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Integrating Mindful Feeding Into Responsive Feeding Guidance

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ABSTRACT

Responsive feeding is widely recognized as a best practice in infant and young child feeding, yet the gap between its recommendation and its consistent implementation among caregivers remains a persistent challenge. Mindful feeding, which is defined as present-centered mental and emotional awareness in the feeding context, has emerged as a related but distinct construct that may help explain this gap. While research on mindful feeding is still developing, early evidence suggests it is associated with similar positive outcomes for child nutrition and development as responsive feeding, including improved diet quality and decreased negative mealtime behaviors. This Perspective argues that mindful feeding may function as a promising adjunct to support the intrapersonal conditions that facilitate responsive feeding. By cultivating awareness, emotional regulation, and nonjudgmental receptivity, caregivers may be better equipped to perceive and appropriately respond to children's hunger and satiety cues. Drawing on a comparison of definitions, theoretical frameworks, and measurement tools, we propose that mindful feeding be considered for integration into infant and young child feeding guidance and interventions alongside responsive feeding and identify priorities for research needed to support this integration.

Responsive feeding, broadly defined as feeding practices that are prompt, predictable, and contingent on children's hunger and satiety cues, has become a cornerstone of infant and young child feeding (IYCF) recommendations globally. For the first time, the 2020–2025 Dietary Guidelines for Americans formally recognized responsive feeding as a best practice for promoting healthy growth, self-regulation, and obesity prevention in children from birth to age two (U.S. Department of Agriculture and U.S. Department of Health and Human Services 2020), a recognition echoed in World Health Organization IYCF guidance (World Health Organization 2023). Despite this, translating responsive feeding recommendations into sustained caregiver practice remains difficult. Caregivers face a range of intrapersonal barriers, including emotional reactivity, parenting stress, and distraction during feeding interactions that can impede their ability to recognize and respond to children's cues,

even when they understand what responsive feeding looks like in principle (Almaatani et al. 2023; Redsell et al. 2021).

Mindful feeding offers a promising but underexplored pathway to addressing these barriers. Building on the broader theoretical framework of mindful parenting (Bögels et al. 2010; Duncan et al. 2009), mindful feeding links the main concepts of mindfulness centered on present-moment awareness, nonjudgement and non-reactivity, and applies them to the social context of caregiver-child relationships as in mindful parenting but explores them specifically in the context of feeding. Mindful feeding encompasses a caregiver's capacity to attend fully to the feeding interaction, regulate their own emotional reactivity, and respond to their child's cues without judgment (Meers 2013). Where responsive feeding describes *what caregivers do*, mindful feeding describes *how caregivers attend*, making these constructs complementary rather than competing.

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Summary

- Responsive feeding is an established best practice in IYCF guidance, but intrapersonal barriers, including emotional reactivity and distraction, frequently impede its implementation. Mindful feeding may aid in addressing these barriers that limit caregiver responsiveness.
- Responsive feeding emphasizes the *interpersonal and behavioral* dimensions of the caregiver-child feeding relationship, while mindful feeding emphasizes the *intrapersonal and attentional* dimensions, making them complementary rather than redundant.
- Future research should prioritize empirical testing of the relationship between mindful and responsive feeding, development of validated measurement tools for younger age groups, and integration of mindful feeding into IYCF interventions and policy guidance.

Early evidence suggests that mindful feeding is associated with improved diet quality and home food environments (Emley et al. 2017; Meers 2013), and that parental mindfulness is positively associated with feeding practices that align with responsiveness (Zimmer-Gembeck et al. 2019b). While the proposed relationship between mindful and responsive feeding shows promise in terms of the potential for improved feeding practices, it has not been explicitly theorized in the infant and young child context and therefore cannot yet be incorporated into IYCF guidance at the national or global level.

This perspective draws on existing literature comparing the definitions, theoretical frameworks, and measurement tools associated with responsive and mindful feeding in children from birth to age 4. We argue that while these two constructs are distinct in their mechanisms with responsive feeding operating at the level of caregiver-child interaction and mindful feeding at the level of caregiver awareness and self-regulation, they are linked in the outcomes they promote and may be most effective when pursued together. Specifically, we propose that mindful feeding may contribute to the facilitating conditions from which effective responsive feeding may emerge, though we also recognize the relationship may be bidirectional and that responsive feeding can occur in the absence of mindful feeding practices. This relationship has meaningful implications for how IYCF interventions are designed and how feeding guidance is communicated to caregivers of infants and young children. It is also important to note that research on mindful parenting more broadly demonstrates mixed effects, with outcomes moderated by socioeconomic stressors, maternal depression, and structural barriers (Garofalo et al. 2023; Mourão et al. 2023). The assumption that cultivating mindfulness will always translate into improved feeding practices may not be the case and should be tested further including contextual factors into future research designs.

