

Research Article

Knowledge, Attitude and Practice of Weight Management among Mothers of Primary School Children in the United Kingdom

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ABSTRACT

Background: Obesity among women of reproductive age remains a major public health concern in the United Kingdom, with long-term implications for maternal and child health. Research has largely focused on pregnancy and the early postpartum period, leaving limited understanding of weight management behaviours among mothers of primary school children. This paper addresses this gap by examining knowledge, attitude and practice (KAP) of weight management within this population.

Methods: A cross-sectional quantitative design was employed using data from 267 mothers residing in Sunderland. A structured questionnaire assessed knowledge, attitude and practice of weight management alongside socio-demographic characteristics. Scores were standardised and categorised using a 70% threshold. Descriptive statistics were used to summarise distributions, while Pearson's correlation analysis examined relationships between KAP components.

Results: The findings reveal a marked divergence across the three domains. A high proportion of participants (88%) demonstrated good knowledge, with a mean score of 79.71. In contrast, only 43% exhibited a positive attitude, while just 4.2% reported good practice. Correlation analysis showed a weak but significant association between knowledge and attitude ($r = 0.21$, $p < 0.05$) and between attitude and practice ($r = 0.18$, $p < 0.05$). No significant relationship was observed between knowledge and practice ($r = 0.05$, $p > 0.05$).

Conclusion: The findings demonstrate a clear knowledge-behaviour gap, with high levels of awareness failing to translate into effective weight management practices. Attitude plays a partial mediating role but does not fully bridge this gap. These results highlight the need for interventions that extend beyond information provision to address behavioural and contextual factors influencing engagement. Supporting sustained behaviour change among mothers remains essential for improving maternal health outcomes and reducing the long-term burden of obesity.

Keywords: Knowledge, attitude and practice; weight management; mothers; health behaviour; obesity; public health; behaviour change

INTRODUCTION

Obesity remains one of the most pressing public health challenges across high-income settings, with a sustained rise in prevalence among women of reproductive age. Recent estimates indicate that more than half of adult women in the United Kingdom are classified as overweight or obese, with significant implications for long-term health outcomes including cardiovascular disease, type 2 diabetes and certain cancers (Office for Health Improvement and Disparities, 2023; World Health Organization [WHO], 2025). Maternal weight trajectories represent a particularly critical dimension of this problem, as pregnancy and the postnatal period are associated with physiological and behavioural changes that can contribute to persistent weight gain.

Postpartum weight retention has been identified as a key pathway through which temporary pregnancy-related weight gain transitions into long-term obesity. Evidence suggests that a substantial proportion of women retain excess weight beyond the immediate postnatal period, with some studies reporting continued retention several years after childbirth (Endres et al., 2015; Harrison et al., 2021; Van Uytsel et al., 2022). This pattern not only increases maternal health risks but also has intergenerational implications, as maternal obesity has been linked to adverse outcomes in offspring, including higher risk of obesity and metabolic disorders (Godfrey et al., 2017).

Despite growing recognition of this issue, research attention has largely focused on pregnancy and the early postpartum period. Comparatively little is known about women beyond this stage, particularly those raising school-aged children. This gap is significant, as lifestyle patterns established during this phase may shape long-term health trajectories. The wider research

addresses this gap by examining weight management among mothers of primary school children, a group that has received limited empirical attention despite clear public health relevance.

Understanding weight management behaviours requires a multidimensional approach. The Knowledge, Attitude and Practice (KAP) framework offers a structured lens through which health-related behaviours can be examined. Knowledge reflects awareness and understanding of health risks and management strategies, attitude captures beliefs and perceptions that shape motivation, while practice represents actual behavioural engagement. Although these components are often assumed to operate sequentially, evidence increasingly suggests that high levels of knowledge do not necessarily translate into meaningful behavioural change (Kwasnicka et al., 2016).

