

Journal Pre-proof

Offering a Developmental Perspective to Enhance the Efficacy of Multi-Component Interventions for Pediatric Overweight and Obesity

Mackenzie Lane, B.S., R.D.N.

PII: S2212-2672(22)01070-X

DOI: <https://doi.org/10.1016/j.jand.2022.10.006>

Reference: JAND 55570

To appear in: *Journal of the Academy of Nutrition and Dietetics*

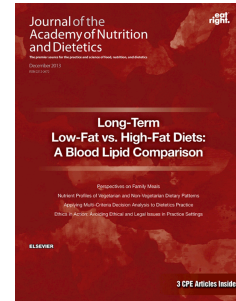
Received Date: 28 September 2022

Accepted Date: 3 October 2022

Please cite this article as: Lane M, Offering a Developmental Perspective to Enhance the Efficacy of Multi-Component Interventions for Pediatric Overweight and Obesity, *Journal of the Academy of Nutrition and Dietetics* (2022), doi: <https://doi.org/10.1016/j.jand.2022.10.006>.

This is a PDF file of an article that has undergone enhancements after acceptance, such as the addition of a cover page and metadata, and formatting for readability, but it is not yet the definitive version of record. This version will undergo additional copyediting, typesetting and review before it is published in its final form, but we are providing this version to give early visibility of the article. Please note that, during the production process, errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

Copyright © 2022 by the Academy of Nutrition and Dietetics.



Title: Offering a Developmental Perspective to Enhance the Efficacy of Multi-Component Interventions for Pediatric Overweight and Obesity

Keywords/Descriptive Phrases: development, context, adolescence, family, peers

Word Count (text): 474 words

Author Contact Information:

Full name: Mackenzie Lane, B.S., R.D.N.

Affiliation: Ph.D. Student, Human Development and Family Studies, The Pennsylvania State University

Address: 115 Health and Human Development Building, University Park, PA 16803

Phone: 814-865-1428

Email: Mml6343@psu.edu

ORCID: Author does not have an ORCID.

Author Contributions: ML is the sole author of this manuscript. Please address correspondence to mml6343@psu.edu.

Funding/Financial Disclosures: No funding or support was used for this manuscript.

Conflict of Interest Disclosure: There are no conflict of interests to report.

1 To the Editor:

2 Direct attention to dramatic physical, social and relationship changes across ages 2 to 17
3 years would supplement the proposed position in the article “Treatment of Pediatric Overweight
4 and Obesity: Position of the Academy of Nutrition and Dietetics Based on an Umbrella Review
5 of Systematic Reviews”.¹ Although it offered RDNs extensive evidence-based research on
6 multi-component interventions and implications for their practice, little attention was given to
7 the developmental contexts (e.g., family, peer, media) patients are living in and the influence this
8 may have on their eating habits and/or effectiveness of interventions. RDNs can have a more
9 substantial positive impact on patients’ health if they also consider these contextual elements
10 while discussing the best treatment approach with their patients.

11 Caregivers are important in shaping children’s eating habits at every developmental
12 stage. Ideally, caregiver practices foster appetite regulation, food acceptance, and healthy food
13 choices². Infants benefit from responsive feeding practices supporting child self-regulation as
14 well as repeated exposure and social modeling practices promoting the acceptance of novel,
15 particularly nutrient-dense, foods³. School-age children who are provided structure and limit
16 setting (e.g., caregiver sets time to eat, child self-serves and decides what/how much to eat) learn
17 healthy eating habits⁴. Adolescents value autonomy and spend increasing time with peers.
18 Caregivers can involve adolescents with food prep/cooking, prioritize shared family meals, and
19 model healthy choices when eating out. These steps help build healthy decision making skills as
20 teens make more food choices away from home^{5,6}. RDNs who provide age- or stage-appropriate
21 support to caregivers will have greater positive impact on patients’ health trajectories. RDNs can
22 also play key roles helping caregivers use supportive communication and practices about weight

23 to help children who may be distressed about their weight and related weight-based
24 victimization⁷.

25 The peer context poses potential challenges to children and adolescents with overweight
26 or obesity. Peer approval and perceived social norms (e.g., unhealthy eating habits) are
27 significant predictors of adolescents' eating behaviors^{8,9}. Consequently, adolescents with
28 overweight or obesity may find it impracticable to follow healthy weight management strategies
29 in the presence of peers due to fears they won't fit in. Children and adolescents will be more
30 likely to follow treatment plans if they feel understood personally and developmentally by the
31 RDN. In turn, they will feel comfortable implementing nutrition interventions in the peer
32 context.

33 Media, social media, and other online sources are most influential to children and
34 adolescents resulting in greater exposures to unrepresentative body portrayals¹⁰, platforms that
35 exacerbate the potential for cyberbullying^{11,12}, and targeted, pervasive unhealthy food
36 advertisements^{13,14}. Tik Tok trends like 'Nacho tables' and 'What I eat in a day'¹⁵ can drastically
37 influence eating habits and body image, and override RDN's recommendations for patients with
38 overweight or obesity.