1 | Defining the Constructs: A Brief Comparison

Responsive feeding is broadly defined as feeding practices in which caregivers respond to infant or child hunger and satiety cues in

ways that are prompt, predictable, contingent and developmentally appropriate (Finnane et al. 2017; Ventura 2017). From an interdisciplinary perspective, it encompasses practices that encourage child autonomy in eating and support self-regulation in response to physiological and developmental needs (Pérez-Escamilla et al. 2021). This construct is also commonly conceptualized by what it is not, in terms of nonresponsive feeding practices such as instrumental feeding, emotional feeding, or controlling practices that override child hunger and satiety cues (Daniels et al. 2015; Redsell et al. 2021). A defining feature of responsive feeding is bidirectionality, focusing on the reciprocal exchange between caregiver and child (Black and Aboud 2011).

While mindful feeding shares this emphasis on recognizing hunger and fullness cues and supporting child autonomy at mealtime, its defining focus is distinctly intrapersonal. Mindful feeding is defined as present-centered mental and emotional awareness in the feeding context (Meers 2013). It encompasses a caregiver's capacity to attend fully to the feeding interaction, regulate their emotional reactivity, and receive their child's cues nonjudgmentally. Where responsive feeding describes the actions that take place between caregiver and child, mindful feeding describes the attentional and emotional state from which those actions arise. Alternatively, mindless feeding, which is characterized by caregiver distractions during feeding interactions, has been found to be associated with greater infant intake during bottle feeding suggesting real consequences for child self-regulation (Golen and Ventura 2015).

Together, these definitions reveal a meaningful complementarity. Responsive feeding sets the standard for *what* effective feeding looks like while mindful feeding may determine *whether* caregivers are able to consistently meet that standard. It is also important to acknowledge that responsive feeding can and does occur without formal mindful feeding practice and that mindful feeding is best conceptualized as a facilitating adjunct rather than a necessary prerequisite. Table 1 provides more detail on how these constructs are defined, including subcomponents, while Figure 1 illustrates the convergence and divergence of their core principles.

Despite their distinct mechanisms, both practices are associated with strikingly similar positive outcomes for child nutrition and development, including improved overall diet quality, greater intake of fruits and vegetables, decreased negative mealtime behaviors, and protection against overweight and obesity (Emley et al. 2017; Goodman et al. 2020; Hohman et al. 2017; Meers 2013; Pérez-Escamilla et al. 2021). It is meaningful that these two constructs operating at such different levels—one interpersonal and behavioral, one intrapersonal and attentional—converge on comparable outcomes. Rather than being redundant, it suggests that they may be operating along a shared pathway: one in which caregiver awareness supports caregiver responsiveness, which in turn shapes child eating behavior and health. The theoretical frameworks discussed in the following section help to explain why this potential pathway exists and how it operates.

2 | Theoretical Frameworks: How Mindful Feeding Supports Responsive Feeding

Several theoretical frameworks illuminate the mechanisms by which mindful feeding may function as an intrapersonal

TABLE 1 | Definitions of constructs and underlying components.

Construct	Definition	Subcomponents
Responsive feeding	Feeding practices that are prompt, predictable, contingent and developmentally appropriate; lack of non-responsive feeding behaviors	Responsive feeding <ol style="list-style-type: none"> 1. Responsiveness to hunger and satiety cues 2. Encouragement of child autonomy in eating Non-responsive feeding <ol style="list-style-type: none"> 1. Instrumental feeding: using food as a reward or punishment 2. Emotional feeding: using food to soothe, comfort or distract 3. Controlling: using restriction or coercion to control the type or amount of food a child consumes
Mindful feeding	Present-centered awareness in the feeding context which enables a caregiver to be aware of both responsive and non-responsive feeding behaviors.	<ol style="list-style-type: none"> 1. Present-centered awareness 2. Present-centered emotional awareness 3. Regulation of reactivity 4. Nonjudgemental receptivity

