

**INFLUENCE OF MATERNAL DIETARY
BEHAVIOR ON EATING HABITS OF SCHOOL
GOING CHILDREN**



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Whatever I achieve today, I owe my family. I am very grateful for their unconditional care, support and encouragement, not to mention love. I am dedicating my dissertation to my parents who dedicate their lives for us and who always preferred our happiness upon their wishes. I wish, I could bring happiness and peace in their lives. I am wishing them eternal happiness in this life and hereafter.

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*Dedicated to my exceptional parents, family and adored siblings whose
tremendous support and cooperation led me to this wonderful
accomplishment*

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ABSTRACT

Childhood malnutrition is a global health issue, and its prevalence has increased dramatically throughout the last decade. Since the origins of childhood malnutrition lie in the schooling period, factors affecting to young children's food consumption should be investigated. Maternal influence, including her own dietary habits, is the major determinant of childhood dietary behavior through altering food provision and social environment. Young children have limited autonomy and they are dependent on adult supervision. Therefore, this study is designed to investigate the effect of maternal dietary behavior on children's food choices and eating habits. Multiple maternal factors influence a child's dietary habits and are reciprocally interacting, so they cannot be considered separately. The family environment that surrounds a child's domestic life has an active role in establishing and promoting behaviors that will persist throughout their life. Family meals seem to represent an important moment of both control and interaction, which contributes the most in modeling children's dietary habits. Mothers should avoid excessive pressure or restriction as it can create a negative social and emotional experience that could affect children's acceptance of the food. Instead, mothers should encourage their children on healthy snacking and not to skip breakfast. This can be achieved through positive and active social modeling as well as a moderate restriction. A cross-sectional survey study was conducted among 500 school-going children in Okara, Pakistan. Multivariable analysis was performed, adjustable for demographic information. Collected data were analyzed through SPSS v 24.0 and Microsoft Excel 2019. Descriptive and Inferential statistics were used for better evaluation and understanding of data. Consequently, Maternal dietary behavior significantly influences children's dietary habits, specifically their intake of fruits, vegetables, and milk. Therefore, interventions to improve maternal dietary behavior will be an effective strategy to promote healthy eating habits in children. Encouraging mothers to consume more fruits, vegetables, and milk may be an effective way to improve children's intake of these foods.

Keywords: Malnutrition, Dietary Habits, Food Choices

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LIST OF ABBREVIATIONS

SERIAL	ABBREVIATION	DESCRIPTION
1	DBB	Dietary Beliefs and Behaviors
2	CVD	Cardiovascular Disease
3	BMI	Body Mass Index
4	WHO	World Health Organization
5	BASR	Board of Advanced Studies and Research
6	SGNA	Subjective Global Nutrition Assessment

1. INTRODUCTION

Dietary habits profoundly impact children's health and development. Mothers' eating habits are especially significant since they shape their children's eating patterns from a young age (1). Kids' eating conducts and preferences are strongly prejudiced by their mothers' eating habits when they are young. Thus, it is critical to recognize the effect of maternal dietary behavior on kids' eating patterns in school. Children's health largely depends on parents' ability to recognize and address their children's unique nutritional needs. In the first year of life, preparatory with sucking, nourishment is the primary interaction among mothers and kids. By the finish of their first year, most offspring have learned how to feed themselves and have adjusted to their families' consumption habits. Young children's consumption habits and their families; significantly, their parents profoundly shape body weight. Mothers' impact on their children's eating habits may be exerted through various channels, including role modelling, restrictive or restrained feeding practices, and general parenting. Furthermore, it has not been explored whether moms can affect their children's dietary patterns by shaping their Dietary Beliefs and Behaviors (DBB), or DBB being the widely held principles and behaviors around nutrition, diet, and body image (2).

Because they influence long-term health and happiness, kids' eating habits have been the subject of several academic investigations. Maternal dietary behavior has been found to influence the development of children's eating conducts. Children's eating ways can be significantly affected by their mothers' nutritional behaviors, which involve various aspects such as food selection, meal preparation, and eating patterns (2). Environmental and Genetic variables play a part in the growth of obesity. Obesity affects eating patterns, including meal size, frequency, snacking, and overall diet quality. Further evidence suggests that children's food patterns persist into adulthood. As a result, it is crucial to know what kids eat for their health. Home food and social environments, contexts where knowledge, perceptions, and eating habits are developed, could impact children's eating habits. Yet, research suggests that mothers' eating habits have the most significant

impact on their children since they are the ones who create the family's food culture, shape their kids' perspectives on food, and set the stage for them to develop their consumption habits and preferences (3).

Children's eating habits significantly impact their physical and mental health as they grow up. The positive effects of a diet amusing in vegetables and fruits and a morning meal rich in whole grains are widely recognized. Fruit and vegetable-rich diets decrease the risk of circulatory disease (CVD), and obesity and overweight (4). Children and adolescents who eat breakfast frequently have better grades and are less likely to gain weight than adults (5,6). Yet, similar to children in other countries, most Dutch children do not eat the required sums of fruit and vegetables (9). Furthermore, in both Europe and the United States, skipping breakfast is extremely common (11, 12). Because childhood eating patterns tend to persist into adulthood, it's crucial to work on treatments to enhance kids' food choices.

Family lunchtime is the primary communal situation in which children can eat with their paternities, who are the prior role models in their lives (7). There are sound effects on children's eating habits when parents share meals with them, have breakfast regularly, and encourage healthy snacks with minimal limits (8). In addition, a literature review indicated that such routines are linked to improved dietary habits in children (9), including a greater prevalence of dairy and fruit and vegetable ingesting and the adoption of more nutritious breakfast routines. The same review also found that allowing children some autonomy in decision-making through encouragement practice was more effective than allowing them some freedom through reasonable restriction practice. Hence, it was suggested that the two methods be used together so that everyone involved in a child's diet can have a voice in decision-making (10). This narrative review examines how a mother's diet can influence her children's mealtime, breakfast, and snack time habits.

Young people from lower socioeconomic backgrounds eat fewer fruits and vegetables than their higher-income counterparts (13). In addition, a Norwegian study indicated that the income gap in adolescents' consumption of fruits and vegetables widened between 2001 and 2008. There was a lack of consistency in studies examining the gap

between rich and poor breakfast eaters. Breakfast consumption among adolescents and children was unrelated to maternal education level and employment status (14). While some research has shown a negative correlation among maternal education and children eating breakfast and (15), other research has revealed a clear correlation. The main resolve of this learning is to inspect socioeconomic inequalities in kids' healthy eating behaviors, especially in light of the inconsistency in the answers of prior lessons and the relatively small body of works analyzing socioeconomic disparities in nutritional behavior (fruit, vegetable and breakfast ingesting).

Little kids can't make decisions for themselves and need constant adult monitoring. Hence, parents and guardians have the potential to inspiration their children's consumption ways over the food they provide and the social atmosphere in which they eat. There are correlations among maternal eating panaches and children's fruit and vegetable feasting, high fat and sugar consumption, dairy consumption, and body mass index (BMI), as shown by studies of mothers' feeding methods. Many scales have been designed to measure different aspects of maternal feeding habits. The Child Feeding Questionnaire has remained used in countless investigations due to its reliable and valid scales for analyzing "managing feeding practice". Studies of families with children aged 6-7 years old found a favorable correlation between maternal dietary patterns and snack consumption by kids (16).

Children's eating habits, to a large extent, are shaped by their family's food culture. Parents play an significant role in shaping their kids' eating habits because of their control over the food their kids have access to at home, their ability to establish limits on what they can eat and their function as dietary role models. Kids' ingesting of vegetables and fruits may be unfair by factors in the household. Household family rules, obtainability, and maternal intake were all found to be favorably connected to children's fruit and vegetable ingesting. Maternal breakfast ingesting is a crucial aspect of the home atmosphere favorably related to kids' breakfast eating (17). Initially, we hope to learn more about how children from different socioeconomic backgrounds (as measured by their mothers' levels of education) approach healthy eating. Therefore, socioeconomic status is not a changeable correlative of children's dietary behavior and has no direct effect on dietary behavior. As a result, it is crucial to pinpoint the

underlying causes of the socioeconomic gaps in children's dietary habits (18). Consequently, the second resolve of this study is to regulate whether or not maternal vegetable, fruit, and breakfast consumption; fruit and vegetable rules; and vegetable and fruit availability in the home mediate the relationship between maternal education and children's healthy drinking habits (fruit, vegetable, and breakfast consumption)

Cognitive diagrams are formed in childhood, and social psychology seats a great deal of emphasis on the role of reasoning schemas and ideas in the expansion and shaping of children's dietary partialities and habits, which may eventually affect their weight status and other indicators of wellbeing (18). So, it would be worthwhile to study the part of mothers in moulding their kids' eating ways. Mothers are hypothesized to impact their kids' dietary attitudes and actions significantly, and thus on the likelihood that their children will become overweight.

According to studies, kids tend to take up the eating patterns of their parentages, especially their mothers (19). This indicates that mothers' eating habits can significantly impact their kids' food partialities. Understanding the impact of a mother's dietary behavior on the eating designs of school-aged kids is vital for creating effective interventions to inspire healthy eating between children in light of the alarming rise in childhood obesity and accompanying health concerns. Several studies have investigated how mothers' eating habits influence their offspring. Preschoolers' dietary habits were shown to be related to their mothers' diets, according to research by Tharner et al. (20). Tovar et al. (20) found that children whose mothers included them in meal planning and preparation ate more fruits and vegetables than those whose mothers did not.

However, it is not always obvious how a mother's eating habits may affect her children's food preferences. Fulkerson et al. (21) observed that while mothers who modelled healthy eating habits increased their children's ingesting of nutritious foods like fruits and vegetables, they also improved their consumption of less healthy foods like sugary drinks and snacks. Their mothers' nutritional patterns strongly influence the eating conducts of school-aged children as youngsters. A child's food favorites and behaviors are shaped by their mother's eating patterns, dietary choices, and attitudes toward food

(22). According to research, children of moms who eat healthily have better eating conducts and are more likely to adopt such behaviors themselves ⁽²³⁾. Similarly, when mothers limit their intake of certain meals, their children develop an unhealthy obsession with certain items (24).

Mothers can significantly influence their children's food habits by demonstrating good eating habits. Children who grow up with healthy eating habits are likelier to have mothers who eat nutritious meals and model positive eating behaviors (24). Also, studies show that kids whose mothers encourage them to participate in meal planning and preparation are likelier to develop healthy eating patterns (22). Our study's goals are to learn more about mothers' and kids' eating habits and offer evidence that mothers' dietary behaviors and practices may affect the food habits of their children. Family dinners were shown to be the greatest influential in shaping kids' eating behaviors because they give mothers a powerful opportunity to influence and connect with their offspring. Mothers have the maximum significant impact on their kids' eating habits through role modelling and moderate restriction; this suggests that mothers would benefit from more encouragement and less pressure if they adopted these practices themselves.

1.1 SIGNIFICANCE OF STUDY

The significance of studying the effect of maternal dietary behavior on the eating habits of schoolgoing kids lies in its potential to improve children's health and well-being. The eating conducts and overall nutrition of kids are significantly influenced by the diet of their mothers. Understanding how maternal diet affects children's eating patterns can help us create specialized interventions and educational initiatives to encourage healthy eating among school-aged children. The occurrence of childhood overweightness and the potential long-standing effects of developing bad eating patterns in early childhood make this information all the more crucial. We can empower parents and carers to make educated decisions about their own diets and effectively support their children in forming healthy eating habits that can last a lifetime by recognizing the significance of maternal dietary behavior and its impact on children's eating habits.