This paper draws on empirical evidence from the wider research to examine the levels of knowledge, attitude and practice of weight management among mothers of primary school children in Sunderland, alongside the relationships between these components. The findings reveal a striking pattern. A substantial majority of participants demonstrated good knowledge of weight management, yet this did not correspond with positive attitudes or effective behavioural practices. Only a small proportion reported engaging in appropriate weight management behaviours, highlighting a clear disconnect between awareness and action.

Such findings align with broader research indicating that behavioural change is shaped not only by knowledge but also by psychological, social and environmental factors. Barriers such as time constraints, caregiving responsibilities, stress and limited access to tailored interventions have been identified as significant impediments to weight management among mothers (Makama et al., 2021; van der Pligt et al., 2016). These factors may weaken the translation of knowledge into sustained behavioural practice, particularly in populations managing competing demands.

This paper therefore contributes to ongoing debates on health behaviour by demonstrating that knowledge alone is insufficient to drive effective weight management. It advances understanding by situating the KAP framework within the lived realities of mothers with school-aged children, highlighting the need for interventions that move beyond information provision to address behavioural, contextual and structural determinants. In doing so, it provides a foundation for developing more responsive and targeted public health strategies aimed at reducing obesity among women in later stages of motherhood.

METHODS

Study Design and Theoretical Orientation

This paper adopts a cross-sectional quantitative design. The study is grounded in a positivist orientation, which assumes that health-related behaviours can be measured objectively and analysed using statistical techniques (Kupcewicz et al., 2019). This approach is appropriate for examining Knowledge, Attitude and Practice (KAP) constructs, which are commonly operationalised through structured instruments and analysed using inferential statistics (Mallah et al., 2020). The cross-sectional design enables the assessment of KAP levels and their interrelationships at a single point in time within a defined population.

Study Setting and Population

The study was conducted in Sunderland, a city in Northeast England characterised by varied socio-economic profiles and documented public health challenges, including obesity prevalence. The target population comprised mothers of primary school children. This group was selected to extend existing research beyond the immediate postpartum period and to capture behavioural patterns among women managing ongoing caregiving responsibilities.

Participants were required to be mothers of at least one child attending primary school and residing within the study area. Individuals who did not meet these criteria or who provided incomplete responses were excluded from the final analysis. This ensured that the dataset reflected the intended population and maintained analytical integrity.

Sampling Strategy and Sample Size

A non-probability convenience sampling approach was employed. Recruitment was facilitated through online platforms, including social media groups and community networks relevant to parents. This approach enabled efficient access to the target population, although it inherently limits generalisability.

A total of 382 responses were initially collected. Following data cleaning and application of inclusion criteria, 267 responses were retained for analysis, yielding a valid response rate of 66.75%. The final sample size was considered adequate for the statistical analyses conducted, including correlation and group comparisons.

Data Collection Instrument

Data were collected using a structured, self-administered questionnaire designed to measure three core domains: knowledge, attitude and practice of weight management. The instrument comprised four sections. The first section captured socio-demographic characteristics, including age, ethnicity, educational attainment and monthly income. The remaining sections assessed KAP components.

The knowledge domain consisted of 13 items designed to evaluate participants' understanding of weight management concepts, including dietary practices, physical activity and health risks associated with overweight and obesity. The attitude domain included 10 items measuring beliefs, perceptions and motivation related to weight management. The practice domain comprised 12 items assessing actual engagement in behaviours such as exercise, dietary control and lifestyle modification.

All items were measured using Likert-type scales, allowing responses to be quantified and analysed statistically. The questionnaire design was informed by established KAP survey approaches, which are widely used in public health research to assess behavioural constructs (Kumar, 2026).

Measurement and Scoring

Each KAP domain was scored by aggregating responses across relevant items. Scores were converted into percentages to allow standardised interpretation. A threshold of 70% was applied to categorise participants as having good or poor knowledge, attitude and practice,

This categorisation enabled both descriptive and inferential analysis, facilitating comparison across groups and examination of relationships between variables. The use of a consistent cut-off point ensured comparability across domains and supported clarity in interpretation.