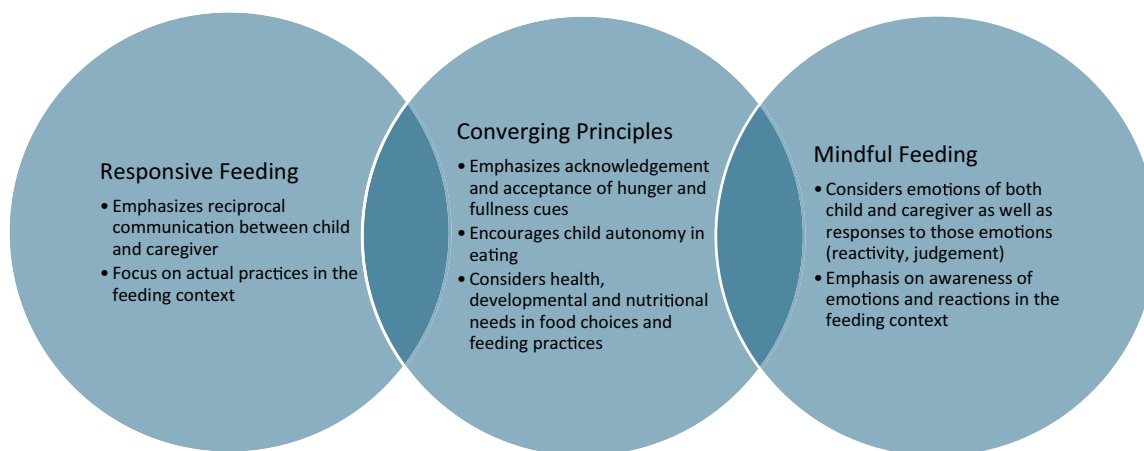


FIGURE 1 | Convergence and divergence of main principles in responsive and mindful feeding.

facilitator of responsive feeding. Rather than treating these frameworks as parallel explanations for each construct independently, we propose reading them together as a layered account of how caregiver awareness shapes the feeding relationship and its outcomes.

2.1 | Attachment Theory

Attachment theory (Ainsworth and Bowlby 1991) provides a foundational lens for understanding why the quality of caregiver attention during feeding matters as children develop secure attachment relationships with caregivers who respond consistently and sensitively to their needs. The feeding relationship is a primary context for this development, particularly in the early stages of development (Kim et al. 2024). The sensitivity that supports secure attachment involves not only behavioral responsiveness on the part of the caregiver, but emotional availability, which is where mindful feeding and

responsive feeding converge. Current research demonstrates that greater maternal mindfulness and secure attachment during early development have been found to be associated with higher levels of responsiveness (Pickard et al. 2017), suggesting that the attentional capacities cultivated through mindful feeding may support the development of secure, responsive caregiving relationships. Further, insecure attachment has been associated with lower food self-regulation and greater obesogenic behaviors in children (Lamson et al. 2020), underscoring the stakes of this relationship.

2.2 | Socio-Environmental Context of Feeding

Building upon the importance of secure attachment as it relates to feeding, the socio-environmental context of feeding model (DiSantis et al. 2011) describes feeding as a bidirectional communication system in which caregiver and child mutually influence one another through the consistency and appropriate

interpretation of each other's behavioral cues. A central pathway in this model is "awareness of feeding cues" or the caregiver's capacity to perceive and correctly interpret signals of infant hunger and satiety. This is not merely a behavioral skill; it requires attentional presence. A caregiver who is distracted, emotionally dysregulated, or operating on autopilot is less likely to accurately read infant cues, regardless of their knowledge of what responsive feeding requires. Mindful feeding directly targets this awareness, suggesting that it may help facilitate the communication pathway that responsive feeding depends on.

2.3 | Social Cognitive Theory and Self-Efficacy

Finally, Bandura (1991) social cognitive theory of self-regulation offers further explanation of the mechanism by which mindful feeding may improve responsive feeding practice. Bandura describes self-regulation as driven by self-monitoring—attending to one's own behavior and its effects—alongside judgment of that behavior in relation to personal goals and values. Applied to the feeding context, mindful feeding practices may support caregivers in observing not only their child's cues but their own responses to those cues, and in assessing whether those responses align with their feeding goals. Research has shown that increases in present-centered awareness are associated with decreased emotional and behavioral reactivity during feeding and with feeding responses that better align with caregiver intentions (Emley et al. 2017; Goodman et al. 2020). This is the self-regulatory loop that social cognitive theory predicts: greater awareness can lead to greater self-efficacy, which in turn supports more consistent, goal-aligned behavior. For caregivers who struggle to practice responsive feeding not because they lack knowledge but because they are overwhelmed, reactive, or distracted, mindful feeding may offer precisely the self-regulatory scaffolding that facilitates sustained responsiveness.

Taken together, these frameworks converge on a coherent account of the relationship between mindful and responsive feeding. Attachment theory establishes that emotional availability is foundational to responsive caregiving. The socio-environmental context of the feeding model identifies cue awareness as the critical pathway through which mindful feeding may facilitate responsive feeding. Finally, social cognitive theory provides the mechanism: by building caregiver self-monitoring and self-efficacy, mindful feeding may support the intrapersonal conditions from which more consistent responsive feeding can emerge. As previously mentioned, and supported by these theoretical frameworks, this relationship may also operate bidirectionally, with responsive feeding experiences reinforcing mindful attending over time.