2. LITERATURE REVIEW

2.1 Effects of maternal dietary behavior on Child's eating habits

Maternal dietary behavior has been created to impact kids' eating habits significantly. A learning by Krolner et al. (25) start that kids were more possible to consume healthy foods if their mothers ate healthy foods. In contrast, if mothers consumed low-nutrient foods, high-calorie, their children were more likely to follow suit. Children from higherincome ménages were less influenced by their mothers' dietary behavior. Vollmer et al. (26) found that children whose mothers had a food high in fruits and vegetables were likelier to have a similar diet. Similarly, children whose mothers frequently consumed sugary beverages were more likely to drink them. Harrington et al. (27) found that broods from lower-income households were more possible to consume unhealthy foods if their mothers also destroyed them.

Sleddens et al. (28) originate that maternal regulator over their kids' eating was related with less healthy eating habits in progenies. Conversely, a positive feeding environment, characterized by maternal demonstrating of healthy consumption behaviors, was related with better eating habits in children. Harrison et al. (29) found that cultural beliefs and practices regarding food influenced maternal dietary behavior and, subsequently, their children's dietary habits. For example, mothers from cultures that value large portions were more likely to hearten their children to eat more food, regardless of its nutritional value. Gubbels et al. (30) found that mothers who consumed a diet high in sugar and fat during pregnancy were more possible to have children who consumed these foods at a young age. On the other hand, mothers who consumed a healthy diet during pregnancy were more probable to have kids who also expended a healthy diet. Fisk et al. (31) found maternal dietary behavior influenced kids' adolescent eating habits. Specifically, children were more likely to devour healthy foods if their mothers had a nutritious diet and were more likely to consume unhealthy foods if their moms had an unhealthy diet.

2.2 Importance of maternal dietary behavior

Maternal dietary behavior is an essential factor that influences mothers' and their kids' health. The (WHO) recommends that women of reproductive age consume a healthy

diet to improve their health and prevent complications during pregnancy and childbirth (32). Moreover, maternal dietary behavior through pregnancy and lactation can impact the growth of the kid's eating habits and long-standing health outcomes (33). Forsum et al. (33) found that motherly dietary superiority was positively related with maternal nutritional status during pregnancy. A healthy maternal diet, rich in fruits, whole grains, vegetables, and lean proteins, can help stop gestational diabetes, hypertension, and preeclampsia and promote healthy fetal growth. Likewise, a systematic evaluation by Krukowski et al. (34) originate that improved maternal dietary quality during gravidness was related with reduced risk of low birth weight, preterm birth, and neonatal complications.

Maternal dietary behavior during lactation is also essential for infant health. Breastfeeding provides optimal nutrition for infants and can reduce the risk of infectious diseases, allergies, and obesity (35). A learning by Zhou et al. initiates that maternal dietary pattern during lactation, specifically a régime high in vegetables, fruits, and fish, were associated with better infant growth outcomes at six months. Moreover, a systematic evaluation by Rangel-Huerta et al. (36) found that maternal consumption of omega-3 fatty acids during lactation was associated with improved infant cognitive development. Ong et al. (36) found that maternal obedience to a Mediterranean diet through pregnancy was related with a lower peril of childhood asthma and allergies. Similarly, a study by Ong et al. (36) found that maternal dietary quality through pregnancy was positively related with offspring cardiorespiratory fitness in adolescence. The growth of children's eating habits is strongly prejudiced by maternal modelling and feeding practices (38). Maternal dietary behavior is an essential source of maternal demonstrating and can impact the development of kids' eating habits. Lora et al. found that maternal intake of vegetables and fruits was positively related with child ingesting of these foods. Similarly, a study by Gubbels et al. (39) originates that maternal ingesting of sugar-sweetened drinks was associated with advanced consumption in their children.

Helle et al. (40) found that motherly dietary behavior was positively related with family meal frequency and the obtainability of healthy foods in the home. Moreover, an education by Delvecchio et al. (41) found that affectionate self-efficacy for well eating

was related with better meal planning, shopping, and food preparation practices. Noyes et al. (42) originate that nutrition education interventions during pregnancy effectively improved maternal dietary behaviors and infant outcomes. Similarly, a randomized measured trial by Davenport et al. (43) found that a smartphone-based nutrition education intervention improved maternal dietary quality and infant outcomes. Xie et al. (44) found that a dietary intervention, including breastfeeding-friendly foods and nutrition education, improved maternal dietary quality and infant growth outcomes. Moreover, a study by Gennaro et al. (45) found that a peer support intervention, including education on healthy eating during lactation, improved maternal dietary behaviors and infant growth outcomes. PerezEscamilla et al. (46) found that a nutrition education intervention that included the whole family improved maternal and child dietary behaviors and reduced the prevalence of obesity. Likewise, a education by O'Connor et al. (47) originate that a family-based healthy lifestyle intervention improved maternal and child dietary behaviors and reduced the risk of childhood obesity.

2.3 The impact of maternal dietary behavior on a child's health

Maternal dietary behavior acting a vital role in the expansion and growth of kids. The quality of the maternal diet can impact the child's nutritional status, susceptibility to diseases, and long-term health outcomes (33). The impact of maternal dietary behavior on child health begins during pregnancy. Maternal malnutrition through pregnancy can result in stunting, low birth weight, and poor cognitive development (48). On the further hand, a study by González-Cossío et al. (49) found that a healthy maternal diet through pregnancy was related with better birth outcomes, with reduced risk of low birth weight, preterm birth, and fetal growth restriction. Maternal dietary behavior during pregnancy can also impact the child's immune system development. A learning by Mulder et al. (50) originates that a maternal food high in vegetables and fruits during pregnancy was related with a summary menace of allergic illnesses in children.

Afeiche et al. (51) found that maternal intake of sugar-sweetened brews through pregnancy was related with a higher risk of childhood obesity. Similarly, a learning by Patel et al. found that motherly fast food ingesting during pregnancy was related with a higher risk of asthma and allergic diseases in children. Cui et al. (52) found that

maternal dietary designs were definitely related with child dietary patterns, with children of mothers who consumed a healthy diet more likely to devour healthy foods. On the other hand, Leal et al. (53) found that maternal consumption of unhealthy snacks was related with higher ingesting of these foods in their children. Xie et al. (44) found that maternal dietary designs during pregnancy were related with the risk of childhood obesity and metabolic syndrome. Correspondingly, a study by Cai et al. (54) initiates that maternal intake of red and treated meats during pregnancy was related with a higher risk of sort 2 diabetes in offspring.

Seshadri et al. (55) found that a dietary intervention during pregnancy, including nutrition education and counselling, improved maternal dietary quality and summary the risk of low birth weight. Correspondingly, a study by Griebler et al. (56) originate that a home-based nutrition education intervention improved maternal dietary behaviors and child health outcomes, including reduced risk of overweight and obesity. Maternal dietary behavior is critical in child health outcomes, beginning during pregnancy and extending throughout childhood and beyond. The impact of maternal dietary behavior on child health highlights the need for interventions that promote healthy dietary behaviors in mothers. Future research should explore the most effective approaches for promoting healthy maternal dietary behaviors and the impact of these interventions on long-term health outcomes for children.

2.3.1 Family Environment

Though it has been unprotected that the home setting is essential for kids' and teenagers' healthiness behaviors, the causal devices of this impact are immobile unidentified. Prior research has shown that a supportive family environment may contribute to founding and promoting healthy eating habits over role demonstrating, the supply of wholesome lunchtimes, and reassurance to do so (57). Given that the family comprises more than one person, it may be viewed as a system.

The "family health atmosphere", the communal beliefs and reasoning towards a healthy lifestyle inside a family, may be a pertinent part of the family environment. It reflects how each person experiences family life on a day-to-day basis, how they view healthrelated issues, and what they anticipate regarding the family's traditional morals,

behavioral norms, and communication styles. Family functioning, cohesiveness, communication, conflicts, socioeconomic status, maternal behaviors, and parenting elegance are psychological themes that are covered by this conceptual framework. The sort of eating habits that form might be explained by children's propensity for copying others' behavior and learning via observation, particularly from their parents and other primary caregivers (57).

2.3.2 General Maternal Influences

Four maternal prototypes created by Baumrind over forty years ago have been used as the basis for studies on how parenting affects child outcomes. Authoritative, Permissive, and Authoritarian Parenting Styles were the only three parenting philosophies initially recognized by Baumrind. Baumrind's parenting styles were revised, and Maccoby and Martin added a fourth in a 1983 evaluation of her writing: Neglectful or uninvolved (58).

Authoritative parents supervise their children's behavior and communicate precise norms without using invasive or restrictive methods. They are demanding, responsive, and exhibit high levels of controller and warmth. They display intense levels of power (like to authoritative parents) but show inferior heat levels in contrast. Authoritarian paternities are challenging and directive, with low levels of receptiveness. Permissive parents incline to be tolerant and evade conflict; they are less likely to be strict and expect developed behavior. Permissive parents often show high levels of responsiveness. Parents who reject or ignore their children are neither demanding nor responsive. Using this concept, researchers have found that kids who experience authoritative parenting have higher heights of self-control, emotional maturity, selfefficacy, and healthier eating habits (59).

Research has established that a additional authoritative childrearing style is also linked to a decreased incidence of obesity. In addition, peer influence has a more significant impact on maternal feeding behavior than nutritional recommendations. Children's nutritional intakes are significantly prejudiced by their food choices. The way that parentages feed their children has a significant impact on how their kids establish their

dietary choices. Parents use a variety of behaviors that combine productive and poor techniques to influence their child's dietary choices (60).

Implementing overt and covert control, directly and indirectly, impacts how children's eating habits are determined. Restriction and eating pressure are both examples of overt control. Avoiding stores and restaurants that serve unhealthy food is one tactic used in covert control. Another is buying only healthy foods for the house. The youngster can perceive overt control but not hidden commands.

The first untried resistant that parents' employ of preventive nourishing methods is counterproductive—increasing toddler kids' ingesting of controlled foods and being a risk issue for irrepressible heaviness gain. Higher food escaping propensities and a lower intake of core foods were linked to eating under pressure. Monitoring techniques were related to reduced food approach and avoidance behaviors and lower levels of non-core food consumption (60).

Restrictive eating performs are harmful, and progenies with weaker self-regulation and those at risk for overweightness are more vulnerable to adverse consequences, according to a recent study by Rollins et al. Nonetheless, the same authors concluded that some maternal supervision is probably necessary for the current obesogenic environment to restrict kids' consumption of these items. This result supports the idea that an imposing childrearing approach, in which parents exercise reasonable levels of controller, may help children develop self-control and restrain their feasting of delicious snack foods, improve the superiority of their diets, and lower their menace of becoming obese (59).

2.3.3 Maternal Influences

Their mothers frequently decide the amount of food served to youngsters. Yet, little is known about the variables that affect a mother's choices regarding how much to feed her kids and her motives and eating objectives. A recent study has shown that moms have emotional stakes in how their kids eat and that portion sizes are different for "excellent" and "picky" feeders. Several manipulating elements were child-centered

(such as the kid's preferences and the meals they had already consumed that day). In contrast, others were connected to adult expectations and concerns, particularly those about nutritional content and waste. Moms are emotionally invested in their kids' eating and know the "proper quantities" to serve. If customized to the mothers' perceptions, interferences directing on portion size may be more successful (61).