Data Analysis

Data analysis was conducted using the Statistical Package for the Social Sciences (SPSS). Descriptive statistics were used to summarise participant characteristics and KAP distributions, including means, frequencies and percentages.

Inferential statistical tests were applied to examine relationships and differences within the data. Chi-square tests were used to assess associations between categorical variables, particularly between socio-demographic factors and KAP categories. Analysis of variance was employed to compare mean scores across demographic groups where appropriate.

Pearson's correlation coefficient was used to evaluate relationships between knowledge, attitude and practice scores. This enabled the identification of linear associations between the three domains and provided insight into the extent to which knowledge and attitude influenced behavioural practice.

Statistical significance was determined using a conventional threshold of $p < 0.05$. This approach ensured that findings were interpreted within an established framework of statistical inference.

Ethical Considerations

Ethical approval for the study was obtained from the Ethics Committee of the University of Sunderland. Participation was voluntary, and informed consent was obtained from all respondents prior to data collection. Participants were provided with information about the purpose of the study, the nature of their involvement and their right to withdraw at any stage.

Confidentiality and anonymity were maintained throughout the research process. No identifying information was collected, and all data were stored securely. The study adhered to established ethical principles for research involving human participants, including respect for autonomy, beneficence and data protection.

RESULTS

The analysis was conducted on a final sample of $N = 267$ respondents. The results are presented in three stages, beginning with descriptive distributions of knowledge, attitude and practice (KAP), followed by visual representation of these patterns, and concluding with correlation analysis examining relationships between the three domains. All tables and figures are presented in accordance with journal publication standards.

As shown in Table 1, participants demonstrated a high level of knowledge of weight management, with a mean score of 79.71 and 88% classified as having good knowledge. In contrast, only 43% of respondents demonstrated a positive attitude, while just 4.2% were classified as having good practice. This marked decline across the three domains indicates a substantial gap between

awareness and behavioural engagement. The pattern suggests that while knowledge is widespread, it does not translate into corresponding levels of motivation or sustained behavioral action.

Table 1. Distribution of Knowledge, Attitude and Practice (KAP)

Variable	Mean Score (%)	% Good (≥70%)	N
Knowledge	79.71	88.0	267
Attitude	65.30	43.0	267
Practice	48.20	4.2	267

Note. Scores are expressed as percentages. Good classification based on ≥70% threshold.

The distribution is further illustrated in Figure 1, which presents the KAP categories. The figure highlights the steep gradient from knowledge to practice, reinforcing the presence of a pronounced behavioural gap. While knowledge levels remain consistently high, both attitude and practice show substantial decline, with practice levels particularly low.