3 | Measuring Mindful and Responsive Feeding: Where We Stand and What Is Missing

The measurement landscape for these two constructs reflects their unequal development in the literature. Responsive feeding benefits from a large and growing body of instrumentation. A systematic review conducted by Heller and Mobley (2019)

identified 33 existing instruments assessing caregiver feeding practices among children from birth through age 5, spanning dimensions including responsiveness to hunger and satiety cues, encouragement of child autonomy, and nonresponsive practices such as pressure to eat, restriction and the use of food as reward or comfort. The responsive feeding instruments included in Table 2 were selected based on their comprehensiveness across feeding dimensions and the age groups for which they are validated. These include the Comprehensive Feeding Practices Questionnaire (CFPQ; Musher-Eizenman and Holub 2007), validated for children ages 2–8 and covering 12 dimensions of responsive and nonresponsive feeding; the Feeding Practices and Structure Questionnaire (FPSQ; Jansen et al. 2018) designed for children ages two to five and rigorously tested across racially and economically diverse samples; and the Feeding Practices and Structure Questionnaire- Solid Feeding Version (FPSQ-SF; Jansen et al. 2021), an adaptation extending assessment to children under two across both milk and solid feeding modalities.

Mindful feeding, by contrast, has only three instruments developed for use with young children. The Mindful Feeding Questionnaire (MFQ; Meers 2013), validated for children ages 3–6, assesses present-centered awareness, present-centered emotional awareness, regulation of reactivity, and non-judgmental receptivity. The Mindful Food Parenting Instrument (MFPI; Escobar 2020), validated for children ages 4–8, extends this framework to include mindful food choices, awareness of the hunger and fullness experience, and compassion for self and child. A third instrument, the Parent Socioemotional Context of Feeding Questionnaire (PSCFQ; Zimmer-Gembeck et al. 2019a), was not designed specifically to assess mindful feeding but has been used alongside dispositional mindfulness measures to examine the relationship between parental mindfulness and food-related parenting—finding that greater mindfulness was associated with higher supportiveness and structure and lower coerciveness and chaos in feeding contexts (Zimmer-Gembeck et al. 2019b). Notably, neither the MFQ nor the MFPI has been published in the peer-reviewed literature, existing only as dissertations, which limits their accessibility and uptake.

Examining these instruments together reveals both meaningful overlap and important divergence. The monitoring domain of the CFPQ (Musher-Eizenman and Holub 2007) aligns conceptually with the present-centered awareness dimensions of the MFQ and MFPI, and the emotion regulation and food-to-calm dimensions of responsive feeding instruments parallel the emotional awareness and reactivity dimensions of mindful feeding tools. These overlaps suggest that the two constructs share measurable common ground, even as they assess it from different vantage points—one behavioral, one attentional. The divergences are equally informative: responsive feeding instruments uniquely capture pressure to eat, food rewards, and parental control of intake, while mindful feeding instruments uniquely assess nonjudgmental receptivity and self-compassion, domains with no equivalent in current responsive feeding measurement.

Taken together, the instruments reviewed here reflect a measurement landscape that remains in early stages of psychometric

TABLE 2 | Comparison of measurement instruments assessing responsive and mindful feeding.

Instrument	Construct assessed	Factors/number of items	Intended age group	Response options	Sample items
Comprehensive Feeding Practices Questionnaire (Musher-Eizenman & Holub)	Responsive feeding	<ol style="list-style-type: none"> 1. Monitoring 2. Child control 3. Emotion regulation 4. Encouragement of balance and variety 5. Healthy environment 6. Food as reward 7. Involvement 8. Modeling 9. Pressure 10. Restriction for health 11. Restriction for weight control 12. Teaching about nutrition Total Items: 49	2–8 years	5-point Likert scale	Emotion regulation: “When this child gets fussy, is giving him/her something to eat or drink the <i>first</i> thing you do?” Restriction for health: “If I did not guide or regulate my child’s eating, s/he would eat too much of his/her favorite foods.”
Feeding Practices and Structure Questionnaire (Jansen et al. 2018)	Responsive feeding	<ol style="list-style-type: none"> 1. Distrust in appetite 2. Reward for behavior 3. Reward for eating 4. Persuasive feeding 5. Overt restriction 6. Covert restriction 7. Structured meals setting 8. Structured meal timing 9. Family meal setting Total Items: 28	2–5 years	5-point Likert scale	Overt restriction: “I intentionally keep some foods out of my child’s reach” Covert restriction: “How often do you not buy foods that you would like because you don’t want your children to have them?”
Feeding Practices and Structure Questionnaire- Solid Feeding Version (Jansen et al. 2021)	Responsive feeding	<ol style="list-style-type: none"> 1. Feeding routine versus feeding on demand 2. Family meal environment 3. Parent-led feeding 4. Persuasive feeding 5. Food to calm Total Items: 28	< 2 years based on mode of feeding (milk vs. solid food)	5-point Likert scale	Using food to calm: “I give my child food to make sure that they do not get unsettled or cry” Family meal environment: “My child is given the same foods as the rest of the family (pureed, mashed, chopped)”