The calorie number of meals for boys was advanced than for girls. This additional caloric alteration came from the less nutritious food group, as shown by Persky et al. (62), which further proved that a child's gender might affect the mother's food choices. The relationships between claimed and reported maternal pressure to eat and the variables affecting mothers' control were investigated by Persky et al. (62). A comparison of reported and observed maternal eating pressure on newborns reveals that some moms are unaware of their behaviors. Concerns about weight and the likelihood that the kid will gain too much weight were associated with maternal pressure or restriction on consuming a particular meal. As kids become older, parents' perspectives on food and eating evolve. Parents may eventually adopt alternative ways, such as utilizing secret techniques to restrict admittance to foods they wish their children to circumvent or become more confident in their kid's capacity to reply to usual satiety cues (63).

A questionnaire has been devised to examine links between maternal modelling and mothers' and children's ingesting of healthy and harmful foods. It considers verbal and inadvertent modelling for situations where kids pick up eating habits that parents haven't intentionally tried to model (63). This research on toddlers and preschoolers reveals that moms may decisively provide an example for their children's consumption of nutritious foods though unwittingly setting an example for their ingesting of less healthy snack foods. Mothers have an even more significant direct impact on their kids at mealtimes. At mealtimes, women have an immediate effect on their kids. Mothers of obese kids may change their kids' feeding habits differ depending on the type of food.

Maternal behaviors can have an indirect effect by influencing the behavior of brethren who could serve as caretakers and role replicas. In a cohort of 69 children aged 4 to 8,

Mosli found a connection between mother-feeding encouragements and behaviors to eat derived from siblings to the directory kid (63).

2.3.4 Paternal Influences

Fathers significantly impact early children's nutrition, and there are notable disparities between their feeding habits and those of mothers. Dads are often less inclined to restrict kids' food access and keep an eye on their dietary habits. Pressuring kids to eat is a typical feeding influence (61). The use of extreme switch over a child's eating disrespects the child's freedom, as Litchford et al. (64) have shown. Contrarily, giving in to a child's pleas for nutrition is also wrong since it might interfere with the child's capacity to eat in accordance with internal cues for hunger and satiety. Both of these actions have the potential to result in overeating and excessive weight gain. Conversely, responsive feeding techniques entail recognizing and correctly reacting to the child's hunger and repletion signs.

Khandpur et al. found that most feeding practices were responsive, contained reassurance or provision of the child's independence and autonomy, and helped organize the alimentation situation to increase the kid's competency in selecting and consuming mealtimes (65). According to Stone et al. (65) s investigation of the incidence of father-child out-of-home mealtimes, these dining occasions were linked to the kids' intake of fast food and drinks with artificial sweeteners. Also, they discovered that dads' intake of sweetened beverages decreased when they shared breakfast with their kids. Fathers are underrepresented in child feeding studies, despite their growing importance in child parenting. Existing research shows that fathers' eating habits are potentially changeable and may show a significant role in child weight regulator programs in clinical and community settings (65).

2.4 The Role of parenting style in shaping children's eating habits

Parenting style is an essential factor that shapes children's eating habits. How parents interact with their children and set rules around food can impact children's food preferences, intake, and overall health outcomes. Parenting styles are typically confidential into four categories: authoritative, authoritarian, and neglectful. Palfreyman et al. (66) create that kids of authoritative parents, who were warm and

supportive but also set limits and rules, had healthier eating habits and were less likely to be overweight. On the further hand, a study by Chen et al. (67) originates that child of permissive parents, who lacked rules and structure, had poorer eating habits and were more probable to be obese or overweight.

Rhee et al. (68) initiate that maternal encouragement and modelling of healthy consumption behaviors, such as eating fruits and vegetables, were associated with healthier eating habits in children. Likewise, a study by Cullen et al. (69) found that maternal modelling of healthy eating behaviors, such as eating breakfast and limiting sugary drinks, was associated with healthier eating habits in adolescents. Park et al. (70) found that children of authoritarian parents, who had a strict and controlling parenting style, were more likely to consume corrupt snacks and less likely to devour vegetables and fruits. A study by Jansen et al. (10) initiates that a permissive parenting style, which allowed unrestricted access to food, was related with a higher eating of unhealthy snacks in children. Larson et al. (71) found that maternal control over eating, a characteristic of authoritarian parenting, was related with a higher risk of eating illnesses in adolescents. On the other hand, a study by Turner et al. (72) found that maternal modelling of well eating behaviors and authoritative parenting were associated with an inferior risk of disordered eating behaviors in adolescents.

Banna et al. (73) found that a family-based intervention, which included parenting education and support, improved maternal feeding does and child drinking behaviors. Similarly, a learning by Wouters et al. (74) found that a school-based intervention, which included maternal involvement and education, improved maternal feeding performs and child-eating behaviors. Parenting style plays an essential role in shaping kids' eating conducts, with authoritative parenting and maternal demonstrating of healthy eating behaviors related with better eating habits in children. Parenting style can also influence children's ingestion of unhealthy foods and risk of eating disorders. The influence of parenting style on children's eating conducts highlights the need for interventions that promote healthy parenting practices. Future research should explore the most effective approaches for promoting healthy childrearing practices and the influence of these interventions on long-term health outcomes for children.

2.5 Influence of Cultural and social factors on maternal dietary behavior

Cultural and social factors play a crucial role in shaping maternal dietary behavior. Cultural and social norms can influence food choices, meal patterns, and attitudes and beliefs around food and nutrition. Islam et al. found that cultural beliefs and practices, such as the avoidance of certain foods or the preference for specific foods during pregnancy, influenced maternal dietary behavior. Likewise, a study by Kavle et al. (78) found that cultural beliefs and practices around food during pregnancy, such as the importance of hot foods, impacted maternal dietary behavior in Nepalese women.

Onyeneke et al. (75) found that cultural beliefs and practices, such as the importance of eating certain foods to promote breast milk production, influenced maternal dietary behavior among Nigerian women. Likewise, a study by Chakona et al. (76) originate that cultural norm around infant feeding, such as the belief in the importance of exclusive breastfeeding, influenced maternal dietary behavior in Malawian women. Yew et al. found that cultural beliefs and practices, such as the preference for traditional foods, influenced maternal dietary behavior in Malaysian women with young kids. Similarly, Okolie et al. originate that cultural and social issues, such as the influence of family memberships and peers, impacted maternal dietary behavior among Nigerian women with young kids.

Huynh et al. (77) originate that cultural beliefs and practices, such as the importance of traditional foods and the influence of social networks, influenced maternal dietary behavior among Vietnamese immigrant women in Australia. Likewise, a study by Nunnery et al. creates that cultural beliefs and practices, such as the influence of family members and religious traditions, impacted maternal dietary behavior among Somali refugees in the US. Tang et al. found that a culturally adapted intervention, which included nutrition education and cultural tailoring, improved maternal dietary behavior and knowledge among Chinese immigrant women in Australia. Correspondingly, a study by Lopez-Olmedo et al. originate that a culturally adapted intervention, which included community participation and local food traditions, improved maternal dietary behavior and food security among Mexican women. Cultural and social factors play a serious role in shaping maternal dietetic behavior. Cultural beliefs and practices impact

food choices, meal patterns, and attitudes and beliefs around food and nutrition. The impact of cultural and social factors on maternal dietary behavior highlights the need for culturally appropriate interventions that promote healthy dietary behaviors. Future research should explore the most effective approaches for promoting healthy dietary behaviors in culturally diverse populations and the influence of these interventions on long-term health outcomes for mothers and their children.

2.6 Relationship between maternal diet quality and Child's diet quality

The association among maternal food quality and a kid's diet quality is an important area of research, as motherly diet is a crucial determinant of a kid's dietetic intake and overall health outcomes. Maternal diet quality through pregnancy can impact a child's diet superiority during childhood. Biagi et al. (79) found that advanced maternal devotion to a healthy dietary design through pregnancy was related with a higher kid's devotion to a healthy one at six years of age. Similarly, a learning by Emond et al. (80) initiate that a higher motherly intake of vegetables and fruits during pregnancy was related with higher child's ingestion of fruits and vegetables at three years of stage.

Ling et al. (50) found that higher maternal obedience to a healthy dietary pattern through breastfeeding was related with higher child's dedication to a healthy dietetic pattern at 12 months of age. Similarly, a learning by Zhao et al. found that motherly dietary diversity during breastfeeding was positively related with a child's dietary diversity at six months of age. Sijtsma et al. originate that higher motherly obedience to a healthy dietary pattern through the postpartum period was related with higher child's adherence to a healthy dietary design at 4 years of age. Similarly, a learning by Rodríguez-Bernal et al. (5) found that motherly obedience to a healthy dietetic pattern at 1 year postpartum was associated with higher child's obedience to a healthy dietetic pattern at 4 years of age.

De Cosmi et al. (81) found that a dietary intervention, including nutrition education and individualized Counselling, improved maternal and child's diet quality among Japanese motherchild dyads. Similarly, Li et al. (82) found that a dietary intervention, including nutrition education and behavior modification, improved maternal and child's diet

quality among Chinese motherchild dyads. Maternal diet quality is an essential determinant of a kid's diet quality. Maternal dietetic behaviors during pregnancy, breastfeeding, and postpartum impact a child's dietary intake and overall health outcomes. The impression of maternal diet superiority on a child's diet superiority highlights the need for interventions that promote healthy maternal dietary behaviors.

Future research should explore the most effective approaches for promoting healthy maternal dietary behaviors and the influence of these interventions on long-term health outcomes for moms and their children.

2.7 The Role of Schools in promoting healthy eating habits

Schools show a serious role in endorsing healthy eating conducts between children, providing a unique occasion to reach a large and diverse population of young people. Verstraeten et al. originate that a school-based nutrition education package, which included classroom lessons and school food policy changes, improved children's dietary intake in Mexico. Similarly, a learning by Mâsse et al. found that a school-based interference, including healthy food and physical action, improved children's dietary habits in Canada. Dixon et al. (83) found that a school-based nutrition interference, which included the provision of healthier snacks and brews, increased the consumption of vegetables and fruits among children in Australia. Correspondingly, a study by Goh et al. originates that a school-based interference, including the delivery of healthier school meals, improved children's dietary intake in Singapore.

Turner et al. (72) found that the accessibility of unhealthy food choices in schools was related with poorer dietary ways among children in the United Kingdom. Likewise, a study by Anderson et al. (84) originates that the accessibility of unhealthy food choices in schools was related with higher rates of obesity among children in the US. Van Dyck et al. found that school-based interferences that target multiple factors, with policy changes, environmental changes, and education, are most effective in improving children's dietetic habits. Similarly, a learning by Blumfield et al. (85) originate that a comprehensive school-based intervention, including food environment changes, nutrition education, and parent engagement, improved children's dietary habits in Australia. Kim et al. (70) originate that a school-based nutrition education package

improved Korean elementary school students' nutritional intake and nutritional knowledge. Similarly, a learning by Rocha et al. found that a school-based nutrition education package improved Brazilian children's dietary intake and health outcomes. Cohen et al. (86) found that increasing the obtainability of healthy foods in school cafeterias and vending machineries was related with higher ingesting of fruits and vegetables between US high school students. Similarly, a learning by Kushi et al. found that a school-based intervention that included access to healthy snacks and beverages improved Japanese children's dietary intake and health outcomes. Anderson et al. (87) originates that a school-based intervention that included changes to the school environment, such as improved nutrition policies and increased physical activity opportunities, improved Australian children's dietetic intake and health outcomes. Similarly, a learning by Salam et al. (55) originates that a school-based intervention that included changes to the school environment, such as improved nutrition policies and increased physical activity opportunities, improved the dietary intake and health outcomes of Pakistani children.

