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A Review of Parental Misperception of Children's Body Weight in Arab Communities

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ABSTRACT: Childhood overweight and obesity have become growing international public health concerns, with an accumulating body of evidence suggesting that their prevalence is increasing in Arab communities. Parental perception is among the factors shown to influence children's weight status and health-related behaviors and outcomes. Therefore, this review aimed to explore parental misperception of children's body weight. This review summarizes findings from previous studies that focus on parental perception, feeding habits, cultural attitudes, and the psychological and behavioral implications of weight misperception. The reviewed literature indicates that many parents tend to underestimate the weight of their children, particularly in cases of overweight and obesity. Misperception is influenced by several factors, such as cultural beliefs that equate increased body mass with health and well-being, limited health literacy and limited access to credible information. The results also indicate that there was a significant association between parental misperception and inappropriate feeding practices that include overfeeding and lack of dietary control, which may contribute to unhealthy weight trajectories. Moreover, parental misperception is associated with psychological and behavioral consequences in children, including body dissatisfaction, low self-esteem, and high risk of disordered eating behaviors in children. Parental communication and weight-related stigma have also been identified as influential factors affecting the emotional well-being of children. In conclusion, parental misperception of children's body weight is a multidimensional and complicated issue, which necessitates coordinated educational, cultural, and healthcare interventions. Addressing this issue is critical for improving the physical and psychological health outcomes of children and reducing the burden of childhood obesity in Arab communities in the long-term.

INTRODUCTION

Overweight childhood and obesity have become major global public health issues (Di Cesare et al., 2019). This trend is no longer restricted to high-income countries, but has spread across developing regions, including Arab communities (Al Dhaifallah, Mwanri, & Aljoudi, 2015). Multiple factors contribute to this increase, including rapid urbanization, lifestyle changes, and dietary changes, among others, have all led to this phenomenon making it a multi-faceted and complex issue that demands a better understanding of its underlying determinants (Badran & Laher, 2011; Musaiger, 2011). Among the factors contributing to childhood weight status, parental perception has been identified as important but often neglected that contribute to childhood weight status (Onay et al., 2024). Parents are the main decision-makers in a child's life who influence the daily patterns of food intake, physical activity, health, and well-being (Adamo & Brett, 2014; Al Yazeedi et al., 2021; Crone et al., 2021).

Nevertheless, existing literature suggests that parents often misjudge the weight status of their children particularly in cases of overweight and obesity (Hudson et al., 2010; Nuaimi, 2010; Rodrigues et al., 2012; et al., 2020). Parental misperception of child weight

refers to the discrepancy between the actual weight status of the child, which is usually determined through standardized measures such as body mass index, and the parent's subjective assessment of the weight by the parent. In most cases, parents tend to underestimate the weight of the child and consider an overweight child to have a normal, or even ideal, body size (Towns, & D'Auria, 2009). This misperception is not simply due to lack of knowledge, but it is frequently influenced by a set of cognitive biases and cultural beliefs as well as social factors (Al-Qahtani et al, 2017; Alodainy, 2022).

The consequences of this misperception are substantial and far-reaching. Parents who do not recognize that a child is overweight are less likely to make lifestyle changes that could improve health outcomes (Chou et al., 2025). They may not regulate portion sizes, restrict consumption of unhealthy foods, or promote physical activity. Instead, they may inadvertently reinforce habits that contribute to weight gain. Empirical studies have consistently shown a close correlation between parental perception and feeding habits, emphasizing the role of inaccurate perceptions in causing maladaptive feeding habits (Sharaf et al., 2021).

The problem of parental misperception is even more complex in Arab communities where cultural influences and social norms are deeply entrenched (Musaiger, 2011). In certain cultural contexts, a larger child may be viewed positively, as a sign of health, strength or proper parental care. These inherited beliefs may normalize excess weight and make parents less concerned about potential health risks. This means that the early identification of overweight or obesity may be delayed, which restricts the possibility of early intervention (Almutairi & Alhamidi, 2024; Pasch et al., 2016).

However, the beliefs and attitudes of parents regarding nutrition, feeding, and health are affected by a variety of factors such as education, socioeconomic status, and availability of credible health information. In other instances, parents may rely on traditional knowledge or community-based perceptions rather than evidence-based guidance. This disconnect between scientific and non-scientific knowledge is one of the reasons behind their influence, along with the repercussions that it brings (Benjamin et al., 2024; Aldolaim et al., 2025).