(Continues)

TABLE 2 | (Continued)

Instrument	Construct assessed	Factors/number of items	Intended age group	Response options	Sample items
Mindful Food Parenting Instrument (MFPI) (Escobar 2020)	Mindful feeding	6. Using (non-) food rewards Total items: 34	1. Bringing mindful awareness to eating experiences 2. Cultivating awareness of parent and child emotions and reactivity to emotions 3. Creating awareness of the hunger and fullness experience	4–8 years 5-point Likert scale	
Total items: 14		Bringing mindful awareness to eating: “I use my phone or tablet while my child is eating meals (breakfast, lunch, or dinner).” Creating awareness of the hunger and fullness experience: “I recognize when my child is hungry.”			
Mindful Feeding Questionnaire (MFQ) (Meers 2013)	Mindful feeding	1. Present-centered awareness 2. Present-centered emotional awareness 3. Regulation of reactivity 4. Nonjudgmental Receptivity Total items: 19	3–6 years	5-point Likert scale	Present-centered Emotional Awareness: “I am aware of how my emotions affect when and what I feed my child.” Nonjudgemental receptivity: “When my child refuses to eat, I consider this calmly before doing anything about it.”

development for both constructs, and several limitations warrant explicit acknowledgment. For responsive feeding, Heller and Mobley's (2019) systematic review found that the majority of existing instruments had undergone limited psychometric testing, with few validated for use with infants or with racially, ethnically, and socioeconomically diverse populations. While more recent work has begun to address these gaps, notably through instruments developed for younger age groups (Jansen et al. 2021) and low-income and culturally diverse communities (Sall 2020; Thompson et al. 2009), cross-cultural validation remains uneven across the field. For mindful feeding, the psychometric limitations are more acute. Both the MFQ (Meers 2013) and the MFPI (Escobar 2020) were validated in predominantly white, college-educated U.S. samples, and neither has undergone independent replication of its factor structure or reliability. The PSCFQ (Zimmer-Gembeck et al. 2019a), while more extensively tested, was validated primarily in an Australian sample with limited racial and ethnic diversity. Across both construct bodies, it is also worth noting that the assumption of consistent effects of mindful feeding across socioeconomic and contextual conditions remains empirically untested, a limitation that mirrors broader findings from the mindful parenting literature, where outcomes have been shown to vary meaningfully by socioeconomic stress, maternal depression, and structural adversity (Garofalo et al. 2023; Mourão et al. 2023). Considering this, future instrument development should prioritize validation across diverse populations.

The most critical gap in both bodies of instrumentation, however, is the absence of validated tools for assessing mindful feeding in infancy, the period from birth through age 2 that is the focus of IYCF guidance and the period during which the feeding relationship is arguably most consequential for child development. No instrument currently exists to assess mindful feeding practices in caregivers of infants, and responsive feeding instruments for this age group, while improving, remain less comprehensive than those developed for toddlers and preschoolers (Heller and Mobley 2019). This gap is not merely methodological; it limits researchers' and practitioners' ability to understand how mindful feeding operates during the developmental window when its influence may matter most. Given this absence, integration of mindful feeding into infant feeding recommendations is aspirational at this time. However, this gap also sheds light on the need to prioritize the development of validated measures for mindful feeding in the infant period so that researchers can test or verify the proposed relationships between mindful and responsive feeding in this population.

4 | Implications for Practice, Intervention, and Policy

The evidence reviewed here carries several direct implications for how the field approaches IYCF guidance, intervention design, and future research. In terms of best practices, responsive feeding has been formally incorporated into national and global IYCF recommendations, representing a significant step forward in recognizing the relational dimensions of infant nutrition. However, guidance that tells caregivers *what* to do such as respond promptly to hunger cues, avoid using food to soothe, and support child autonomy, does not address the

intrapersonal conditions that make doing so consistently possible. The argument proposed here suggests that guidance which also addresses *how caregivers attend* in the feeding context through cultivating present-centered awareness, emotional regulation, and nonjudgmental receptivity would be more complete. Practically, this could mean incorporating brief mindful feeding principles into anticipatory guidance provided by pediatric healthcare providers or adding a mindful feeding component to existing responsive feeding curricula such as the INSIGHT responsive parenting program (Savage et al. 2018).

In considering the implications of this evidence on future interventions, mindful feeding should be utilized as a stress-buffering target. Research by Almaatani et al. (2023) established a significant association between parenting stress and non-responsive feeding practices across diverse populations. This finding is important because it identifies a modifiable pathway: if stress impairs responsive feeding, and if mindful feeding cultivates the emotional regulation and self-efficacy that buffer against stress reactivity, then mindful feeding interventions may be particularly valuable for caregivers experiencing high levels of parenting stress. This is consistent with the social cognitive theory framework discussed above, and points toward a specific population—stressed caregivers of infants and toddlers—for whom integrating mindful feeding into responsive feeding support could have the greatest impact. Future intervention research should test this directly, examining whether mindful feeding components improve caregiver self-efficacy and reduce stress-driven nonresponsive feeding practices.

