education level, type of occupation, and infant and child weaning practices<sup>14</sup>.

In South East Asia, different complementary foods are only a slight modification of adult foods, without consideration of nutritional requirements of children<sup>16, 17</sup>. The complementary feedings, mostly started late in the developing countries. Many international studies conducted by Sugumaran et al, in 2020, & Pradhan et al., 2020; found that only 38.72% mothers introduced weaning foods at first 4 to 8 months of life, and similar results were also found by Anbesho & Agegneu in 2020<sup>18, 19, 20</sup>. Moreover, in a study conducted internationally it was found that 43% of mothers with school going children started weaning foods at 6 months of infants age<sup>8</sup>.

Pakistan being a developing country, with high rates of communicable diseases among children of under five years age, and the nutrition problems along with malnutrition causing high mortality and morbidity especially under five year's children. Moreover, the weaning practices were not according to standards; and thus this cross sectional study was conducted to assess the knowledge and practice of mothers regarding weaning practices; and to identify the important common dental problems among school going children, visiting Basic health Unit, Palosi, Peshawar, Pakistan.

## METHODOLOGY

After taking ethical approval, a cross-sectional descriptive study was conducted by the Department Of Community Medicine, Khyber Medical College, Peshawar at Basic Health Unit Palosi, Peshawar Pakistan. The total duration for data collection was six months i.e. from September 2019 to February 2020. A sample size of two hundred & eleven (n=211) mothers was selected based on the 95% confidence interval, with 5% absolute precision, and 10-20% prevalence of knowledge. After informed consent from mothers (n=211) mothers were assessed regarding the knowledge and practice regarding weaning practices. Moreover, for common dental problems among children, an experienced dental consultant help was sorted. Moreover, the practice was categorized as practicing weaning or not practicing. Furthermore, a convenience

sampling technique was used to select mothers visiting BHU. All the married women visiting health facility were included while mothers not permanent resident of district Peshawar were excluded. The data were collected through a structured questionnaire and SPSS 23.0 was used for data analysis. Finally results were presented in form of tables.

## RESULTS

The demographic characteristics of mothers of school going children (n=211) were shown in Table No 1. The frequency of common dental problems among school going children (n=211) of District Peshawar Pakistan was shown in Table No 2. The knowledge, and practice of mothers of school going children (n=211) regarding weaning practices was shown in Table No 3.

**Table No 1. Frequency of Demographic Characteristics Mothers of School Going Children (n=211) Regarding Weaning Practices of District Peshawar Pakistan**

Variables	Response	frequency	(%age)
Age Groups	< 25 years	75	35.55
	25 - 35 years	113	53.55
	> 35 years	23	10.90
Monthly Income	< 30000	134	63.51
	30 – 45000	57	27.01
	> 45000	20	9.48
Occupations	Housewife	145	68.72
	Job	52	24.64
	Students	14	6.64
Educational Status	Literate	169	80.09
	Illiterate	42	19.91
No of Children	One	108	51.18
	Two to three	69	32.70
	> 3	34	16.11

**Table No 2. Frequency of Common Dental Problems Mothers of School Going Children (n=211) Regarding Weaning Practices of District Peshawar Pakistan**

S. No	Dental problems	Frequency	Percentage
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1	No Dental Problems	95	45.02
2	Tooth Decay	57	27.01
3	Peri-Odontal Diseases	19	9.00
4	Tooth Erosion	27	12.80
5	Tooth Sensitivity	13	6.16

**Table No 3. Knowledge & Practice of Mothers of School Going Children (n=211)  
 Regarding Weaning Practices of District Peshawar Pakistan**

Variables	Response	frequency	(%age)
<b>Gave weaning food to your child</b>	Yes	169	80.09
	No	42	19.91
<b>Any importance of weaning</b>	Yes	176	83.41
	No	35	16.59
	No Idea	10	4.74
<b>Weaning started at which age</b>	1 Month	9	4.27
	4 Months	115	54.50
	6 Months	76	36.02
	12 Months	11	5.21
<b>Common weaning food</b>	Mixed	125	59.24
	Vegetables	27	12.80
	Banana	22	10.43
	Kitchree/ Rice	37	17.54
<b>Frequency of weaning food per day</b>	1- 2 Times	17	8.06
	3-4 Times	59	27.96
	More than 4 times	135	63.98
<b>Duration of weaning up to</b>	12 Months	29	13.74
	18 Months	32	15.17
	24 Months	91	43.13
	30 Months	50	23.70
	36 Months	9	4.27
<b>Source of awareness of weaning</b>	Parents/ Relatives	129	61.14
	Social Media	45	21.33
	Health Personals	27	12.80
	Any other	10	4.74

## DISCUSSION

According to our study results, among the study population (n=211), 80.09% of mothers had satisfactory knowledge regarding weaning practices whereas in a study conducted in 2019, also found that mothers had average knowledge regarding weaning practices<sup>10</sup>.