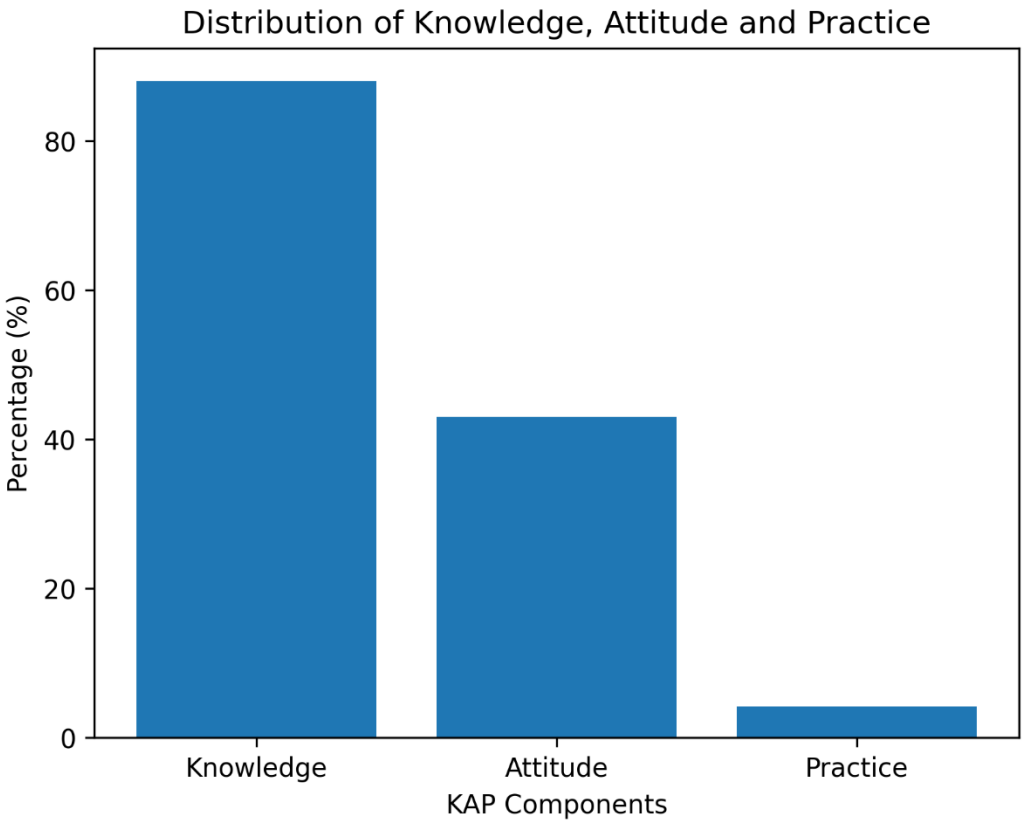


Figure 1. Distribution of Knowledge, Attitude and Practice (N = 267).

The figure highlights the disproportionate concentration of participants within the knowledge domain compared to markedly lower levels of practice. This pattern reinforces the presence of a pronounced knowledge–practice gap.

To examine the relationships between KAP components, Pearson correlation analysis was conducted. The results are presented in Table 2. A weak but statistically significant positive correlation was observed between knowledge and attitude ($r = 0.21$, $p < 0.05$), indicating that higher levels of knowledge are associated with more favourable attitudes. A similar pattern was observed between attitude and practice ($r = 0.18$, $p < 0.05$), suggesting that positive attitudes may facilitate engagement in weight management behaviours.

These findings indicate that while knowledge may influence attitudes, it does not directly translate into behavioural practice.

Table 2. Pearson Correlation Matrix for KAP Variables

Variable	Knowledge	Attitude	Practice
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Knowledge	1.00	0.21*	0.05
Attitude	0.21*	1.00	0.18*
Practice	0.05	0.18*	1.00

Note. * $p < 0.05$. Values represent Pearson correlation coefficients.

However, no statistically significant relationship was found between knowledge and practice ($r = 0.05$, $p > 0.05$). This finding is particularly important, as it demonstrates that knowledge alone does not directly influence behavioural practice. The absence of a direct association underscores the complexity of behaviour change and highlights the role of intermediary factors such as motivation and contextual constraints.

Figure 2 presents the gradient decline across KAP domains.