In addition to the physical health outcomes, parental perception has significant psychological and emotional consequences for children. Childhood is a critical period during which body image and self-perception are formed. Children gradually develop perceptions of their bodies by interacting with their parents as well as their immediate surroundings. When parental perceptions are inaccurate or inconsistent children may develop distorted attitudes toward their weight. In the long run, this may lead to body dissatisfaction, low self-esteem, and unhealthy weight-control practices (Puma et al., 2023; Taylor et al., 2012).

Moreover, the importance of parental communication should not be overlooked. Weight-related comments, attitudes and behaviors can have a profound impact on the emotional experiences of children. Even constructive comments may contribute to feelings of shame, embarrassment, sadness or inadequacy when communicated inappropriately. It has been demonstrated that weight-related stigma, be it explicit or implicit, may have enduring and adverse consequences on children, their mental health, and social functioning (Czepczor-Berna et al., 2025; Dahill et al., 2022; Haqq et al., 2021).

Accordingly, this review aimed to examine the body weight misperception of parents in Arab societies towards their children's weight status. This review provides an in-depth synthesis of the misconception of parents on the ideal body weight of their children in Arab societies based on the existing literature and past research conducted.

CONCEPT OF PARENTAL MISPERCEPTION OF CHILD WEIGHT

Parental misperception of child weight refers to a discrepancy between the objective status of child weight, which is usually measured using standardized indicators such as body mass index (BMI) or cut-off values for obesity in children and the perceived weight by the parent (Black et al., 2015). In Arab communities, studies conducted in the UAE and Saudi Arabia among parents revealed similar results. For instance, parents in both contexts are more likely to underestimate the weight of their child, especially when the child falls within the overweight or obesity range (Aljunaibi et al., 2013; Al-Mohaimeed, 2016). Another study among Kuwaiti parents revealed that many failed to identify their children's actual weight status, specifically overweight and obese children (Alrashidi, 2024).

Likewise, another study conducted in Lebanon revealed that parents underestimated their child's weight status, and were less concerned about the child becoming overweight or obese (Abbas et al., 2023). In a study involving parents from the UAE, parents underestimated their children's body weight (Nuaimi, 2010).

Cultural determinants of misperception

The impact of cultural beliefs on parental perception is also evident. Studies conducted in Arab communities emphasize that body weight is often interpreted within a cultural, rather than strictly medical, context. To illustrate, Almutairi and Alhamidi (2024) point out that Saudi parents often associate higher body weight with positive qualities such as strength and appropriate care. Increased body size in children is sometimes associated with positive attributes like strength, good health and good parental care. These beliefs are rooted in social traditions, and they may be strengthened by extended family and community norms (Badran & Laher, 2011).

In the same way, a Saudi study by Aldolaim et al. (2025) shows that, fathers' perceptions shaped their perceived responsibilities and were negatively associated with self-efficacy in promoting healthy eating habits. Fathers' roles were shaped by Saudi cultural expectations, in which fathers are often regarded primarily as financial providers. These results indicate that misperception does not arise merely from ignorance, but rather it is supported by shared social and cultural values. A further systematic review from the Eastern Mediterranean Region (EMR) countries found that cultural norms in many Arab societies strongly influence on the perception and evaluation of body weight. Consequently, parents may fail to view excess weight as a health concern and may instead regard it as desirable or acceptable (Musaiger, 2011).

Parental knowledge, attitudes, and beliefs

Parents' perceptions are strongly affected by their beliefs and attitudes towards nutrition, health, and body weight. Some parents may lack accurate knowledge normal ranges of weight concerning the normal weight ranges or the risks related to obesity on health. Research also shows that parental education and health information could have a huge impact on weight perception. A study conducted in a Lebanese population revealed that underestimation of child weight was more common among parents (Moussa et al., 2021). According to research conducted by Alsheraifi et al. (2025) in UAE, parents with lower health literacy were more likely to misinterpret the weight status of their children. The study emphasized the importance of a supportive environment and improved parental understanding of obesity-related outcomes. Nevertheless, mothers with higher educational levels appear more likely to demonstrate accurate understanding and greater responsibility and accurate understanding towards child weight (Benjamin et al, 2024).

On the other hand, a UAE study also identified that parents' educational levels can affect their perception toward children's weight status (Nuaimi, 2010). Lower educational attainment is associated with an increased risk of underestimation, with parents possibly relying on informal knowledge or visual comparisons, as opposed to clinical guidelines. Outcomes from a UAE study revealed that, lack of parental knowledge about healthy eating may contribute to childhood obesity (Stott et al., 2013). Studies conducted in Saudi Arabia and Libya demonstrated that poor health literacy was linked to parental misperception of child weight and increased child BMI, respectively (Alodainy, 2022; Bishit, 2024).

