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Understanding the psychological and behavioral factors influencing picky eating in preschool-aged children

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Abstract

Eating choices in preschool children are shaped by various psychological and behavioral factors. Key influences include the child's natural temperament, with traits such as sensory sensitivity and food neophobia playing an important role. Parental eating practices, including modeling healthy eating behaviors and creating a positive mealtime environment, have a significant impact on children's eating patterns. Family dynamics, such as parental pressure or restrictions, can exacerbate selective eating behavior. In addition, early experiences with a variety of foods and repeated exposure to new foods are also important in shaping a child's acceptance of varied foods. Interventions that emphasize a non-coercive and supportive approach, encourage repeated exposure to a variety of foods, and foster a positive mealtime atmosphere are critical to reducing picky eating behavior. By understanding these factors, parents and caregivers can better address and manage picky eating, encourage healthier eating habits, and support preschoolers' overall growth and well-being.

Keywords: Psychological; Behavioral Factors; Picky Eating; Preschool; Modeling Healthy

1. Introduction

Picky eating habits can be characterized as fussy, fad, or picky eating. This behavior also can be classified as part of a spectrum of feeding difficulties (Diamantis, Emmett & Taylor, 2023). It is characterized by an unwillingness to eat familiar foods or to try new foods, as well as strong food preferences. Picky eating is an issue concerning eating habits that primarily affects youngsters. In the context of the current understanding of the psychological and behavioral factors that influence picky eaters among preschool-aged children is important. This concerning matter of picky eating in preschool-aged children is a frequent complaint of parents in the present day. Therefore, there can be many causes that affect the child's psychological and behavioral factors that influence picky eating.

In early childhood, children tend to be picky over their choices of food for numerous different or personal reasons of their own. Additionally, there are many factors that can cause children to become picky eaters. Such as fear of trying something new, a sign of early feeding difficulties, and the textures of food that are known as psychological factors. As a result, these factors may be attributed to bad experiences with foods, which can potentially lead to anxiety when the child is forced to eat the food or try new foods. Picky eating is one of the common behaviors that can lead to the refusal of food and negative behaviors from the child's actions such as screaming, crying, and throwing tantrums (Cunliffe, Coulthard & Williamson, 2022). These actions may cause parents to feel more anxious and frustrated, as well as drive them to feel negatively about routines with their kids like mealtimes.

Picky eating is an eating disorder that develops among children and may cause harm in different aspects of their lives. This is because picky eating can cause growth disorders and affect children's nutritional status (Amdan et al. 2024).

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Hence, it is crucial for parents and caregivers to recognize any early signs of factors that influence picky eating among children. Early detection of early signs also can help to reduce the risk of eating disorders that can cause significant damage to a child's body. Therefore, these children must be discovered at an early stage to ensure parents can receive support, guidance, and advice (Taylor & Emmett, 2019). Parental modeling of eating peculiar foods, as well as the formation of positive social interactions surrounding mealtimes, are all strategies for preventing or treating fussy eating.

1.1. Problem background

One of the problem backgrounds can be seen from exploring parental influence and mealtime dynamics. Parental influence can be defined as any opinion, attitude, or action that somehow shapes or molds the child's attitudes, lifestyles, or behavior. Parents can influence their children positively or negatively. As an example, if all parents always practice a healthy lifestyle, then even the children are influenced by their actions (Andrea B. Fuller, Rebecca A. Byrne, Rebecca K. Golley & Stewart G. Trost, 2019). Therefore, every parent should always be vigilant with every behavior and action they show to their children to prevent them from being influenced by negative behavior as well as actions shown by their parents or caregivers. Children are alike to mirrors and they are the reflection of their parents.