It is, however, critical to acknowledge that the caregivers who may benefit from adopting mindful feeding practices the most, likely face the greatest challenges in doing so. The ability to practice mindful feeding is not solely a function of intrapersonal capacity, but rather structural determinants, including poverty, food insecurity, and other stressors may constrain both mindful and responsive feeding regardless of a caregiver's intentions or awareness. Additionally, due to the resource-intensive nature of many mindfulness-based interventions, they may not be feasible or acceptable in low-resource settings. We acknowledge that guidance and interventions that focus exclusively on cultivating mindfulness without addressing these structural barriers risk placing undue burden on already resource-constrained caregivers. Policy recommendations should therefore explicitly address the systemic conditions that shape the feeding environment alongside individual-level intrapersonal targets. Further, guidance should be framed carefully to avoid pathologizing ordinary feeding challenges and emphasize that mindful feeding is a supportive tool, not a moral standard.

Understanding the ways in which we measure these constructs was also examined here highlighting that the field's ability to study, promote, and evaluate mindful feeding depends on having psychometrically sound, accessible tools. Several priorities stand out. First, peer-reviewed publication and broader dissemination of the MFQ and MFPI would substantially increase their use and allow for independent replication of their psychometric properties. Second, new instruments are needed for the birth-to-two age group, where current mindful feeding measurement is entirely absent. These instruments should be designed to differentiate across feeding modalities—

breastfeeding, bottle feeding, and complementary feeding—given that the attentional and emotional demands of each differ meaningfully. Third, existing responsive feeding instruments should be examined for their capacity to capture the overlap between constructs, and future development of integrated measurement tools that assess both mindful and responsive feeding dimensions simultaneously should be considered.

Finally, the perspectives from which we are understanding the feeding relationship should be expanded. The existing literature on both responsive and mindful feeding has overwhelmingly focused on mothers as the unit of study. This leaves significant gaps in understanding how mindful and responsive feeding operate in fathers, co-parenting dyads, and other primary caregivers such as grandparents and foster parents. Given that feeding practices within families are shaped by multiple caregivers whose approaches may converge or conflict, a more inclusive approach to caregiver research would better reflect the actual feeding environments of infants and young children, generating more actionable guidance.

5 | Conclusion

Responsive feeding and mindful feeding are related but distinct constructs that together offer a more complete account of effective early childhood feeding than either provides alone. Responsive feeding defines the practices of caregiving that are attuned, contingent, and respectful of child autonomy. Mindful feeding describes the intrapersonal conditions, including present-centered awareness, emotional regulation, and non-judgmental receptivity that may facilitate those practices, particularly under conditions of parenting stress and distraction. The theoretical frameworks reviewed here, from attachment theory to social cognitive theory, converge on the proposition that greater caregiver awareness in the feeding context supports greater responsiveness, and early empirical evidence is consistent with this claim. Importantly, however, mindful feeding is best understood as a promising adjunct to responsive feeding and a potentially valuable support for caregivers who face intrapersonal barriers to consistent practice rather than a necessary condition for responsiveness.

The field is at an early but promising stage in understanding this relationship. While responsive feeding has achieved formal recognition in IYCF policy, mindful feeding has not, and its evidence base remains limited by a small number of studies, instrumentation confined to dissertation literature, and an absence of tools for the infant age group. Because of this, several cautions are warranted. First, any integrations into infant-specific IYCF remain premature given the absence of validated infant measures. Additionally, more research is needed to fully establish the relationship between mindful and responsive feeding, specifically via experimental and longitudinal studies. Finally, structural barriers including poverty and food insecurity may limit the reach of mindfulness-based approaches regardless of their theoretical merit. Taking these cautions into consideration, future research focused on integrating mindful feeding as an adjunct to responsive feeding guidance represents a meaningful and achievable direction for the field.

Author Contributions

Kristen Davis conceptualized the manuscript and led the writing. Rachel Razza, Lynn Brann, and Gabriel Merrin contributed to the intellectual development of the manuscript and provided critical review and revision of the content. All authors approved the final version for submission.

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Conflicts of Interest

The authors declare no conflicts of interest.