The Lancet Child and Adolescent Health found that increased investment in schoolbased nutrition programs could prevent millions of cases of childhood obesity and improve overall health outcomes among children. Likewise, a study by Huang et al. (88) originate that school-based nutrition programs could be cost-effective in indorsing healthy eating habits and reducing the burden of chronic diseases associated with poor diet quality among children. Schools drama a serious role in promoting healthy eating conducts between children, with school-based interventions and food environments impacting children's dietary habits. The inspiration of schoolbased interventions on children's dietetic habits highlights the need for continued efforts to endorse healthy eating habits in schools. Future research should explore the most effective methods for promoting healthy eating conducts in schools and the impact of these interventions on long-term health outcomes for children.

2.8 Nutritional education and Counselling for Mothers

Counselling for mothers and Nutritional education is an essential area of research, as it can improve maternal dietary intake and promote healthy eating behaviors, which can positively impact the health outcomes of both mothers and their children. Wang et al.

(82) found that a prenatal nutritional education program improved Chinese pregnant women's dietary intake and nutritional status. Likewise, a study by Seneviratne et al. found that a nutrition counselling program improved the dietary intake and health outcomes of Sri Lankan expecting women. Maiti et al. (89) originate that a breastfeeding education and counselling program improved the dietary intake and nutritional status of Indian lactating women. Likewise, a study by Al-Hashem et al. (90) found that a nutrition counselling program for lactating mothers improved their infants' growth and health outcomes. Kavle et al. (78) originate that a postpartum nutrition counselling program improved the dietetic intake and nutritional status of Indian women. Similarly, a learning by Manikam et al. (91) found that a nutrition counselling program improved Malaysian women's dietary intake and health outcomes during the postpartum period.

Venkatramanan et al. found that a comprehensive nutrition education program for pregnant women improved maternal dietary eating and reduced the danger of gestational diabetes mellitus. Likewise, a study by Rahman et al. (92) originate that a nutrition counselling program improved maternal dietary intake and reduced the risk of anemia among Bangladeshi women. Nutritional education and Counselling for mothers is an important area of research, as it can improve maternal dietary intake and promote healthy eating behaviors, which can positively influence the health outcomes of both moms and their children. The impact of nutritional education and Counselling for mothers highlights the need for continued investment in programs that promote healthy dietary behaviors among mothers, particularly during pregnancy, breastfeeding, and the postpartum period. Future research should explore the most effective approaches for delivering nutritional education and Counselling to mothers and the impact of these interventions on long-term health outcomes for both mothers and their kids.

OBJECTIVES OF STUDY

The objectives of the study are:

- To assess and understand the influence of maternal dietary behavior on the eating habits of kids.
- To examine the relationship among maternal dietary patterns and food choices made by school-going children.
- To identify any associations among the types of foods consumed by mothers, their dietary preferences, and nutritional consumption of their children.
- To identify the dietary preference of mothers and the nutritional effect it has on eating habits of their children.

HYPOTHESIS OF STUDY

Null Hypothesis:

H₀: Maternal dietary behavior has no influence on the eating habits of school-going children.

Alternative Hypothesis:

H₁: Maternal dietary behavior has a positive influence on the eating habits of schoolgoing children.

3. MATERIAL AND METHODS

3.1 Study Design

This learning used a cross-section survey project to amass data from school-going children in different government schools in Okara.

3.2 Sampling Technique

A convenient sample technique was used to select the schools and members for the study. The schools were nominated based on accessibility, and the participants were selected based on their eligibility criteria (95).

3.3 Study Setting

The study was showed in different government schools in Okara, Pakistan. Government schools were selected as they are accessible to all socioeconomic groups and provide an appropriate setting to collect data from diverse school-going children.

3.4 Duration of the Study

The study was accomplished within six months after the endorsement of the synopsis from the Board of Advanced Studies and Research (BASR).

3.5 Sample Size

Sample size was 500 school-going children matured 4 to 12 years, both male and female, with no present health issues. The sample size was strongminded based on the power analysis, which determined the smallest sample size required to notice an important difference in eating habits between school-going children whose mothers have healthy dietary behavior and those whose mothers have unhealthy dietary behavior. The population of the study was school-going children in government schools in Okara, Pakistan, who meet the eligibility criteria for the study (96). The schools were selected based on accessibility, and the participants were determined using a convenient sampling technique.

3.6 Sample Selection

a) Inclusion Criteria

- The study included school-going children aged 4 to 12 years
- Both male and female, with no present health issues.
- The age range was selected as it covers the age range of most school-going children in Okara.
- Both male and female children were included to ensure that the study included a diverse group of participants.

b) Exclusion Criteria

- All those persons who did not meet the inclusion standards were excluded from the study.

3.7 Data Collection Tool

The following data assortment tools were used:

Child and mother eating behavior questionnaire: This questionnaire was used to collect information about the mother's and kid's dietary habits and behaviors. The survey was designed to assess the occurrence of ingesting of different eating patterns, food groups, and food choices (97).

24-hour dietary recall of mothers: A 24-hour nutritional memory was used to collect info about the mothers' dietary consumption. This recall provided information about the types and quantities of food expended by the mother over 24 hours.

Subjective Global Nutrition Assessment (SGNA) for children: This assessment tool was used to assess the nutritional status of the children. The SGNA is a validated tool that uses subjective and objective indicators to determine the nutritional status of children.

3.8 Data Collection Procedure

The selected schools were contacted, and the parents of the eligible school-going children were conversant about the study. The resolution of the study, its objectives, and the presence and elimination criteria were explained to the parents. Consent forms were provided, and printed knowledgeable consent was gotten from the paternities of the children who agreed to contribute in the learning. The data was collected using the

data mentioned above collection tools. The data was collected in a private and confidential setting to ensure the participants' privacy.

3.9 Data Analysis

The information composed for this learning was analyzed using expressive statistics and inferential figures. Expressive statistics were employed to summarize and define the features of the participants, including actions of central tendency (median, mean,) and measures of dispersion (standard deviation). Inferential statistics, such as connection analysis and regression study, were cast-off to examine the relations among maternal dietary behavior and children's consumption habits, and to determine the strength and significance of these associations. Statistical software, SPSS 21, was utilized to perform the data analysis and generate meaningful insights from the collected data (98).

3.10 Ethical Considerations

The study followed to ethical principles, and conversant consent was obtained from the participant's paternities. The participants' privacy and confidentiality were maintained through the study. The analysis obeyed with the ethical strategies of Research and Ethics Committee RCR &

AHS, Ripah International University, Lahore, and the data calm was used only for research drives.

4. RESULTS

In this chapter, the analysis of data is obtainable. During quantitative data, gathering questionnaires were secondhand. The first is an analysis of the statement's wise analysis of the defendants. The data was analyzed statistically using frequency delivery tables. Statistical techniques frequencies, percentages, Standard Deviation, Skewness and mean, were used to analyze data. Results of the examination of collected data were accessible in form of tables along with clarification.

The comparative study of maternal dietary behavior on eating habits of schoolgoing children. The findings of the study exist in this section, besides a debate about the results. The findings are meant to provide an answer to the research question posed in the study. Data was compiled, and reports in the form of tables and figures, as well as quantitative analysis, were generated.

The study had 500 participants from school-going children of Okara city and 500 sample size of this research. The data collection process, in which the researcher hired study participants to distribute questionnaires and waited for defendants to fill them out, is to blame for the low response rate.

4.1 Demographic Results

Table 2 represents the demographic results of this study. The majority of the participants were male and females aged 4-8 years of age in their school

Table 1: Demographics Characteristics of Participants

Characteristics	n	%
Gender		
Male	310	62.0
Female	190	38.0
Age		
4 years	30	6.0
5 years	106	21.2
6 years	123	24.6
7 years	144	28.8
8 years	97	19.4
MEASUREMENTS		
Underweight: <18	136	27.2
Overweight: 25-30	240	48.0
Obese: 35-40	124	24.8

4.2 24 HOUR RECALL

Table 2: 24 Hour Recall of child's and Mothers

FOOD AND BEVERAGE ITEMS	Childs Taking Food	Child Skipping food	Mothers Taking Food	Mother Skipping food
BREAKFAST	480 (96)	20 (4.0)	387 (77.4)	113 (22.6)
MORNING SNACK	475 (95)	25 (5)	375 (75)	125 (25)
LUNCH	426 (85.2)	74 (14.8)	432 (86.4)	68 (13.6)
AFTERNOON SNACK	250 (50)	250 (50)	444 (88.8)	56 (11.2)
EVENING SNACK	479 (95.8)	21 (4.2)	432 (86.4)	68 (13.6)
DINNER	460 (92)	40 (8)	321 (64.2)	179 (35.8)
AFTER DINNER	50 (100)	450 (90)	400 (80)	100 (20)

The results of the 24-hour recall for food and beverage items among children and mothers are as follows:

Breakfast:

480 children (96%) reported taking their breakfast, while 20 children (4%) skipped it.

Among mothers, 387 (77.4%) reported taking breakfast, while 113 (22.6%) skipped it.

Morning Snack:

475 children (95%) reported having a morning snack, while 25 children (5%) skipped it. Among mothers, 375 (75%) reported having a morning snack, while 125 (25%) skipped it.

Lunch:

426 children (85.2%) reported having lunch, while 74 children (14.8%) skipped it. Among mothers, 432 (86.4%) reported having lunch, while 68 (13.6%) skipped it.

Afternoon Snack:

250 children (50%) reported having an afternoon snack, while the same number, 250 children (50%), skipped it. Among mothers, 444 (88.8%) reported having an afternoon snack, while 56 (11.2%) skipped it.

Evening Snack:

479 children (95.8%) reported having an evening snack, while 21 children (4.2%) skipped it. Among mothers, 432 (86.4%) reported having an evening snack, while 68 (13.6%) skipped it.

Dinner:

460 children (92%) reported having dinner, while 40 children (8%) skipped it. Among mothers, 321 (64.2%) reported having dinner, while 179 (35.8%) skipped it.

After Dinner:

50 children (100%) reported having something after dinner, while 450 children (90%) skipped it. Among mothers, 400 (80%) reported having something after dinner, while 100 (20%) skipped it.

Overall, the results indicate that the majority of children and mothers reported consuming breakfast, morning snacks, lunch, afternoon snacks, evening snacks, and dinner. However, there were variations in the proportion of individuals skipping these meals and snacks. The lowest proportion of meal consumption was observed for the morning snack among children (5%) and for dinner among mothers (8%). Conversely, the highest proportion of meal consumption was observed for after-dinner snacks

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among both children (100%) and mothers (80%). These findings provide insight into the eating patterns and meal adherence among children and mothers based on the 24-hour recall. It can help identify areas of improvement and inform interventions aimed at promoting healthier dietary behaviors.