Family modeling behavior and the home environment

Families play a central role in shaping eating patterns and lifestyle habits of children. Children often develop behaviors by observing their parents who serve as primary role models. When parents have unhealthy eating habits and lifestyles, their children are more likely to adopt similar behaviors. In studies conducted in Saudi Arabia, parents are more likely to misperceive their children's weight, particularly when there is a family history of obesity (Gohal, 2025). Indeed, misperception was more likely in Saudi parents with overweight or obese children compared with parents of normal-weight children (Al-Mohaimed, 2016). Furthermore, obesity in one or both parents is also linked to higher parental misperception among parents in the Arab Gulf States (Badawi et al., 2021).

The concept of weight perception is a multidimensional construct encompassing visual evaluation, peer comparisons, environment, and self-concepts of health. As revealed in a Saudi Arabian study, Saudi parents tend to rely on visible signs or body shape as opposed to the clinical indicators, making comparisons between the appearance of their child and the appearance of other children in their social setting (Al-Qahtani et al., 2017). In another study from the UAE, parents reported that negative influences that affect their perceptions originally come from family, peers, social media, common nutrition knowledge and sedentary lifestyles (Zuarub et al., 2022).

Likewise, in a study from Jordan, parental comparisons between siblings, particularly girls, appeared to affect their perception as well (Tayyem et al., 2018). A study from Qatar, stated that parents who underestimate their child's weight are less likely of adopting the right attitudes toward child dietary habits (Hendaus et al., 2020).

Parental feeding behaviors and behavioral control

One of the most direct ways parental perception affects child health is through feeding practices. Parental perception and feeding behaviors have been found to be strongly and consistently associated among Saudi parents (Benjamin et al., 2024). Parents who accurately perceive their child's weight and understand child nutrition might develop feeding practices that better reflect the child's actual needs in using restrictive feeding and pressure to eat, which reflect the real needs of the child. However, a study from Qatar reported different behaviors, such as unresponsive feeding and poor dietary control, they can promote increased food consumption, serve high caloric meals or even fail to control portion sizes (Hendaus et al., 2020).

Moreover, parents restrictive feeding of preferred foods leads to enhance the likelihood of children eating in the absence of hunger (Rollins et al., 2013). These practices may contribute to the development of unhealthy eating behaviors. For instance, a study among Bahraini parents conducted by Sharaf et al. (2021) demonstrated that misperception is linked with pressure to eat and reduced use of restrictive feeding. These feeding strategies can promote overeating and poor portion control.

Differences in age and gender

Relevant studies around this topic show that parental misperception varies according to the child's age and gender. Younger children's weight is more likely to be underestimated since parents might view excess weight as temporary. Younger child age was significantly associated with a significant incorrect perception among Saudi parents (Arabi et al., 2022). Some further research also introduces similar findings from a study conducted in UAE, underestimation was linked with younger children (Aljunaibi et al., 2013).

There is further evidence that parents may be more concerned about weight in girls than in boys, this can be linked to expectations existing in society regarding appearance. A Jordanian study assessing parents' and peers' opinions found that, obese boys were more likely to be blamed by peers regarding their weight. However, obese girls were more likely to receive more criticism from their parents in regard to their weight status. Likewise, parents' comparison between siblings related body weight seem to affect their perception as well (Tayyem et al., 2018).

On the other hand, parents age also affect their perception towards child weight in assessing overweight and obesity, as demonstrated from research study in Jordan. Both maternal and paternal age may predict differences in perception to child weight status (Janem et al., 2026). Although Benjamin et al. (2024) demonstrated that older parents, however, had a better understating of childhood obesity prevention measures. These variations show that more nuanced approaches are needed in the context of parental perception.

Psychological and emotional consequences

Parental misconception does not only bound on physical health outcomes but also psychological and emotional aspects. Body image formation begins early in life and is strongly affected by the attitudes and feedback of parents. Negative parental comments about weight can have a significant impact on the children's attitudes toward their own bodies. Moreover, research by O'Hara et al. (2023) in Qatar highlighted the negative consequences of weight stigma and reveals that negative attitudes and labeling may be associated with emotional distress, low self-esteem, and mental health issues. Among Egyptian children, cultural factors such as societal norms regarding body weight and media influences were associated with weight stigma which was linked to emotional distress among them (Hendy et al., 2025).