References

- Ainsworth, M. S., and J. Bowlby. 1991. "An Ethological Approach to Personality Development." *American Psychologist* 46: 333–341. <https://doi.org/10.1037/0003-066X.46.4.333>.
- Almaatani, D., A. Zurbau, F. Khoshnevisan, et al. 2023. "The Association Between Parents' Stress and Parental Feeding Practices and Feeding Styles: Systematic Review and Meta-Analysis of Observational Studies." *Maternal & Child Nutrition* 19: e13448. <https://doi-org.libezproxy2.syr.edu/10.1111/mcn.13448>.
- Bandura, A. 1991. "Social Cognitive Theory of Self-Regulation." *Organizational Behavior and Human Decision Processes* 50: 248–287. [https://doi.org/10.1016/0749-5978\(91\)90022-L](https://doi.org/10.1016/0749-5978(91)90022-L).
- Black, M. M., and F. E. Aboud. 2011. "Responsive Feeding Is Embedded in a Theoretical Framework of Responsive Parenting." *Journal of Nutrition* 141: 490–494. <https://doi.org/10.3945/jn.110.129973>.
- Bögels, S. M., A. Lehtonen, and K. Restifo. 2010. "Mindful Parenting in Mental Health Care." *Mindfulness* 1: 107–120. <https://doi-org.libezproxy2.syr.edu/10.1007/s12671-010-0014-5>.
- Daniels, L. A., K. M. Mallan, J. M. Nicholson, et al. 2015. "An Early Feeding Practices Intervention for Obesity Prevention." *Pediatrics* 136: e40–e49. <https://doi.org/10.1542/peds.2014-4108>.
- DiSantis, K. I., E. A. Hodges, S. L. Johnson, and J. O. Fisher. 2011. "The Role of Responsive Feeding in Overweight During Infancy and Toddlerhood: A Systematic Review." *International Journal of Obesity* 35: 480–492. <https://doi.org/10.1038/ijo.2008.214>.
- Duncan, L. G., J. D. Coatsworth, and M. T. Greenberg. 2017. "A Model of Mindful Parenting: Implications for Parent-Child Relationships and Prevention Research." *Clinical Child and Family Psychology Review* 12: 255–270. <https://doi-org.libezproxy2.syr.edu/10.1007/s10567-009-0046-3>.
- Emley, E. A., M. B. Taylor, and D. R. Musher-Eizenman. 2017. "Mindful Feeding and Child Dietary Health." *Eating Behaviors* 24: 89–94. <https://doi.org/10.1016/j.eatbeh.2017.01.007>.
- Escobar, S. N. 2020. *Development and Validation of a Mindful Food Parenting Instrument to Assess the Relationship Between Parent Food Practices and Children's Dietary Outcomes*. University of North Florida.
- Finnane, J. M., E. Jansen, K. M. Mallan, and L. A. Daniels. 2017. "Mealtime Structure and Responsive Feeding Practices Are Associated With Less Food Fussiness and More Food Enjoyment in Children." *Journal of Nutrition Education and Behavior* 49: 11–18.e1. <https://doi.org/10.1016/j.jneb.2016.08.007>.