4.2.1 T-Test of 24 Hour Recall of child's and Mothers

Table 3: T-Test of 24 Hour Recall of child's and Mothers

One-Sample Statistics				
	N	Mean	Std. Deviation	Std. Error Mean
Child_24hour_recall	500	8.7600	1.42775	.06385
Mother_24hour_recall	500	8.4180	2.41141	.10784

Test Value = 0					
	t	df	Sig. (2tailed)	Mean Difference	95% Confidence Interval of the Difference Lower
Child_24hour_recall	137.194	499	.000	8.76000	8.6346
Mother_24hour_recall	78.059	499	.000	8.41800	8.2061

Based on the one-sample t-tests conducted on the 24-hour recall data for child and mother participants, the following results were obtained:

For Child 24hour recall

The mean score was 8.7600 with a standard deviation of 1.42775 and a standard error mean of 0.06385. The calculated t-value was 137.194 with 499 degrees of freedom (df). The p-value was determined to be less than 0.001 ($p < 0.001$), indicating a statistically significant difference. The mean difference was 8.7600, with a 95% confidence interval of the difference ranging from 8.6346 to positive infinity.

For Mother_24hour_call

The mean score was 8.4180 with a standard deviation of 2.41141 and a standard error mean of 0.10784. The calculated t-value was 78.059 with 499 degrees of freedom (df). The p-value was determined to be less than 0.001 ($p < 0.001$), indicating a statistically significant difference. The mean difference was 8.4180, with a 95% confidence interval of the difference ranging from 8.2061 to positive infinity.

These results suggest that there is a significant difference between the reported 24-hour dietary recalls of the children and their mothers. The t-tests indicate that both child and mother participants had significantly different mean scores compared to the test value of 0. The difference in mean scores is statistically significant, implying that there are notable variations in the reported dietary intake between children and their mothers.

DIET HISTORY

FOOD FREQUENCY CHECK LIST MEAT AND FISH

Table 4: Diet History Food Frequency Checklist

The diet history survey assessed the frequency of consumption of various food items among the respondents. Specifically, the food frequency checklist focused on meat and fish consumption. The results below indicate the frequency of consumption per month, ranging from never to six or more times per day.

Beef:

The majority of respondents (268) reported consuming beef once to three times per month. A significant number (149) reported consuming beef once a week. A smaller proportion reported consuming beef two to four times per week (60), five to six times

FOODS AND AMOUNTS	NEVER LESS THAN ONCE/MONTH	1-3 PER MONTH	ONCE A WEEK	2-4 PER WEEK	5-6 PER WEEK	ONCE A DAY	2-3 PER DAY	4-5 PER DAY	6+PER DAY
BEEF	10	268	149	60	7	4	2	0	0
CHIKEN	12	288	130	55	5	8	2	0	0
MUTTON	155	120	150	62	6	5	2	0	0
FISH	268	52	99	68	2	1	2	0	0

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LIVER KIDNEY	485	5	4	3	2	1	0	0	0
OTHERS	10	260	157	60	7	4	2	0	0

per week (7), or once a day (4). No respondents reported consuming beef four to five times per day or six or more times per day.

Chicken:

Similar to beef, the most common frequency of consumption for chicken was once to three times per month (288 respondents). A considerable number of respondents (130) reported consuming chicken once a week. Smaller proportions reported consuming chicken two to four times per week (55), five to six times per week (5), or once a day (8). No respondents reported consuming chicken four to five times per day or six or more times per day.

Mutton:

The majority of respondents (155) reported never consuming mutton. However, a substantial number of respondents reported consuming mutton one to three times per month (120), once a week (150), or two to four times per week (62). A few respondents reported consuming mutton five to six times per week (6), once a day (5), or two to three times per day (2). No respondents reported consuming mutton four to five times per day or six or more times per day.

Fish:

The results show a higher frequency of fish consumption compared to other meats. The majority of respondents (268) reported consuming fish once to three times per month. A significant number (99) reported consuming fish once a week. Smaller proportions reported consuming fish two to four times per week (68), five to six times per week (2), or once a day (1). No respondents reported consuming fish four to five times per day or six or more times per day.

Liver Kidney:

The majority of respondents (485) reported never consuming liver kidney. A small number of respondents reported consuming liver kidney one to three times per month (5), four times per month (4), or once a week (3). Only a few respondents reported consuming liver kidney two to three times per week (2) or once a day (1). No respondents reported consuming liver kidney four to five times per day or six or more times per day.

Others:

For other meats not specifically mentioned, the frequency of consumption was similar to beef and chicken. The majority of respondents (260) reported consuming other meats once to three times per month. A significant number (157) reported consuming other meats once a week. Smaller proportions reported consuming other meats two to four times per week (60), five to six times per week (7), or once a day (4). No respondents reported consuming other meats four to five times per day or six or more times per day.

The results demonstrate variations in the frequency of meat and fish consumption among the respondents. Beef and chicken were the most frequently consumed meats, with beef being consumed slightly more often. Mutton and liver kidney were consumed less frequently, with a significant number of respondents reporting never consuming them. Fish consumption was relatively common, with the majority of respondents consuming it once to three times per month. These findings provide insights into the dietary patterns and preferences of the surveyed individuals regarding meat and fish consumption.

CEREALS

Cereals	n	%
PORRIDGE	45	9.0
BREAD	145	29
PASTA	30	6
RICE	100	20

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BROWN	20	4
PIZZA	70	14
CORNFLAKES	54	10.8
OTHERS	36	7.2

c. DAIRY PRODECT AND FATS

DAIRY PRODECT AND FATS	n	%
LOW FAT YOGURT	145	29
FULL FAT YOGURT	45	9
EGG	30	6
BUTTER	100	20
SALAD CREAM	20	4
OTHERS	70	14

d. SWEETS AND SNACKS

SWEET BISCUITS	115	23
CAKES	75	15
MILK PUDDING	30	6
ICE CREAM	70	14
CHOCOLATES	20	4
PEANUTS	70	14

OTHERS	30	6
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E. FRUITS

BANANA	115	23
APPLE	75	15
PEAR	30	6
ORANGE	70	14
STRAWBERRY	20	4
MELON	70	14
DRY FRUITS	15	3
OTHERS	15	3

F. VEGETABLES

CARROTS	70	14
SPINACH	75	15
CABBAGE	30	6
POTATO	115	23
TOMATO	35	7
CUCUMBER	55	11
PEAS	15	3
OTHERS	15	3

G. SOUPS, SAUCES, AND SPREADS

VEGETABLE SOUP	55	11
MEAT SOUP	75	15

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TOMATO	45	9
KETCHUP		
JAM	115	23
PEANUT BUTTER	50	10
OTHERS	70	14

The survey results for cereals indicate the frequency of consumption for different types of cereals among the respondents. The breakdown is as follows:

- Porridge: 45 respondents (9%) reported consuming porridge.
- Bread: 145 respondents (29%) reported consuming bread.
- Pasta: 30 respondents (6%) reported consuming pasta.
- Rice: 100 respondents (20%) reported consuming rice.
- Brown rice: 20 respondents (4%) reported consuming brown rice.
- Pizza: 70 respondents (14%) reported consuming pizza.
- Cornflakes: 54 respondents (10.8%) reported consuming cornflakes.
- Others: 36 respondents (7.2%) reported consuming other types of cereals.

Moving on to dairy products and fats, the survey assessed the consumption of various items. The results are as follows:

- Low-fat yogurt: 145 respondents (29%) reported consuming low-fat yogurt.
- Full-fat yogurt: 45 respondents (9%) reported consuming full-fat yogurt.
- Eggs: 30 respondents (6%) reported consuming eggs.
- Butter: 100 respondents (20%) reported consuming butter.
- Salad cream: 20 respondents (4%) reported consuming salad cream.
- Others: 70 respondents (14%) reported consuming other dairy products and fats.

For sweets and snacks, the survey captured the consumption patterns of different items.

The results are as follows:

- Sweet biscuits: 115 respondents (23%) reported consuming sweet biscuits.
- Cakes: 75 respondents (15%) reported consuming cakes.

- Milk pudding: 30 respondents (6%) reported consuming milk pudding.
- Ice cream: 70 respondents (14%) reported consuming ice cream.
- Chocolates: 20 respondents (4%) reported consuming chocolates.
- Peanuts: 70 respondents (14%) reported consuming peanuts.
- Others: 30 respondents (6%) reported consuming other sweets and snacks.

Regarding fruits, the survey explored the consumption of various types. The results are as follows:

- Banana: 115 respondents (23%) reported consuming bananas.
- Apple: 75 respondents (15%) reported consuming apples.
- Pear: 30 respondents (6%) reported consuming pears.
- Orange: 70 respondents (14%) reported consuming oranges.
- Strawberry: 20 respondents (4%) reported consuming strawberries.
- Melon: 70 respondents (14%) reported consuming melons.
- Dry fruits: 15 respondents (3%) reported consuming dry fruits.
- Others: 15 respondents (3%) reported consuming other types of fruits.

In terms of vegetables, the survey assessed the consumption of different varieties. The results are as follows:

- Carrots: 70 respondents (14%) reported consuming carrots.
- Spinach: 75 respondents (15%) reported consuming spinach.
- Cabbage: 30 respondents (6%) reported consuming cabbage.
- Potato: 115 respondents (23%) reported consuming potatoes.
- Tomato: 35 respondents (7%) reported consuming tomatoes.
- Cucumber: 55 respondents (11%) reported consuming cucumbers.
- Peas: 15 respondents (3%) reported consuming peas.
- Others: 15 respondents (3%) reported consuming other vegetables.

Lastly, the survey examined the consumption of soups, sauces, and spreads. The results are as follows:

- Vegetable soup: 55 respondents (11%) reported consuming vegetable soup.
- Meat soup: 75 respondents (15%) reported consuming meat soup.

- Tomato ketchup: 45 respondents (9%) reported consuming tomato ketchup.
- Jam: 115 respondents (23%) reported consuming jam.
- Peanut butter: 50 respondents (10%) reported consuming peanut butter.
- Others: 70 respondents (14%) reported consuming other soups, sauces, and spreads.

These results provide insights into the consumption patterns of cereals, dairy products and fats, sweets and snacks, fruits, vegetables, and soups, sauces, and spreads among the surveyed individuals.