It certainly can be seen that parents do have the biggest influence on their children no matter what way whether it is in life in general or especially in the aspect of the eating habits of their children (Fitria Wahyu Ariyanti, Atikah Fatmawati, Ike Prafitia Sari, 2023). Generally, parents and caregivers are responsible for taking care of their children's nutritional intake. For that matter, parents, and caregivers play an important role in their children's life, in this case, especially in eating behavior. Parents are the biggest influence over the types of foods for your children (Fadel, N. S. M., Ishar, M. I. M., Jabor, M. K., Ahyar, N. A. M., & Janius, N. 2022). For example, they can influence children's preferences towards food choices and eating habits by labeling some food as "healthy" or "unhealthy". Thus, this may be the reason for the children starting to become picky with their food. Parents should always adopt and set good eating behavior for their children.

Parents or caregivers should also avoid using food as a reward or punishment for their children (Chehade, Meyer & Beauregard, 2019). When using food as a reward or punishment among children may lead to unhealthy eating habits. As an illustration, parents tend to serve sweets, carbonated drinks, or chips as rewards for their children to enjoy, this action may often lead the children to become hyperactive after consuming foods that are high in sugar, fat, and zero in calories. Consequently, children who eat and consume too much junk food may harm their health and cause serious health problems along the way (Hassan et al. 2018).

A child's negative response to food can be distressing for parents. However, some parents may be more distressed than others. Parental sensitivity, defined as awareness and appropriate responsiveness to children's verbal and nonverbal cues, is generally thought to be psychologically beneficial (Silje Steinsbekk, Bonneville- Roussy, Fildes, Llewellyn, & Lars Wichstrøm, 2017). Parents have to cope with their picky child's dissatisfaction or even worry, in order for them to indulge in a dish they have previously refused. Highly sensitive parents may be more affected by their child's distress and be more inclined to avoid confrontation to encourage their child to try new foods when they protest or become distressed (Ismawi, S. N. M., Ishar, M. I. M., & Janius, N. 2022). This is the proposed sensitive pathway to picky eating, whereby high parental sensitivity leads to decreased food exposure.

Parents and caregivers play the biggest role model in their children's lives. Children will most likely act as the reflection of their parents. This is because children will pick up all the habits of the adults that they see every day (Janius, N., Ishar, M. I. M., Bang, P., Sid, R., & Wong, G. 2023). Nevertheless, this is also the reason why parents should set a good example for their children to follow. As an example, eating food that is rich in nutrients such as fruits and vegetables, and not overconsuming food that lacks nutrients such as sweets, soda, processed food, and other junk food. Eventually, by these actions, your children will be influenced to do the same. Meanwhile, another way to be a good role model is to serve appropriate portions and not overeat (Loth et al. 2018). Hence, that is why setting mealtime routines for children can affect children's eating behavior to become better over time.

Mealtime is crucial in early childhood development. A child's eating patterns can be affected by the atmosphere at mealtimes. While distraction and conflict have negative consequences, guidance and tolerance help. The child's eating preferences may also be impacted by the presence of improper mealtime behaviors and table etiquette. For instance, snacking during mealtimes (Janius et al. 2018). Try to avoid snacking on the go or snacking all day, as this can lead to children refusing main meals which are typically more nutritious. Role modeling in good eating habits helps children to learn. Mealtime rituals are the perfect opportunity to communicate with each other. To learn about the goodness of food and to discover our children's culinary likes and dislikes.

During the early years of children's lives, meal presentations are one of the many ways that can be used to attract the attention of children, especially picky eaters among children. As a matter of fact, meals that are plated and presented beautifully and creatively can attract the children to try the meals that are prepared for them. There are numerous way to prepare a meal that will look appealing to them (Janius, N., Ishar, M. I. M., Yusof, Y., Bang, P., Sid, R., & Wong, G. 2023). Frankly, it is not easy for parents to introduce new food to their children, especially foods like vegetables. From these parents have to be creative, for example cutting vegetables into fun shapes or arranging them by color. Other than that, parents may use different shapes or types of cutters to shape a regular sandwich into a panda, a bear, or lots of other shapes and animals. Thus, this way can get children attracted as well as excited about their meals.