- Garofalo, L., C. Booth-LaForce, P. Nurius, et al. 2023. "Cumulative Adversity, Mindfulness, and Mental Health in First-Time Mothers Experiencing Low Income." *Journal of Affective Disorders Reports* 14: 100621. <https://doi.org/10.1016/j.jadr.2023.100621>.
- Golen, R. B., and A. K. Ventura. 2015. "Mindless Feeding: Is Maternal Distraction During Bottle-Feeding Associated With Overfeeding?" *Appetite* 91: 385–392. <https://doi.org/10.1016/j.appet.2015.04.056>.
- Goodman, L. C., L. T. Roberts, and D. R. Musher-Eizenman. 2020. "Mindful Feeding: A Pathway Between Parenting Style and Child Eating Behaviors." *Eating Behaviors* 36: 101335. <https://doi.org/10.1016/j.eatbeh.2019.101335>.
- Heller, R. L., and A. R. Mobley. 2019. "Instruments Assessing Parental Responsive Feeding in Children Ages Birth to 5 Years: A Systematic Review." *Appetite* 138: 23–51. <https://doi.org/10.1016/j.appet.2019.01.024>.
- Hohman, E. E., I. M. Paul, L. L. Birch, and J. S. Savage. 2017. "Insight Responsive Parenting Intervention Is Associated With Healthier Patterns of Dietary Exposures in Infants." *Obesity* 25, no. 1: 185–191. <https://doi.org/10.1002/oby.21705>.
- Jansen, E., H. A. Harris, K. M. Mallan, L. Daniels, and K. Thorpe. 2018. "Measurement Invariance of the Feeding Practices and Structure Questionnaire-28 Among a Community of Socioeconomically Disadvantaged Mothers and Fathers." *Appetite* 120: 115–122. <https://doi.org/10.1016/j.appet.2017.08.030>.
- Jansen, E., C. G. Russell, J. Appleton, et al. 2021. "The Feeding Practices and Structure Questionnaire: Development and Validation of Age Appropriate Versions for Infants and Toddlers." *International Journal of Behavioral Nutrition and Physical Activity* 18, no. 1: 13. <https://doi.org/10.1186/s12966-021-01079-x>.
- Kim, C. Y., N. P. Smith, and D. M. Teti. 2024. "Associations Between Breastfeeding, Maternal Emotional Availability, and Infant–Mother Attachment: The Role of Coparenting." *Journal of Human Lactation* 40, no. 3: 455–463. <https://doi.org/10.1177/08903344241247207>.
- Lamson, A. L., K. W. Didericksen, A. Winter, A. S. Brimhall, and S. Lazorick. 2020. "Attachment, Parenting, and Obesogenic Behavior: A Dyadic Perspective." *Journal of Marital and Family Therapy* 46: 455–470. <https://doi.org/10.1111/jmft.12397>.
- Meers, M. R. 2013. *The Assessment of Mindful Food Parenting and Its Relation to Parental Feeding Practices and Child Food Intake*. Bowling Green State University.
- Mourão, D., A. Fonseca, and H. Moreira. 2023. "Psychopathology and Mindful Parenting in Parents of Preschool and School-Aged Children: The Role of Supportive Coparenting." *International Journal of Environmental Research and Public Health* 20, no. 2: 1238. <https://doi.org/10.3390/ijerph20021238>.
- Musher-Eizenman, D., and S. Holub. 2007. "Comprehensive Feeding Practices Questionnaire: Validation of a New Measure of Parental Feeding Practices." *Journal of Pediatric Psychology* 32: 960–972. <https://doi.org/10.1093/jpepsy/jsm037>.
- Pérez-Escamilla, R., E. Y. Jimenez, and K. G. Dewey. 2021. "Responsive Feeding Recommendations: Harmonizing Integration Into Dietary Guidelines for Infants and Young Children." *Current Developments in Nutrition* 5, no. 6: nzab076. <https://doi.org/10.1093/cdn/nzab076>.
- Pickard, J. A., M. Townsend, P. Caputi, and B. F. S. Grenyer. 2017. "Observing the Influence of Mindfulness and Attachment Styles Through Mother and Infant Interaction: A Longitudinal Study." *Infant Mental Health Journal* 38: 343–350. <https://doi.org/10.1002/imhj.21645>.
- Redsell, S. A., V. Slater, J. Rose, E. K. Olander, and K. Matvienko-Sikar. 2021. "Barriers and Enablers to Caregivers' Responsive Feeding Behaviour: A Systematic Review to Inform Childhood Obesity Prevention." *Obesity Reviews* 22: e13228. <https://doi.org/10.1111/obr.13228>.
- Sall, N. S., et al. 2020. "A Measurement Scale to Assess Responsive Feeding Among Cambodian Young Children." *Maternal & Child Nutrition* 16: e12956. <https://doi.org/10.1111/mcn.12956>.
- Savage, J. S., E. E. Hohman, M. E. Marini, A. Shelly, I. M. Paul, and L. L. Birch. 2018. "Insight Responsive Parenting Intervention and Infant Feeding Practices: Randomized Clinical Trial." *International Journal of Behavioral Nutrition and Physical Activity* 15: 64. <https://doi.org/10.1186/s12966-017-0641-5>.
- Thompson, A. L., M. A. Mendez, J. B. Borja, L. S. Adair, C. R. Zimmer, and M. E. Bentley. 2009. "Development and Validation of the Infant Feeding Style Questionnaire." *Appetite* 53, no. 2: 210–221. <https://doi.org/10.1016/j.appet.2009.06.010>.
- U.S. Department of Agriculture and U.S. Department of Health and Human Services. (2020). *Dietary Guidelines for Americans, 2020–2025* (9th ed.). www.dietaryguidelines.gov.
- Ventura, A. K. 2017. "Associations Between Breastfeeding and Maternal Responsiveness: A Systematic Review of the Literature." *Advances in Nutrition* 8: 495–510. <https://doi.org/10.3945/an.116.014001>.
- World Health Organization. (2023, December 20). *Infant and Young Child Feeding*. <https://www.who.int/news-room/fact-sheets/detail/infant-and-young-child-feeding>.
- Zimmer-Gembeck, M. J., J. Joyce, J. Kerin, H. Webb, S. Morrissey, and A. McKay. 2019a. "Self-Determination Theory and Food-Related Parenting: The Parent Socioemotional Context of Feeding Questionnaire." *Journal of Family Psychology* 33: 476. <https://doi.org/10.1037/fam0000508>.
- Zimmer-Gembeck, M. J., A. McKay, and H. J. Webb. 2019b. "The Food-Related Parenting Context: Associations With Parent." *Mindfulness and Children's Temperament*. 10: 2415–2428. <https://doi.org/10.1007/s12671-019-01169-3>.