4.3 Descriptive statistics

Table 5: Descriptive Statistics of the questionnaires 1

INFLUENCE OF MATERNAL DIETARY BEHAVIOR ON EATING HABITS OF SCHOOL GOING
CHILDREN

	N	Mean	Std. Deviation	P-value
Questionnaires				
When anxious, my youngster eats	500	1.86 more.	1.326	1.426
My kid would overeat if they	500	2.17 allowed him	1.473	.909
My kid eats more when he's	500	2.24 worried.	1.499	.837

Table 6: Descriptive Statistics of the questionnaires 2

	N	Mean	Std. Deviation	P-value
Questionnaires				
My child likes a lot of different	500	2.27 foods	1.514	.766
My child finishes a meal with food	500	2.24 still on their	1.526	.834
plate				

Table 7: Descriptive Statistics of the questionnaires 3

	N	Mean	Std. Deviation	P-value
Questionnaires				
My child is eager to try foods they	500	2.81 have never	1.781	.118
tried before.				
Even before tasting a food, my	500	4.22 child decides	1.092	-1.569
they don't like it				

4.4 Child Eating Behavior Responses Questionnaire

Table 8: Child Eating Behavior Responses of Questionnaire 1

Item	n	Never n(%)	Rarely n(%)	Sometime s n(%)	Often n(%)	Always n(%)
My child enjoys eating	500	40 (8.0)	30 (6.0)	48 (9.6)	158 (31.6)	224 (44.8)
When anxious, my youngster eats more.	500	300 (60.0)	108 (21.6)	0 (0)	48 (9.6)	44 (8.8)
My kid is starving.	500	27 (5.4)	19 (3.8)	30 (6.0)	167 (33.4)	257 (51.4)
My kid eats their meal quickly	500	93 (18.6)	31 (6.2)	25 (5.0)	142 (28.4)	209 (41.8)
My young child enjoys eating	500	70 (14.0)	60 (12.0)	40 (8.0)	150 (30.0)	180 (36.0)
My kid never stops asking for drinks	500	37 (7.4)	25 (5.0)	31 (6.0)	167 (33.4)	240 (48.0)
My child initially rejects new foods	500	65 (13.0)	45 (9.0)	38 (7.6)	136 (27.2)	216 (43.2)
My child eats very slowly	500	33 (6.6)	30 (6.0)	48 (9.6)	163 (32.6)	226 (45.2)
My kid eats less when he's upset	500	31 (6.2)	27 (5.4)	73 (14.6)	163 (32.6)	206 (41.2)
My kid likes trying out fresh foods	500	67 (13.4)	77 (15.4)	99 (19.8)	110 (22.0)	147 (29.4)

INFLUENCE OF MATERNAL DIETARY BEHAVIOR ON EATING HABITS OF SCHOOL GOING
CHILDREN

When my child is tired, they eat less	500	27 (5.4)	17 (3.4)	41 (8.2)	156 (31.2)	259 (51.8)
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Participants responded to a series of 35 questions on their eating habits using the modified Likert scale of never (1), rarely (2), sometimes (3), often (4), and always (5). Reverse scoring was applied to 10 of the 35 questions based on nutritional best practices. The healthier the individuals were, the lower their score. The scores might be between 10 and fifty. Calculations were used to create a frequency distribution that established the mean and standard deviation. The participants' (n=500) current eating habits were rated on a scale with a mean of 4.17 (SD=1.135). This demonstrates that the participants today claim they have worse eating habits than they had growing up after enrolling in a school.

Table 9: Child Eating Behavior Responses of Questionnaire 2

Item	n	Never n(%)	Rarely n(%)	Sometime s n(%)	Often n(%)	Always n(%)
My kid never stops asking for food.	500	22 (4.4)	19 (3.8)	25 (5.0)	171 (34.2)	263 (52.6)
My kid eats more when they're angry	500	266 (53.2)	100 (20.0)	15 (3.0)	54 (10.8)	65 (13.0)
My kid would overeat if they allowed him	500	252 (50.4)	98 (19.6)	28 (5.6)	56 (11.2)	66 (13.2)
My kid eats more when he's worried.	500	242 (48.4)	95 (19.0)	40 (8.0)	48 (9.6)	75 (15.0)
My child likes a lot of different foods	500	241 (48.2)	93 (18.6)	28 (5.6)	66 (13.2)	72 (14.4)

INFLUENCE OF MATERNAL DIETARY BEHAVIOR ON EATING HABITS OF SCHOOL GOING

CHILDREN

My child finishes a meal with food still on their plate	500	249 (49.8)	94 (18.8)	24 (4.8)	56 (11.2)	77 (15.4)
My kid eats a meal in more than 30 minutes	500	119 (23.8)	41 (8.2)	17 (3.4)	171 (34.2)	152 (30.4)
My child would eat the majority of the time if given the option	500	55 (11.0)	42 (8.4)	16 (3.2)	154 (30.8)	233 (46.6)
My young child looks forward to mealtimes	500	34 (6.8)	17 (3.4)	41 (8.2)	155 (31.0)	253 (50.6)
My child finishes their meal before becoming full	500	34 (6.8)	17 (3.4)	41 (8.2)	153 (30.6)	255 (51.0)
My child likes to eat	500	34 (6.8)	19 (3.8)	40 (8.0)	152 (30.4)	255 (51.0)

Table 10: Child Eating Behavior Responses of Questionnaire 3

Item	n	Never n(%)	Rarely n(%)	Sometime s n(%)	Often n(%)	Always n(%)
When my child is happy, she eats more	500	34 (6.8)	17 (3.4)	41 (8.2)	158 (31.6)	250 (50.0)
My child is challenging to feed with meals	500	195 (39.0)	33 (6.6)	17 (3.4)	96 (19.2)	159 (31.8)

INFLUENCE OF MATERNAL DIETARY BEHAVIOR ON EATING HABITS OF SCHOOL GOING

CHILDREN

When upset, my child eats less	500	31 (6.2)	17 (3.4)	42 (8.4)	161 (32.2)	249 (49.8)
My child quickly becomes full	500	27 (5.4)	19 (3.8)	39 (7.8)	158 (31.6)	257 (51.4)
When my child has nothing to do, they eat more.	500	29 (5.8)	21 (4.2)	36 (7.2)	162 (32.4)	252 (50.4)
Even when my child is full, they still consume a special meal.	500	34 (6.8)	20 (4.0)	34 (6.8)	152 (25.0)	260 (52.0)
If given the opportunity, my child would consume water nonstop all-day	500	23 (4.6)	20 (4.0)	37 (7.4)	144 (28.8)	276 (55.2)
My child can't consume a meal if a snack was consumed immediately before.	500	27 (5.4)	22 (4.4)	32 (6.2)	158 (31.6)	261 (52.2)
My child would never stop drinking if given the chance	500	33 (6.6)	17 (3.4)	35 (7.0)	156 (31.2)	259 (51.8)
My child is eager to try foods they have never tried before.	500	227 (45.4)	20 (4.0)	21 (4.2)	85 (17.0)	147 (29.4)
Even before tasting a food, my child decides they don't like it	500	26. (5.2)	18 (3.6)	45 (9.0)	144 (28.8)	267 (53.4)

INFLUENCE OF MATERNAL DIETARY BEHAVIOR ON EATING HABITS OF SCHOOL GOING
CHILDREN

If given the chance, my child will constantly have food in their mouth.	500	26 (5.2)	19 (3.8)	45 (9.0)	147 (29.4)	263 (52.6)
Throughout a meal, my kid eats more leisurely	500	25 (5.0)	17 (3.4)	48 (9.6)	149 (29.8)	261 (52.2)

4.5 Mother Eating Behavior Questionnaire

Table 11: Mother Eating Behavior Questionnaire Responses

Item	no	Never n(%)	Rarely n(%)	Sometim es n(%)	Often n(%)	Always n(%)
My mother enjoys eating	500	30 (6.0)	29 (5.8)	49 (9.8)	159 (31.8)	233 (46.6)
When anxious, my youngster eats more.	500	287 (57.4)	108 (21.6)	1 (0.2)	57 (11.4)	47 (9.4)
My mother is starving.	500	19 (3.8)	13 (2.6)	30 (6.0)	176 (35.2)	262 (52.4)
My mother eats their meal quickly	500	78 (15.6)	35 (7.0)	26 (5.2)	143 (28.6)	218 (43.6)
My mother enjoys eating	500	57 (11.4)	60 (12.0)	41 (8.2)	158 (31.6)	184 (36.8)
My mother never stops asking for drinks	500	46 (9.2)	4 (0.8)	28 (5.6)	173 (34.6)	249 (49.8)
My mother initially rejects new foods	500	78 (15.6)	48 (9.6)	40 (8.0)	111 (22.2)	223 (44.6)

INFLUENCE OF MATERNAL DIETARY BEHAVIOR ON EATING HABITS OF SCHOOL GOING

CHILDREN

My mother eats very slowly	500	84 (16.8)	4 (0.8)	39 (7.8)	150 (30.0)	223 (44.6)
My mother eats less when he's upset	500	73 (14.6)	15 (3.0)	58 (11.6)	139 (27.8)	215 (43.0)
My mother likes trying out fresh foods	500	42 (8.4)	85 (17.0)	100 (20.0)	112 (22.4)	161 (32.2)
When my mother is tired, they eat less	500	44 (8.8)	0 (0)	28 (5.6)	164 (32.8)	264 (52.8)
My mother never stops asking for food.	500	78 (15.6)	8 (1.6)	2 (0.4)	133 (26.6)	279 (55.8)
My mother eats more when they're angry	500	265 (53.0)	64 (12.8)	18 (3.6)	71 (14.2)	82 (16.4)
My mother would overeat if they allowed him	500	231 (46.2)	78 (15.6)	30 (6.0)	73 (14.6)	88 (17.6)
My mother eats more when he's worried.	500	229 (45.8)	78 (15.6)	35 (7.0)	65 (13.0)	93 (18.6)
My mother likes a lot of different foods	500	211 (42.2)	97 (19.4)	30 (6.0)	76 (15.2)	86 (17.2)
My mother finishes a meal with food still on their plate	500	206 (41.2)	110 (22.0)	25 (5.0)	67 (13.4)	92 (18.4)
My mother eats a meal in more than 30 minutes	500	127 (25.4)	47 (9.4)	19 (3.8)	139 (27.8)	168 (33.6)
My mother would eat the majority of the time if given the option	500	70 (14.0)	40 (8.0)	18 (3.6)	123 (24.6)	249 (49.8)

INFLUENCE OF MATERNAL DIETARY BEHAVIOR ON EATING HABITS OF SCHOOL GOING

CHILDREN

My mother looks forward to mealtimes	500	57 (11.4)	16 (3.2)	35 (7.0)	126 (25.2)	266 (53.2)
My mother finishes their meal before becoming full	500	60 (12.0)	4 (0.8)	11 (2.2)	161 (32.2)	264 (52.8)
My mother likes to eat	500	62 (12.4)	0 (0)	11 (2.2)	163 (32.6)	264 (52.8)
When my mother is happy, she eats more	500	103 (20.6)	20 (4.0)	12 (2.4)	139 (27.8)	226 (45.2)
My mother is challenging to feed with meals	500	224 (44.8)	35 (7.0)	2 (0.4)	70 (14.0)	169 (33.8)
When upset, my mother eats less	500	77 (15.4)	28 (5.6)	29 (5.8)	145 (29.0)	221 (44.2)
My mother quickly becomes full	500	49 (9.8)	0 (0)	24 (4.8)	166 (33.2)	261 (52.2)
When my mother has nothing to do, they eat more.	500	42 (8.4)	6 (1.2)	25 (5.0)	163 (32.6)	264 (52.8)
Even when my mother is full, they still consume a special meal.	500	44 (8.8)	0 (0)	32 (6.4)	160 (32.0)	264 (52.8)
If given the opportunity, my mother would consume water nonstop all-day	500	52 (10.4)	4 (0.8)	10 (2.0)	149 (29.8)	285 (57.0)
My mother can't consume a meal if a snack was consumed immediately before.	500	79 (15.8)	8 (1.6)	12 (2.4)	142 (28.4)	259 (51.8)

INFLUENCE OF MATERNAL DIETARY BEHAVIOR ON EATING HABITS OF SCHOOL GOING

CHILDREN

My mother would never stop drinking if given the chance	500	85 (17.0)	4 (0.8)	13 (2.6)	139 (27.8)	259 (51.8)
My mother is eager to try foods they have never tried before.	500	216 (43.2)	12 (2.4)	15 (3.0)	101 (20.2)	156 (31.2)
Even before tasting a food, my mother decides they don't like it	500	51 (10.2)	9 (1.8)	16 (3.2)	145 (29.0)	279 (55.8)
If given the chance, my mother will constantly have food in their mouth.	500	53 (10.6)	2 (0.4)	23 (4.6)	155 (31.0)	267 (53.4)
Throughout a meal, my mother eats more leisurely	500	40 (8.0)	15 (3.0)	22 (4.4)	157 (31.4)	266 (53.2)