This part is focused on exploring the role of sensory and texture sensitivities in picky eating behavior. Investigate how individual differences in sensory perception and aversions to specific textures impact children's food choices. Picky eaters among children are one of the most common challenges faced by many parents around the world (Janius, N., Jahadi, N. E. H. B., Abdullah, S. N. L. B., & Ling, M. S. 2023). In this stage of your children's life, they may be experiencing many new things such as new foods, new environments, and new people. Children begin to taste food with different types of flavors, textures, colors and smells by the time parents start to introduce a whole variety of foods into their daily meals. (Nederkoorn et al. 2019). As a result, this may result in a huge difference in picky eating behavior.

A sensory hypersensitivity to particular food varieties is commonly referred to as sensory food aversion (Zulkifli et al. 2022). The characteristics of some foods, such as taste, texture, temperature, and fragrance, cause heightened sensory difficulties. Sensory food aversion can show up during meals as a general refusal to eat or spitting out the food, or it can get worse and develop as gagging and vomiting at even the slightest sight or scent (Janius, N. 2023). The latter may render your child frightened and make existing eating difficulties worse since they will expect the same reaction to happen with other similar foods. For instance, if a young child gags on broccoli, they may avoid all other green vegetables out of concern that they may cause the same sensory reactions.

There are some children who reject certain foods because of the food textures. Food texture is defined as those properties of food that are sensed by touch in the mouth and with the hands. Nowadays, foods can be described in many words such as soft, hard, crunchy, creamy, chewy, lumpy or slimy. As a child, the texture of the food is important because it can affect whether it is their liking or their enjoyment and acceptability of foods. Children who reject the slimy or sandy sensations in their hands refuse a wider range of foods, probably because their mouths are more sensitive to different food textures (Andes, A. J., 2021). Hence, it is very important for parents and caregivers to start exploring foods with their children as early as they can.

Picky eating behaviors in children are shaped by a complex interplay of emotional and cognitive factors, and it is crucial for parents, caregivers, and healthcare professionals to grasp these dynamics for effective management. Emotional anxiety is important because children may be hesitant to try unfamiliar meals, especially if their earlier experiences were negative or if they frequently endure anxiety in new circumstances (Yakop, A., Ishar, M. I. M., & Janius, N. 2024). This aversion to trying new meals can be caused by this fear of the unfamiliar. Additionally, neophobia, or the fear of new foods, is a common emotional factor. Children naturally exercise caution when encountering unfamiliar foods to safeguard themselves from potential harm, leading to an aversion to trying new foods.

Furthermore, the desire for control is another emotional factor at play. Children frequently try to control numerous elements of their surroundings, and they may do so by controlling what they eat. When children feel they have little control over other elements of their lives, picky eating may be an opportunity for them to show autonomy over their food choices. Emotional reactions to food textures, tastes, and smells also factor in; children with sensory sensitivities may experience heightened aversions to specific textures or flavors, making them hesitant to try certain foods. Negative mealtime experiences, such as choking or vomiting, can leave lasting emotional aversions to certain foods or food types, resulting in avoidance.

Children's eating preferences frequently have cognitive roots in familiarity. Because these foods offer a sense of consistency in terms of taste and texture, they tend to prefer them. Comfort and reduced perceived dangers are brought about by familiarity with new foods (Chang, Morrison, C.-T Jordan Lin, & Sean Hsin-Hung Lin, 2022). Additionally, cognitive biases like anchoring bias and confirmation bias can have a big impact on how people choose their meals. Anchoring bias is the tendency to favor information that supports preexisting ideas (Zulkafli, S. S. A., Ishar, M. I. M., & Janius, N. 2024). A child who has developed bad judgments about particular foods may choose to only consider information that supports such biases.

Moreover, children engage in social learning by observing the eating behaviors of those around them, including parents, siblings, and peers. If they witness others displaying picky eating behaviors or expressing aversions to specific foods, they may emulate these behaviors. Limited exposure to diverse foods during early childhood can also contribute to picky eating later on. Lastly, cognitive associations between food and unpleasant experiences, such as being scolded or feeling pressured to eat, can foster picky eating habits as children develop negative associations with certain foods or mealtime situations.