39 In summary, treatment of overweight and obesity would be more comprehensive,
40 relevant, and efficacious to children and adolescents if intervention plans were tailored to their
41 developmental stages and contexts.

42 **References:**

- 43 1. Kirk S, Ogata B, Wichert E, Handu D, Rozga M. Treatment of Pediatric Overweight and
44 Obesity: Position of the Academy of Nutrition and Dietetics Based on an Umbrella Review

- 45 of Systematic Reviews. *J Acad Nutr Diet.* 2022;122(4):848-861.
46 doi:10.1016/j.jand.2022.01.008
- 47 2. Balantekin KN, Anzman-Frasca S, Francis LA, Ventura AK, Fisher JO, Johnson SL. Positive
48 parenting approaches and their association with child eating and weight: A narrative review
49 from infancy to adolescence. *Pediatr Obes.* 2020;15(10):e12722. doi:10.1111/ijpo.12722
- 50 3. Anzman-Frasca S, Ventura AK, Ehrenberg S, Myers KP. Promoting healthy food
51 preferences from the start: a narrative review of food preference learning from the prenatal
52 period through early childhood. *Obes Rev.* 2018;19(4):576-604. doi:10.1111/obr.12658
- 53 4. Eneli IU, Crum PA, Tylka TL. The Trust Model: A Different Feeding Paradigm for
54 Managing Childhood Obesity. *Obesity.* 2008;16(10):2197-2204. doi:10.1038/oby.2008.378
- 55 5. Fulkerson JA, Neumark-Sztainer D, Hannan PJ, Story M. Family Meal Frequency and
56 Weight Status Among Adolescents: Cross-sectional and 5-year Longitudinal Associations.
57 *Obesity.* 2008;16(11):2529-2534. doi:10.1038/oby.2008.388
- 58 6. Larson NI, Neumark-Sztainer D, Hannan PJ, Story M. Family Meals during Adolescence
59 Are Associated with Higher Diet Quality and Healthful Meal Patterns during Young
60 Adulthood. *J Am Diet Assoc.* 2007;107(9):1502-1510. doi:10.1016/j.jada.2007.06.012
- 61 7. Puhl RM, Lessard LM, Pudney EV, Foster GD, Cardel MI. Motivations for engaging in or
62 avoiding conversations about weight: Adolescent and parent perspectives. *Pediatr Obes.*
63 Published online August 4, 2022. doi:10.1111/ijpo.12962

- 64 8. Stok FM, de Vet E, de Wit JB, Luszczynska A, Safron M, de Ridder DT. The proof is in the
65 eating: subjective peer norms are associated with adolescents' eating behaviour. *Public*
66 *Health Nutr.* 2015;18(6):1044-1051. doi:10.1017/S1368980014001268
- 67 9. Matos M, Palmeira A, Gaspar T, Wit J, Luszczynska A. Social support influences on eating
68 awareness in children and adolescents: the mediating effect of self-regulatory strategies.
69 *Glob Public Health.* 2015;11:1-12. doi:10.1080/17441692.2015.1094106
- 70 10. Uchôa FNM, Uchôa NM, Daniele TM da C, et al. Influence of the Mass Media and Body
71 Dissatisfaction on the Risk in Adolescents of Developing Eating Disorders. *Int J Environ Res*
72 *Public Health.* 2019;16(9):1508. doi:10.3390/ijerph16091508
- 73 11. Tiggemann M, Slater A. NetTweens: The Internet and Body Image Concerns in Preteenage
74 Girls. *J Early Adolesc.* 2014;34(5):606-620. doi:10.1177/0272431613501083
- 75 12. Holmberg C, Berg C, Hillman T, Lissner L, Chaplin JE. Self-presentation in digital media
76 among adolescent patients with obesity: Striving for integrity, risk-reduction, and social
77 recognition. *Digit Health.* 2018;4:2055207618807603. doi:10.1177/2055207618807603
- 78 13. Chung A, Vieira D, Donley T, et al. Adolescent Peer Influence on Eating Behaviors via
79 Social Media: Scoping Review. *J Med Internet Res.* 2021;23(6):e19697. doi:10.2196/19697
- 80 14. Wang CH, Sher STH, Salman I, Janek K, Chung CF. "TikTok Made Me Do It": Teenagers'
81 Perception and Use of Food Content on TikTok. In: *Interaction Design and Children.* ACM;
82 2022:458-463. doi:10.1145/3501712.3535290

83 15. Korbani A, LaBrie J. Toxic TikTok Trends. *J Stud Res*. 2021;10(2).

84 doi:10.47611/jsrhs.v10i2.1687

85

Journal Pre-proof