In our study, the common dental health problems among the school going children were tooth decay (27.01%), peri-odontal diseases (9.0%), tooth erosion (12.80%), and tooth sensitivity (6.16%). A national study conducted by Bhandari et al., 2019, in Nepal; revealed that 42.75% of working mothers had good and satisfactory knowledge regarding weaning practices, and 36% among house wives<sup>19</sup>; and thus our study results supported and confirmed the findings of previous studies by observing 83.41% of mothers having satisfactory knowledge regarding weaning practices. Moreover, in an international study published in the Egyptian Journal of Hospital Medicine, by Saeed et al., 2019, revealed average knowledge (46%) among the mothers regarding weaning practices<sup>10</sup>. In a study conducted in Nigeria by Raji et al., 2020; found that 65.85% of mothers had adequate and satisfactory knowledge regarding the weaning practices<sup>22</sup>. Thus our study findings had good knowledge as compared to international studies conducted by Saeed et al., 2019 and Sadaqat et al., 2018<sup>6, 10</sup> and less level as compared to a study conducted by Dukuzumuremyi et al., 2020<sup>24</sup>. Furthermore, the mother's knowledge level showed strong relationship with weaning practices as revealed by a study published in the Nutrition and Dietary Supplements in 2015, by Abiyu et al., 2020; showed that rural and urban women had 44% and 64% of knowledge regarding weaning practices<sup>4</sup>. Thus mother's knowledge and rural and urban residence has strong relationship with weaning practices of mothers with school going children.

In our study, 80.09% of mothers were following weaning practicing, and most of these weaning practices are not according to the standard protocols. Moreover, in a study published by Munde et al., 2020; in Indian Journal of Child Health; showed that the rural mothers visiting the health care facilities has improper weaning practices and techniques<sup>5</sup>. Moreover, in another study, similar low practice level was observed among the mothers regarding weaning practices. Thus in our study the weaning practice showed satisfactory level among the rural communities as compared to international studies which were also conducted in rural communities and thus showed strong relationship of education status and socio-economic status on the weaning practices of school going children<sup>2, 9</sup>.

In an international study published by Martins et al., in 2020, Shaikh et al., 2020 & Oflu., 2020; conducted in Ethiopia<sup>24, 25, 26</sup>, showed that 2.1% of mothers showed improper time for initiation of weaning practices and the similar results were found and supported by our study, 4.29% of children mothers had incorrect time for starting of weaning foods.

In our study, only 43.13% of mothers had followed proper duration for weaning practice as revealed by an international study which found that the duration of weaning be continued for the first two years of life with food diversity and frequency<sup>16, 26</sup>. Moreover, in our study, the correct time for weaning was observed among 54.50% of mothers whereas in a study conducted by Oflu., 2020; published in Breastfeeding Medicine., in 2020; showed that 52.48% of mothers were

found to have correct total duration of weaning, and thus our study revealed similar results as compared to international study<sup>26</sup>.

In our study, the most common weaning food found were kitchree, rice, vegetables, bananas and mixed variety of home based weaning food items, whereas similar findings were revealed by different international studies conducted on different communities<sup>21,26</sup>. In our study, 38.86% of mothers had information regarding proper weaning practices from health and related responsible sectors, whereas in a study conducted in Pakistan, and published in Journal of the Pakistan Medical Association in 2017, revealed that 49.50% of mothers with school going children had proper information regarding the weaning practices and thus supported our study findings by showing strong relationship of knowledge and information with weaning practices<sup>27,28</sup>.

### CONCLUSION

It was concluded from the study results, that school going children mothers had satisfactory knowledge, and were following proper protocols regarding weaning practices, and the common health problems were tooth decay, peri-odontal diseases, tooth erosion, and tooth sensitivity. Moreover, mother's educational status and level, and monthly income of family strongly influenced the weaning knowledge and practices of mothers. Furthermore, relevant interventions from different sectors are needed to increase the knowledge of mothers regarding weaning practices are needed to improve the health status of children.

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