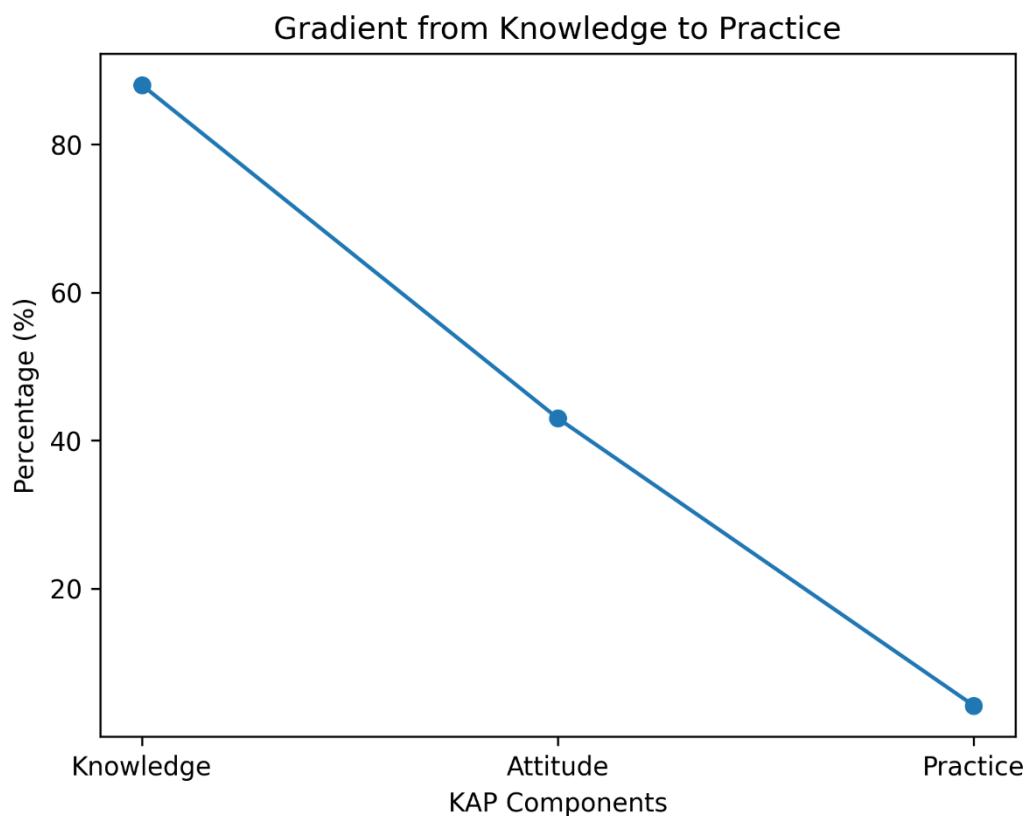


Figure 2. Gradient from Knowledge to Practice (N = 267).

The downward trajectory from knowledge to practice illustrates the progressive reduction in engagement, suggesting that each stage introduces additional barriers to behavioural translation.

Figure 3 provides an alternative visualisation of disparity across domains.