The behavior of a picky eater behavior can be characterized by the unwillingness to try unfamiliar foods or new foods, as well as having strong preferences towards certain foods. Picky eaters had poorer cognitive function compared to non- picky eaters. The significant differences in growth parameters between picky and non- picky eaters resulted in picky eaters being more likely to have a poorer cognitive function. As parental feeding styles significantly influence children's eating behavior, interventions should target parents to improve their children's dietary variety. Some examples of unhealthy diets include limited vegetable consumption, excess meat consumption, and unhealthy snacks such as sweets or chips. This is because such an unhealthy diet can harm their children's health and well-being, including nutritional deficiencies and poorer cognitive function (Fitria Wahyu Ariyanti, Atikah Fatmawati, Ike Prafita Sari, 2023).

Children's growth and development can be compromised due to picky eating behavior, which could lead to malnutrition in both spectrums; thinness or obesity/overweight (Hikmah Mohd Hanapi, Nur Islami Mohd Fahmi Teng, 2022). In addition, picky eating behavior can compromise children's cognitive function, as reported in several cross-sectional and longitudinal studies. Furthermore, cognitive function is critical for school-going children and is often associated with academic performance in school. Hence, identifying the modifiable causes and consequences associated with picky eating behavior can be beneficial to improve their growth and developmental outcomes.

Emotions like anxiety, neophobia (fear of new foods) and the desire for control influence children's reluctance to try certain foods is one of the examples of how children become picky eaters (Białek-Dratwa, A., Szczepańska, E., Szymańska, D., Grajek, M., Krupa-Kotara, K., & Kowalski, O, 2022). In addition, picky eaters are more sensitive to the texture and smell of food and have a stronger sense of disgust than other children. Neophobia is characterized by the child's rejection of foods that are new or unfamiliar, both visually and in terms of taste. Consequently, this has caused an increasing number of parents to come to dieticians with problems concerning the feeding and nutrition of their children.

Objectives

- Exploring Parental Influence and Mealtime Dynamics

Investigate how parental feeding practices, mealtime routines, and attitudes towards food influence picky eating behaviors in preschool-aged children. Examine factors such as meal presentation, caregiver responsiveness, pressure to eat, and the role of family mealtimes in shaping children's food preferences and willingness to try new foods.

- Examining Sensory and Texture Sensitivities

Explore the role of sensory and texture sensitivities in picky eating behavior. Investigate how individual differences in sensory perception and aversions to specific textures impact children's food choices. This objective aims to understand how sensory experiences during eating contribute to picky eating tendencies.

- Identifying Emotional and Cognitive Factors

Assess emotional and cognitive factors that contribute to picky eating behaviors. Investigate whether emotions like anxiety, neophobia (fear of new foods) and the desire for control influence children's reluctance to try certain foods. Examine cognitive aspects such as food preferences based on familiarity and cognitive biases that affect children's food choices.

2. The Importance of Research

The current research aims to investigate the understanding of the psychological and behavioral factors influencing picky eating in preschool-aged children. Therefore, bringing this to the importance of this research is to comprehensively describe the factors and characteristics that are associated with picky eaters among preschoolers. The main issues following the title are feeding problems, such as picky eating and food avoidance, which are common in the early years

of children, especially among preschool-aged children. Picky eating behavior is an important and timely topic given the problem that every parent or caregiver faces when dealing with children during mealtimes.

Despite the following concern over the issue of picky eating among preschool- aged children, there is a ton of research on the specific issue that has been used in this research. In this research, all research studies that have been reviewed focused on problems with feeding problems such as neophobia. Identifying specific risk factors associated with picky eating, including parental feeding practices and child temperament (Tharner et al., 2018), can help guide early intervention strategies to mitigate potential negative consequences on a child's growth and development.