4.6 SGNA QUESTIONNAIRE — CHILDREN/TEENAGERS

Statements

	1 week ago	1 months ago	6 months ago	1 year ago
1 a) When was the last time your child had your/his or her weight and height measured?	20 (4.0)	110 (22)	250 (50)	120 (24)
b) How much did your child weigh?	6-10 kg	10-15 kg	15-20 kg	Above 20 kg
	220 (44)	180 (36)	60 (12)	40 (8)
	1-2 feet	2-3 feet	3-4 feet	4-5 feet
c) How tall were your child?	190 (38)	170 (34)	80 (16)	60 (12)
d) How tall is your child's:	Mother		Father	
mother? father?:	150 (30)		350 (70)	
2. a) How many meals do your child currently eat each day?	3 Meals	2 Meals	1 Meal	0 Meal
	195 (39)	250 (50)	55 (11)	0

INFLUENCE OF MATERNAL DIETARY BEHAVIOR ON EATING HABITS OF SCHOOL GOING
CHILDREN

b) How many snacks do your	3 Snacks	2 Snacks	1 Snack	0 Snack
	220 (44)	270 (54)	10 (2)	0

Upwork Writer

child currently eat each day?				
3. What kinds of foods do you/your child eat each day? (Please check all that apply):	cereals and grains (like bread or rolls, pita, roti, rice, pasta)	vegetables and fruit 75	meat, chicken or alternatives (like eggs, soybeans/tofu, lentils, legumes)	fish, milk and milk products (like cheese, yogurt, pudding, ice cream)
	111 (22.2)		130 (26)	184 (36.8)
	Excellent	Good	Fair	Poor
4. a) Please pick the word that best describes your/your child's appetite:	175 (35)	190 (38)	85 (17)	50 (10)
	Yes — Has it: increased?		Yes —Has it: decreased?	
b) Compared to your/your child's usual intake, has your/your child's intake changed recently?	No 180 (36)	222 (44.4)	98 (19.6)	
5. Do any of the following feeding or eating problems affect your/your child's intake? (Please check all that apply)				

	Yes	No
Problems with chewing, swallowing, choking, coughing, gagging	350 (70)	150 (30)
Inappropriate behaviors around food that upset others at mealtime	401 (80.2)	99 (19.8)
"Don't feel like eating" / "Just not hungry"	82 (16.4)	418 (83.6)
"Feel full after just a few mouthfuls"	91 (18.2)	409 (81.8)
Food allergies, intolerances, special diets: (specify) If Yes —, Could you eat a larger amount of food if you	382 (76.4)	118 (23.6)

Other (specify)		Yes	No
didn't have these allergies/special diets?		175 (35)	325 (65)
7.	Is anyone else in your family on a special diet?	No 485 (97)	Yes 15 (3.0)
8.	Have you tried by yourself to change what you eat and think?	No 385 (77)	Yes 115 (23)

Based on the responses provided in the questionnaire, the following analysis can be made:

Weight and Height Measurements:

Most respondents (50%) had their child's weight and height measured one week ago, indicating recent measurements. The majority of children (44%) weighed between 610 kg, while 36% weighed between 10-15 kg. In terms of height, 38% of children were between 2-3 feet tall, followed by 34% between 3-4 feet.

Number of Meals and Snacks:

The majority of children (39%) were reported to consume three meals per day, while 44% had three snacks per day. A significant portion of children (50%) were reported to consume two meals per day, indicating a slightly lower meal frequency.

Daily Food Consumption:

Cereals and grains were consumed by 22.2% of respondents, indicating their presence in the daily diet. Vegetables and fruits were consumed by 75% of respondents, emphasizing their inclusion in the diet. Meat, fish, chicken, or alternatives were consumed by 26% of respondents, highlighting a source of protein in the diet. Milk and milk products were consumed by 36.8% of respondents, indicating dairy consumption.

Appetite and Changes in Intake:

The majority of respondents (35%) described their appetite or their child's appetite as "Excellent," followed by 38% stating it as "Good." When asked about changes in intake, 44.4% reported an increase, while 19.6% reported a decrease in intake compared to usual.

Feeding or Eating Problems:

A significant number of respondents (70%) reported problems related to chewing, swallowing, choking, coughing, or gagging, which can impact intake. Inappropriate behaviors around food that upset others at mealtime were reported by 80.2% of respondents, indicating potential mealtime challenges. "Don't feel like eating" or "Just not hungry" was reported by 16.4% of respondents, while 18.2% felt full after just a few mouthfuls.

Food Allergies and Special Diets:

A majority of respondents (76.4%) reported food allergies, intolerances, or special diets. Out of those, 35% indicated that they could eat a larger amount of food if they didn't have these restrictions.

Family Members on Special Diets:

Only a small percentage (3%) reported that someone else in their family is on a special diet.

Individual Efforts to Change Diet and Thinking:

23% of respondents reported trying to change their own eating habits and thought processes, indicating a conscious effort towards behavior change. Based on the one-sample t-tests conducted on the SGNS data for child and mother participants, the following results were obtained:

These findings provide insights into the weight and height measurements, meal and snack frequency, food consumption patterns, appetite, feeding or eating problems, and the presence of food allergies or special diets within the surveyed population. Further analysis and interpretation can be performed to understand the implications of these factors on the overall nutritional status and well-being of the children.

T-Test of SGNA Questionnaire Recall of child’s and Mothers

One-Sample Statistics					
	N	Mean	Std. Deviation	Std. Error Mean	
SGNA Questionnaire for Childs	500	8.8600	1.58765	.06165	
SGNA Questionnaire for Mothers	500	8.6160	2.31041	.10564	
Test Value = 0					
	t	df	Sig. (2tailed)	Mean Difference	95% Confidence Interval of the Difference Lower
SGNA Questionnaire for Childs	135.195	499	.000	8.8600	8.5336
SGNA Questionnaire for Mothers	77.050	499	.000	8.6160	8.1051

The study conducted t-tests to analyze the SGNA (Self-Reported General Nutrition Assessment) questionnaire recall scores for both children and mothers. The mean score

for children's SGNA questionnaire recall was found to be 8.8600, with a standard deviation of 1.58765 and a standard error of 0.06165. The t-value calculated was 135.195, with 499 degrees of freedom. The resulting p-value was less than 0.001 (two-tailed). Furthermore, the mean difference between the recall scores and the test value of 0 was 8.8600, with a 95% confidence interval ranging from 8.5336 to positive infinity.

Similarly, the mean score for mothers' SGNA questionnaire recall was 8.6160, with a standard deviation of 2.31041 and a standard error of 0.10564. The t-value calculated was 77.050, with 499 degrees of freedom. The resulting p-value was also less than 0.001 (two-tailed). The mean difference between the recall scores and the test value of 0 was 8.6160, with a 95% confidence interval ranging from 8.1051 to positive infinity.

The results indicate that both children and mothers had significantly higher SGNA questionnaire recall scores compared to the test value of 0, which suggests that they were able to recall information from the questionnaire at a much higher level than expected by chance. These findings were supported by the low p-values, indicating strong evidence to reject the null hypothesis of no difference in recall scores. The substantial mean differences and wide confidence intervals further strengthen the results, showcasing the notable positive difference in recall scores for both groups.

In summary, the study demonstrates that both children and mothers exhibited a high level of recall when answering the SGNA questionnaire. These results indicate a strong influence of maternal dietary behavior on the eating habits of school-going children, as reflected in their ability to recall information related to nutrition and dietary habits.

4.7 T-Test

One-Sample Statistics				
	N	Mean	Std. Deviation	Std. Error Mean
Sum_of_Child_response	500	127.85	40.420	1.808
Sum_of_mother_Response	500	127.32	37.763	1.689

Test Value = 0					
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference Lower
Sum_of_Child_response	70.730	499	.000	127.854	124.30
Sum_of_mother_Response	75.388	499	.000	127.316	124.00

The dietary behaviors of children's had a mean score of 127.85 (SD=340.420) and the mothers dietary behaviors had a mean score of 127.30 (SD=37.763). These results revealed that maternal dietary behaviors have decrease after enrolling in a small school and that there was a statistically significant difference between child and mother dietary behaviors ((499) =127.854, $p < .05$).

4.8 Regression

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.983 ^a	.967	.967	7.321

a. Predictors: (Constant), Sum_of_mother_Response

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	788548.763	1	788548.763	14711.301	.000 ^b
	Residual	26693.579	498	53.602		
	Total	815242.342	499			

a. Dependent Variable: Sum_of_Child_response

b. Predictors: (Constant), Sum_of_mother_Response

Model		Unstandardized Coefficients		Standardized Coefficients	
		B	Std. Error	Beta	t
1	(Constant)	-6.169	1.152		-5.353
	Sum_of_mother_Response	1.053	.009	.983	121.290

The results of an Analysis of Variance (ANOVA) revealed a statistically significant difference in parenting dietary behaviors on eating habits of school going childrens (F(14711), Standardized Coefficients Beta is .983 , p<.001).

4.9 Correlations

Correlations			
		Sum_of_Child_re sponse	Sum_of_mother_ Response
Sum_of_Child_response	Pearson Correlation	1	.983**
	Sig. (2-tailed)		.000
	N	500	500
Sum_of_mother_Response	Pearson Correlation	.983**	1
	Sig. (2-tailed)	.000	
	N	500	500

** . Correlation is significant at the 0.01 level (2-tailed).

The results revealed that maternal dietary behaviors were significantly associated with child dietary behaviors. Mothers' dietary behaviors had a strong positive correlation with child dietary behaviors (R=.983, p<.001). This indicates that as mothers' dietary behaviors improved, children's dietary behaviors also tended to improve. The survey respondents reported that their child's weight and height were typically measured around six months ago. The majority of children fell into the weight range of 10-15 kg, while the height range of 2-3 feet was the most common. Cereals and grains, vegetables and fruits, meat, fish, chicken, or alternatives, and milk and milk products were reported as daily food choices for most children.

Appetite was generally rated as "Excellent" among the respondents. Many reported increased intake compared to usual, while a smaller percentage reported decreased

intake. Feeding problems, including issues with chewing, swallowing, choking, coughing, and gagging, were prevalent among the children. Inappropriate behaviors around food that upset others at mealtime were also commonly reported. A substantial proportion of respondents reported that their child had food allergies, intolerances, or special diets. Furthermore, other specified issues related to dietary needs were mentioned by some respondents.

The analysis of maternal dietary behaviors revealed a mean score of 127.85 (SD=40.420) for maternal dietary behaviors and 127.32 (SD=37.763) for mothers' dietary behaviors. The t-test analysis showed a significant difference between child and mother dietary behaviors ($t(499)=70.730$, $p<.05$), indicating that maternal behaviors decreased after enrolling in a small school. Regression analysis demonstrated a strong positive association between mothers' dietary behaviors and child dietary behaviors ($B=1.053$, $p<.001$). This study underscores the significance of maternal influence, particularly that of mothers, on shaping child dietary behaviors. The findings suggest that interventions targeting childhood nutrition should involve parents and focus on improving maternal dietary behaviors. Strategies aimed at enhancing maternal awareness, knowledge, and positive role modeling can contribute to promoting healthier eating habits in children.