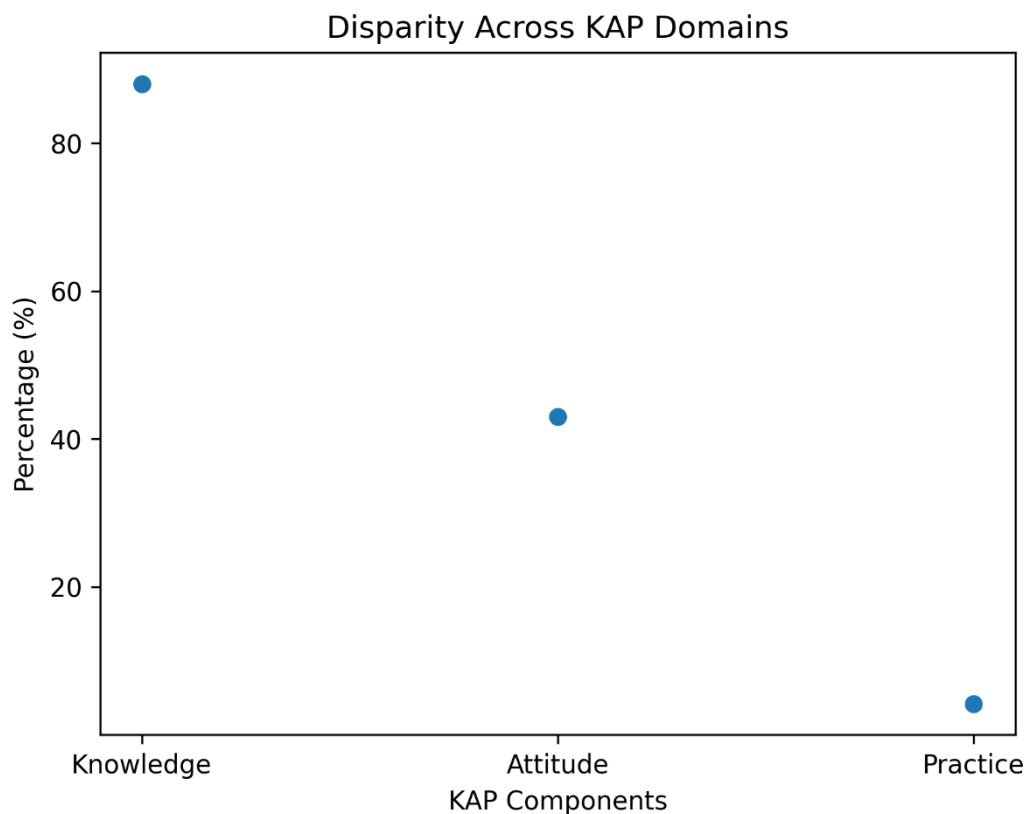


Figure 3. Disparity across KAP domains (N = 267).

This representation further emphasises the imbalance between domains, with practice positioned as a clear outlier.

The overall pattern of results indicates that attitude functions as a partial bridge between knowledge and practice, although its influence remains limited. These findings provide strong empirical support for the presence of a knowledge–behaviour gap within this population.

DISCUSSION

This paper set out to examine the levels and interrelationships of knowledge, attitude and practice of weight management among mothers of primary school children. The findings present a clear and important pattern. Knowledge of weight management was high, yet this did not translate into corresponding levels of behavioural practice. Attitude occupied an intermediate position, with a modest proportion of participants demonstrating favourable perceptions towards weight management. The overall structure of the results points to a pronounced knowledge–behaviour gap, with attitude functioning as a partial bridge rather than a strong conduit between awareness and action.

The persistence of this gap is consistent with established evidence in health behaviour research. Knowledge has long been recognised as a necessary but insufficient condition for behaviour change. Contemporary models emphasise that behaviour is shaped through a combination of capability, opportunity and motivation, rather than information alone (Michie et al., 2011; Willmott et al., 2021; Armitage et al., 2024). Within this framework, knowledge contributes to psychological capability, yet behavioural enactment depends equally on contextual conditions and motivational drivers. The absence of a significant relationship between knowledge and practice in this paper reinforces this position and challenges assumptions that information-based interventions are adequate in isolation.

The modest but significant association between knowledge and attitude suggests that awareness does contribute to shaping beliefs and perceptions. Participants who demonstrated higher knowledge scores were more likely to hold favourable views towards weight management. This aligns with findings from recent studies indicating that health literacy can influence attitudes towards diet, physical activity and weight control (Carbone & Zoellner, 2012; Lu et al., 2025; Heydari et al., 2025). However, the relatively low proportion of participants with positive attitudes indicates that knowledge does not uniformly translate into motivation. This suggests that attitudinal formation is influenced by a broader set of factors, including personal experiences, cultural expectations and perceived barriers.

The relationship between attitude and practice provides further insight into the behavioural process. Although statistically significant, the association was weak, indicating that even favourable attitudes do not reliably lead to consistent behavioural

engagement. This finding resonates with research highlighting the intention–behaviour gap, where individuals express positive intentions but fail to translate these into sustained action (Sheeran & Webb, 2016; Faries & Dudgeon, 2019; Rhodes & Brennan, 2026). In the context of this paper, mothers may recognise the importance of weight management and express willingness to engage, yet encounter practical constraints that limit implementation.

The lived realities of mothers of primary school children are central to understanding these findings. This population often navigates competing demands including childcare, employment and household responsibilities. These pressures can constrain time, energy and access to supportive environments for health behaviour change. Recent research has identified time scarcity, fatigue and lack of tailored support as key barriers to weight management among women with caregiving responsibilities (van der Pligt et al., 2016). These factors may weaken the translation of both knowledge and attitude into practice, particularly where behavioural change requires sustained effort.