Lastly, given the issues of picky eating among preschool-aged children, the findings of this research could have important and useful implications for parents, caregivers, educators and researchers. Research focused on the psychological and behavioral factors affecting picky eating in preschool-aged children holds significant importance in contemporary child development and nutrition. Several studies have contributed to our understanding of this phenomenon, emphasizing its multifaceted nature. Recent research has helped delineate intricate patterns of picky eating, examining how factors such as irregular family meal patterns (Brown, Vander Schaaf, & Cohen, 2017).

3. Discussion

Understanding the psychological and behavioral factors influencing picky eating in preschool-aged children is essential for parents and healthcare professionals alike. Picky eating can provide difficulties for families, therefore this subject should be tackled with compassion and an open mind. According to one viewpoint, preschoolers' picky eating habits are frequently a normal stage of development. Many children go through periods where they are hesitant to try new foods or exhibit strong food preferences (Webb & Ricciardelli, 2017). Recognizing this as a part of their developmental journey can alleviate some of the stress and anxiety parents may feel.

Furthermore, considering the nutritional implications of picky eating is essential. Prolonged or extremely picky eating can result in nutritional deficiencies (Brown & Ogden, 2018). Therefore, understanding the behavioral aspects can help parents and professionals create strategies to ensure children receive a balanced diet. Many experts emphasize the importance of positive reinforcement and a relaxed mealtime environment. Pressuring children to eat certain foods or using food as a reward can exacerbate picky eating behaviors. Encouraging a positive attitude towards food can be more effective.

Another approach is gradual exposure to new foods. Encouraging children to explore new tastes and textures at their own pace can be helpful in reducing anxiety around unfamiliar foods (Taylor et al., 2018 & Mohammad Aniq Bin Amdan, Naldo Janius, & Mohd Aidil Hazidi Bin Kasdiah, 2024). In some cases, picky eating may be a sign of underlying issues like sensory processing disorders or gastrointestinal problems. Seeking professional help from pediatricians, dietitians, or therapists can be crucial to address these factors. Nevertheless, it is important for children to have a more pleasant and pleasurable mealtime experience if they are allowed to experiment with new tastes and sensations at their own pace

4. Conclusion

Based on the research results, there are numerous factors that may cause children to be picky about food. Most studies indicated that picky eating was a problem that parents always face with children during mealtimes. The roles that parents and caregivers play are crucial for their children. The reason for this is that parents and caregivers play important roles which are providing support and encouragement all the time so that it simultaneously enables a child to master skills that can positively affect their development. Additionally, since a child's family is the primary social network they have, their interactions have the largest effect on their learning and socialization. Hence, parents need to start by practicing democratic parenting. This is since in contrast to permissive parenting, which makes kids fussy eaters, this method does not make kids finicky eaters. Therefore, from a parental perspective, eating habits may also make kids less selective eaters. Children won't develop picky eating habits as long as parents promote democratic parenting and healthy eating habits in their young charges. In a nutshell, it is vital to fully understand the complex psychological and behavioral aspects that influence fussy eating in preschool-aged children. It requires a patient, empathetic, and holistic approach, keeping in mind that every child is different and that strategies should be tailored to their specific needs and developmental stage. The goal is to help children develop a healthy and positive relationship with food.

Compliance with ethical standards

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Disclosure of conflict of interest

The author has no conflict of interest regarding the research, authorship or publication of this study

Statement of ethical approval

The researchers used the research ethics guidelines provided by the Universiti Kebangsaan Malaysia Research Ethics Committee (RECUKM). All procedures performed in this study involving human subjects were conducted in accordance with the ethical standards of the institutional research committee. Permission and consent to participate in the study were also obtained from all guardians of the study participants.

Statement of informed consent

I Mohammad Aniq Bin Amdan, voluntarily consent to participate in research conducted by Naldo Janius at UNITAR International University, lot129, Alam Mesra, Plaza Utama (phase 3), Sulaman, 88400 Kota Kinabalu, Sabah, Malaysia, understanding its purpose, procedures, risks, confidentiality, and my right to withdraw.

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