Children, who feel confused about their body weight or receive conflicting messages from parents, can develop feelings of insecurity or anxiety (O'Hara et al., 2023). Parents in a UAE study, mostly mothers, were more likely to express higher levels of stress related to child weight status (Nuaimi, 2010). In addition, weight related stigma may also influence parents to underestimate the child weight status, as revealed from a UAE research study (Aljunaibi et al., 2013). Thus, the way parents discuss weight and appearance plays an important role in shaping these perceptions. Weight stigma is linked with depression and low self-esteem and disordered eating (Tiggemann & Hage, 2019).

DISCUSSION AND CONCLUSION

This review indicates that parental misperception of children's body weight is very widespread. There is an observed trend in which a high percentage of parents underrate the weight status of children especially in cases of overweight and obesity (Aljunaibi et al., 2013; Al-Mohaimeed, 2016; Alodainy, 2022). This illustrates that the majority of parents in Arab communities consider overweight children to have normal weight, which indicates a large discrepancy between clinical and parental interpretation. This echoes findings from studies worldwide, where parents tend to be less concerned about child weight (Campbell et al., 2006; Towns & D'Auria 2009). Parents are also more likely to underestimate their children's overweight and obesity status (Aljunaibi et al., 2013; Spargo & Mellis, 2014; West et al., 2008).

The problem of parental perception of child weight is a multifaceted phenomenon that cannot be explained by single factor. It involves interactions among cognitive factors, cultural beliefs (Almutairi & Alhamidi, 2024; Badran & Laher, 2011), behavioral practices (Benjamin et al., 2024; Hendaus et al., 2020; Sharaf et al., 2021) and environmental conditions (Gohal, 2025; Al-Mohaimeed, 2016; Hendaus et al., 2020; Badawi et al., 2021).

A similar global pattern has also been found globally in preferences and perceptions for child weight. In other countries, a larger body size is preferred as it is seen as a sign of prosperity, power, and security. Thus, larger child body size has been reported as desirable and linked to beliefs and preferences amongst Hispanic, Latino and Black parents (Eckstein et al., 2006; Killion et al., 2006; Pasch et al., 2016). This echoes findings by Garcia-Blanco et al. (2022) parents who underestimate their child's weight are less likely to adopting the right attitudes towards child dietary habits. Likewise, Chou et al. (2025) demonstrated that misperception is linked with pressure to eat and reduced use of restrictive feeding.

Other studies find that parents' misperception of child weight is more likely to appear when children are overweight instead of obese children (Chen et al., 2014). It has been suggested that the child's age and gender as well as the parent's own weight status are among the factors that could alter parents' perception of child overweight (Hudson et al., 2012). However, parents were more accurate in identifying children's weight status among older children and girls than among younger children and boys (Wald et al., 2007).

Throughout the literature, the family environment has been associated with children's dietary intake. Dahill et al. (2022) indicate that both positive and negative parental comments about weight can have a significant impact on the attitudes of children towards their own bodies. Mothers who themselves had higher personal weight issues and concerns regarding their eating were more likely to attempt to restrict their children's intake of food (Francis et al. 2001). Moreover, parental body dissatisfaction along with a history of eating disorders predicts restrictive feeding (Duke et al., 2004).

Underestimation of child body weight has been reported in the United States shown in the US, where parents seemed to be less likely to understand the actual weight of the child (Howe et al., 2017). Globally, previous research has shown that multiple factors involve in parents underestimation including child gender, parent's own weight status and parents' visual assessment of their child weight (Lundahl et al., 2014). However, Korean fathers tended to display different attitudes toward female and male children, respectively. Parental were inclined to underestimate the weight of their female children and overestimate the weight of their male children (Yoon et al., 2020). On the whole, the findings indicate that the issue of parental misperception should not be viewed merely as erroneous judgment, but as a multifaceted construct that is shaped by various intersecting factors.

FUTURE RESEARCH EXPANSIONS

Finally, this review indicates that additional studies that specifically target Arab groups are necessary. All these factors contribute to the formation of parents' perception that parents have towards their child and their reactions to the weight. Although current literature is very insightful, more extensive longitudinal studies are needed gain a clearer picture regarding how parental perception changes over time and how it is influenced by changing social and cultural settings. Intervention effectiveness and the best practices to reduce misperception and its risks should also be studied in the future.

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