The findings of this paper therefore carry important implications for public health intervention design. Approaches that focus primarily on education and awareness are unlikely to produce meaningful change in this population. Interventions need to engage more directly with behavioural and contextual determinants. This includes creating supportive environments, addressing structural barriers and incorporating strategies that enhance motivation and self-regulation. Behaviour change techniques such as goal setting, self-monitoring and social support have been shown to improve intervention effectiveness and may be particularly relevant in this context (Michie et al., 2013; Chen et al., 2017; Compennolle et al., 2019).

There is also a need to recognise the heterogeneity within this population. While this paper focuses on overall KAP patterns, the wider research indicates variation across socio-demographic groups. Tailored interventions that account for differences in age, education and socio-economic status may therefore be more effective than uniform approaches. This aligns with current public health priorities that emphasise targeted and context-sensitive strategies to reduce health inequalities (Lennon et al., 2019; Office for Health Improvement and Disparities, 2023).

The findings of this paper carry important implications for both theory and practice. They support behaviour change frameworks that emphasise the interaction between cognitive, motivational and contextual factors, rather than a simple linear progression from knowledge to behaviour. In practical terms, they highlight the need to move beyond information-based approaches in public health interventions. Strategies aimed at improving weight management should focus on enabling behaviour through supportive environments, practical tools and context-sensitive design that reflect the lived realities of mothers.

Several limitations should be acknowledged. The cross-sectional design limits causal interpretation, and the reliance on self-reported data introduces the possibility of reporting bias. The use of convenience sampling restricts generalisability beyond the study population. These limitations do not diminish the value of the findings but highlight the need for further research using longitudinal and mixed-methods designs to explore behavioural processes in greater depth.

This paper thus demonstrates that high levels of knowledge of weight management among mothers of primary school children do not translate into effective behavioural practice. Attitude plays a mediating role but does not fully bridge the gap between awareness and action. These findings underscore the need for interventions that extend beyond information provision to address the broader behavioural and contextual factors shaping weight management. Addressing this gap remains critical for improving maternal health outcomes and reducing the long-term burden of obesity.

CONCLUSION

This paper examined the levels and interrelationships of knowledge, attitude and practice of weight management among mothers of primary school children. The findings reveal a clear and consistent pattern. Knowledge of weight management was high, yet this did not translate into corresponding behavioural engagement. Attitude occupied an intermediate position, while practice remained notably low. This gradient highlights a pronounced disconnect between awareness and action, reinforcing the presence of a persistent knowledge–behaviour gap within this population.

The absence of a direct relationship between knowledge and practice challenges the assumption that increasing awareness alone will improve health behaviours. While knowledge contributes to shaping attitudes, its influence appears limited when it comes to actual behavioural change. Attitude shows a modest association with practice, suggesting that motivation plays a role, although it is insufficient to fully bridge the gap between awareness and sustained action.

Interventions that integrate behavioural support with education are more likely to produce meaningful and sustained change. Recognising the competing demands faced by this population is essential in designing effective approaches that are both realistic and accessible.

Overall, knowledge alone is not enough to drive weight management behaviour. Addressing the gap between awareness and action remains critical for improving maternal health and reducing the broader burden of obesity.

AUTHOR CONTRIBUTION

All authors played a substantive role in shaping this study and developing the manuscript. O.D. conceptualised the work and designed the overall study framework, under the supervision of K.O.O. Data analysis, interpretation of data and validation of findings were carried out collaboratively, with each author contributing to the discussions that informed the final results. K.O.O. and C.E.E. prepared the initial manuscript draft, covering the introduction, methods, results and discussion. Co-authors strengthened the analysis, offered detailed revisions and enhanced the clarity and coherence of the final document. Every author reviewed the complete manuscript, approved the final version and accepted responsibility for the integrity of the work.

CONFLICTS OF INTEREST

The authors declare no conflicts of interest.

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