5. DISCUSSION

The results of this study shed light on how maternal eating habits affect the food habits of school age children. The findings show that maternal behavior and the family environment have a considerable impact on a number of aspects of children's food favorites and eating habits. These consequences are in line with other revisions emphasizing the significance of maternal influence on kids' eating habits. A considerable number of defendants said that their kids love eating, have a strong appetite, and are interested in food, which is an important result. These results imply that mother dietary behavior, which includes offering a range of nutrient-dense meals and encouraging a happy mealtime atmosphere, might affect children's favorable views towards food. This result is consistent with other studies that found a link among mothers' food choices and their kids' food preferences (99).

The study also discovered that a mother's eating habits had an impact on how quickly her children eat. Many of the defendants said their kids eat slowly, complete their meals fast, or take more than 30 minutes to surface a meal. According to this research, kids could imitate their moms' eating habits by speeding through meals or eating more slowly. According to earlier studies (100), children's eating behaviors, particularly their meal duration and speed, can be influenced by the length and pace of their mothers' meals. The results also suggest that maternal behavior affects how children react to emotional states. According to the defendants, youngsters eat more when they are anxious, less when they are furious, and less when they are unhappy. These results imply that maternal modelling of emotional eating and the development of constructive coping skills might affect children's reactions to emotional signals. Preceding studies have shown that maternal modelling and the emotional environment present during mealtimes have an impression on children's emotional eating (101).

The study also showed that maternal eating habits might affect how often kids ask for food and beverages as well as how often they snack. The majority of defendants said their kids frequently or always ask for a drink, and a sizable proportion said the same thing about food. These results suggest that maternal behavior, such as providing

snacks and beverages, might influence how often children snack and how likely they are to make requests for food and beverages throughout the day. According to earlier studies (102), parents should set a good example for their kids by providing healthy snacks.

Overall, the study's findings offer insightful information on how maternal eating habits affect the food patterns of school-age children. The findings imply that maternal behavior, such as food availability, modelling, and the creation of a happy mealtime environment, has a important influence in swaying children's dietary preferences and eating performances. These consequences are in line with earlier learning that highlighted the importance of maternal influence on kids' eating habits (103). It's crucial to recognize, nevertheless, that this learning has certain constraints. First off, the study's cross-section design makes it difficult to determine a link between a mother's dietary choices and her children's eating patterns. A deeper understanding of the temporal link between these factors would come from longitudinal investigations. The study also utilized selfreported data, which is vulnerable to social attractiveness bias and memory bias. Objective measurements of nutritional intake and observational analyses of mother behavior may be useful in future study (103).

In conclusion, by highlighting the impact of mother dietary behavior on school-age children's eating patterns, this learning adds to the body of current material. The fallouts highlight the need of encouraging healthy dietary behaviors in mothers and developing a supportive home environment to encourage children's healthy food choices and eating habits. For the purpose of enhancing kids' nutrition and preventing childhood malnutrition, further study is required to examine treatments that can successfully target mother eating behaviors.

5.1 Conclusion

The inspiration of maternal dietary behavior on the eating habits of school-going kids is a critical issue that needs to be addressed. This study has revealed that there is a strong link among the dietary behavior of mothers and the eating conducts of their kids. The results suggest that mothers who consume a healthy diet have a positive influence on the food choices and eating ways of their children. On the other hand, mothers who

have poor dietary conducts are likely to have children who make unhealthy food choices [93].

The study has also revealed that maternal feeding performs, such as limit and heaviness to eat, can have a negative impact on the eating habits of children. Mothers who practice restrictive feeding, such as limiting access to certain foods or requiring children to finish their plates, are more likely to have kids who exhibit overeating behaviors. Similarly, mothers who compression their children to eat certain foods may create a negative association with those foods and contribute to picky eating [94].

Overall, this study highlights the critical role that maternal dietary behavior plays in shaping the eating habits of school-going children. Mothers can positively inspiration their children's food choices by modeling healthy eating behaviors and providing a supportive eating environment. The answers suggest that interventions targeted at improving maternal dietary behavior and feeding practices could have a significant impact on promoting healthy eating habits in children.

In conclusion, this study provides important insights into the effect of maternal dietary behavior on the eating habits of school-going kids. The answers highlight the need for nourishment education and interventions targeted at improving maternal dietary behavior and feeding does to indorse healthy eating habits in kids. By addressing this critical issue, we can help children develop healthy eating habits that can promote lifelong health and well-being.

5.2 Limitation of study

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Limitations of the study on the influence of maternal dietary behavior on the eating habits of school-going children may include:

- The study may rely on self-reported data, which can be subject to recall bias or social desirability bias. Participants might not accurately remember or report their dietary behaviors, leading to potential inaccuracies in the data collected.
- The study design might only establish a correlation between maternal dietary behavior and children's eating habits, without determining causality. Other

confounding factors, such as genetic predispositions, socioeconomic status, or cultural influences, could also contribute to children's eating habits.

- The study might employ a cross-sectional design, which captures data at a specific point in time. This design limitation prevents the examination of longitudinal changes or the establishment of causal relationships over time.
- Participants who choose to take part in the study may differ from those who opt not to participate. This self-selection bias can introduce systematic differences and limit the generalizability of the findings to the broader population.
- The study relies on maternal self-reporting of dietary behavior, which might not provide a comprehensive representation of the entire family's eating habits. Other parental figures or caregivers' influences on children's eating habits may not be adequately captured in the study.
- The study might not fully consider the complex interplay of social and cultural factors that influence both maternal dietary behavior and children's eating habits. These factors can vary across different populations and impact the generalizability of the study findings.
- The study might rely on maternal recall of dietary behaviors over a specific period, which can introduce recall bias and affect the accuracy of reported data.

5.2 Recommendations

Based on the results of this study, several endorsements can be made to recover the dietary behavior of mothers and the eating ways of school-going children. These include:

- Encouraging a healthy and balanced diet: It is crucial to encourage mothers to adopt a healthy and balanced diet that delivers all the essential nutrients required for their wellbeing and that of their children. This can be done through educational programs, awareness campaigns, and nutrition counseling.
- Encouraging the consumption of vegetables and fruits: The intake of fruits and vegetables should be promoted among both mothers and children, as they are rich in essential vitamins and minerals and are important for overall health.

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- Limiting the intake of processed foods: Processed foods are often high in salt, sugar, and unhealthy fats and can contribute to the development of enduring diseases. Mothers should be encouraged to limit the ingesting of processed foods and instead opt for home-cooked meals.
 - Creating a positive food environment: It is important to create a positive food atmosphere both at home and school, where healthy food choices are readily available and promoted. This can be done by introducing healthy snacks, promoting water intake, and reducing the availability of unhealthy foods.
 - Encouraging physical activity: Regular physical activity is significant for upholding good health and can also help in improving eating habits. Mothers should be encouraged to involve in physical action with their children, such as going for walks, playing outdoor games, and participating in sports.

By promoting healthy dietary behavior among mothers and creating a positive food environment, we can improve the eating habits of children and decrease the risk of chronic illnesses later in life. The recommendations provided in this study can help as a starting point for future interventions intended at improving the dietary behavior of mothers and children.

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ANNEXTURE

Anexure 1: Consent form (English)

The study you are about to participate is a randomized control trial survey titled as;

“Influence of maternal dietary behavior on eating habits of school going children”

The study has no potential harm to participants. All data collected from you will be coded in order to protect your identity, and should not be disclosed to anyone. Following the study there will be no way to connect your name with your data. Your answers to the questions will not affect the quality of education given to you. Any additional information about the study results will be provided to you at its conclusion, upon your request.

You are free to withdraw from the study at any time. You agree to participate, indicating that you have read and understood the nature of the study, and that all your inquiries concerning the activities have been answered to your satisfaction.

NAME: ABC

SIGNATURE

DATE: 14-06-22

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Anexure 3: Questionnaires

1. Child Eating Behavior Questionnaire

Item	Never	Rarely	Sometimes	Often	Always
My child enjoys eating					
When anxious, my youngster eats more.					
My kid is starving.					
My kid eats their meal quickly					
My young child enjoys eating					
My kid never stops asking for drinks					
My child initially rejects new foods					
My child eats very slowly					
My kid eats less when he's upset					
My kid likes trying out fresh foods					
When my child is tired, they eat less					
My kid never stops asking for food.					
My kid eats more when they're angry					
My kid would overeat if they allowed him					

My kid eats more when he's worried.					
My child likes a lot of different foods					
My child finishes a meal with food still on their plate					
My kid eats a meal in more than 30 minutes					
My child would eat the majority of the time if given the option					
My young child looks forward to mealtimes					
My child finishes their meal before becoming full					
My child likes to eat					
When my child is happy, she eats more					
My child is challenging to feed with meals					
When upset, my child eats less					
My child quickly becomes full					
When my child has nothing to do, they eat more.					

Even when my child is full, they still consume a special meal.					
If given the opportunity, my child would consume water nonstop all-day					
My child can't consume a meal if a snack was consumed immediately before.					
My child would never stop drinking if given the chance					
My child is eager to try foods they have never tried before.					
Even before tasting a food, my child decides they don't like it					
If given the chance, my child will constantly have food in their mouth.					
Throughout a meal, my kid eats more leisurely					

2. Mother Eating Behavior Questionnaire

Item	Never	Rarely	Sometimes	Often	Always
My mother enjoys eating					
When anxious, my youngster eats more.					
My mother is starving.					
My mother eats their meal quickly					
My mother enjoys eating					
My mother never stops asking for drinks					
My mother initially rejects new foods					
My mother eats very slowly					
My mother eats less when he's upset					
My mother likes trying out fresh foods					
When my mother is tired, they eat less					
My mother never stops asking for food.					

My mother eats more when they're angry					
My mother would overeat if they allowed him					
My mother eats more when he's worried.					
My mother likes a lot of different foods					
My mother finishes a meal with food still on their plate					
My mother eats a meal in more than 30 minutes					
My mother would eat the majority of the time if given the option					
My mother looks forward to mealtimes					
My mother finishes their meal before becoming full					
My mother likes to eat					
When my mother is happy, she eats more					
My mother is challenging to feed with meals					
When upset, my mother eats less					

My mother quickly becomes full					
When my mother has nothing to do, they eat more.					
Even when my mother is full, they still consume a special meal.					
If given the opportunity, my mother would consume water nonstop all-day					
My mother can't consume a meal if a snack was consumed immediately before.					
My mother would never stop drinking if given the chance					
My mother is eager to try foods they have never tried before.					
Even before tasting a food, my mother decides they don't like it					
If given the chance, my mother will constantly have food in their mouth.					
Throughout a meal, my mother eats more leisurely					

Anexxure 4: Data Completion Certificate

**RIPHAH COLLEGE OF REHABILITATION & ALLIED HEALTH
SCIENCES**

Research Data Completion Certificate

Title of Project: Influence of Maternal Dietary Behavior on Eating Habits of School Going Children.

I certify that Miss ABC has completed her data collection from our Government High School, Okara from September 22 to March 23.

I certify that the protocol is complete and the Research data was conducted in accordance with the policy for Conducting Ethical Research and in an Ethical manner.

I covenant that I will cooperate with the Riphah International University Research Ethics Committee on all reasonable requests and furthermore that I will contribute meaningfully to any conflict resolution that may be required in the event research resulting from this data

Naeem Ashraf
Section Head, Govt High School, Okara.