Multicultural Orientation-Informed Focused Acceptance and Commitment Therapy for Adolescents Seeking Bariatric Surgery

Mary Elizabeth Keenan-Pfeiffer

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MULTICULTURAL ORIENTATION-INFORMED FOCUSED ACCEPTANCE AND COMMITMENT THERAPY FOR ADOLESCENTS SEEKING BARIATRIC SURGERY

by Mary Elizabeth Keenan-Pfeiffer

A Dissertation Defense
Submitted in Partial Fulfillment of the Requirements for the Degree of Doctor of Philosophy

Major: Clinical Psychology

The University of Memphis
August 2023
Dedication

First and foremost, I dedicate this work and my career to understanding and improving thriving in youth with health concerns and their families. Without their contributions, this research could not exist. It is an honor to serve the communities with whom I work, and I vow to never take this honor for granted.

I dedicate my work also to my mother, Joyce Irene Keenan, a woman of unimaginable strength who has supported me through my greatest journeys in life. Thank you for showing me what resilience looks like, and how vulnerability in the face of great challenges is not weakness, though it can be difficult. You gave me the world and I promise to make you proud.

Finally, I dedicate this milestone of my career to my husband, Christopher Stephen Keenan-Pfeiffer, who has supported me throughout my graduate training and throughout our lives together. The strength of true partnership, equality, and continued desire to grow that I experience with you has helped shape me into who I am today and who I will be tomorrow. Thank you for pushing me to keep doing what brings me meaning, even when I doubt myself. Your kindness, heart, and mind bring so much to this world. I am honored to walk beside you, hand-in-hand, on this path of life.
Acknowledgements

I would like to express deep gratitude for my graduate school mentor, Kristoffer S. Berlin, PhD. Thank you for giving me a chance when you accepted me into your lab, and for continually challenging me. From the moment we first spoke on the phone (when you offered me the chance to interview for the graduate program), your passion for the field of pediatric psychology has been apparent and infectious. I cannot wait to see what happens next in our continued collaboration!

To my clinical supervisor (who turned into my dissertation committee member and co-mentor, and hopefully lifelong collaborator), E. Thomaseo Burton, PhD, MPH. Thank you for the opportunity to work with you and learn the art of clinical interventions to families in need. You fostered independence in my clinical work that I had not yet experienced, and that I will forever cherish. You showed me the possibilities for a career incorporating clinical service, advocacy, and research, something I didn’t think was truly achievable.

To my countless clinical supervisors, research collaborators, Child Health and Illness Lab teammates, thank you for the opportunity to learn and grow with you. I hope we continue to do what brings us meaning and improves the lives of the families we serve!
Preface

The present paper presents research from the perspective of a medical model of obesity consistent with predominant views in academic research. This research exists within systems of oppression that differentially impact individuals of intersecting marginalized identities (including those based on race, ethnicity, gender, sexuality, physical ability, body size/type/weight, economic resources, and more). The Fat Acceptance movement and the field of Fat Studies consider weight-based oppression as a social justice and human rights issue. Advocates for fat acceptance denounce the vilification of large bodies that exists within the medical system and Western society. The terms obesity and overweight carry with them a history of discrimination, stigma, and differential access to human rights including healthcare, which needs to be acknowledged. However, academic research and treatment guidelines use these terms, and they will be used in the present paper minimally only when needed for consistency/clarity. Every effort has been made to use the phrasing “with large bodies” elsewhere or to avoid subjective terms (e.g., listing BMI ranges numerically and not labeling them) in this manuscript and clinically to use language that families use/prefer themselves.

The collaborators of this current research come from differing backgrounds and life experiences, which informs our current work. We seek to continue to grow individually and look forward to the continued growth of academic understanding of the diverse needs of individuals with large bodies. The readers are directed to the paper “Fat Acceptance as Social Justice (McPhail & Orsini, 2021),” the book “Fearing the Black Body: The Racial Origins of Fat Phobia,” the National Association to Advance Fat Acceptance (https://naafa.org), and the Association for Size Diversity and Health (https://asdah.org) to begin and/or continue their own journeys towards understanding the nuanced complexities of supporting health in this population.
Abstract

Objective: The present paper details a pragmatic trial of a Focused Acceptance and Commitment Therapy (FACT) intervention for adolescents seeking bariatric surgery. The intervention was developed within a multicultural orientation (MCO) framework to acknowledge families’ diverse sociocultural contexts and clinical needs. The intervention aimed to increase psychological flexibility, specifically by supporting values-consistent behavior change through openness to internal experiences and present moment awareness, within the context of seeking bariatric surgery. It was designed to be flexibly implemented across two sessions, one focused on increasing adolescent psychological flexibility, the other on increasing caregiver psychological flexibility. The present paper describes implementation and refinement of the intervention based on feasibility and acceptability of the adolescent portion and adolescent perspectives/outcomes.

Method: Eleven adolescents participated in the clinical intervention. Adolescent-reported intervention acceptability was collected before, during, and after the intervention sessions. Self-report measures of psychological flexibility and health-related quality of life were also completed. Interventionists recorded post-session interviews discussing intervention implementation and refinement. Results: The intervention was acceptable as rated by adolescents, and it was feasible to implement in an interdisciplinary clinic. Self-report results are presented descriptively. Conclusions: This intervention was acceptable to adolescents, feasible to implement in an interdisciplinary clinic, and should be explored in additional samples and with further research. Themes from post-intervention intervention sessions are briefly summarized. Feasibility of the research study is discussed within an MCO framework. Ideas for future research and adaptation for other pediatric populations are presented.
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Multicultural Orientation-Informed Focused Acceptance and Commitment Therapy for Adolescents Seeking Bariatric Surgery

The present study evaluated the development, feasibility, and youth’s perspective on acceptability of a multicultural orientation-informed Focused Acceptance and Commitment Therapy (FACT) intervention for adolescents pursuing bariatric surgery. The intervention aimed to increase psychological flexibility by supporting values-consistent behavior change through openness to internal experiences and awareness of the present moment, within the context of preparing for potential upcoming bariatric surgery. The intervention was designed to be flexibly implemented across two sessions, one focused on increasing adolescents’ psychological flexibility, the other focused on increasing their caregivers’ psychological flexibility. It was developed within a multicultural orientation framework to meet the needs of each family’s diverse sociocultural context. The present pilot pragmatic trial aimed to iteratively develop and refine the intervention to make it both a) acceptable for diverse adolescents seeking bariatric surgery, and b) feasible for inclusion in fast-paced interdisciplinary clinics.

Contextualizing the Needs of Youth with Large Bodies

Almost one in five youth under age 19 in the United States have a body mass index (BMI) > 95th percentile for age and sex assigned at birth, with prevalence rate steadily increasing over the past several decades (Skinner et al., 2018). BMI > 95th percentile in children and adolescents has been associated with higher rates of adverse metabolic and cardiovascular conditions (e.g., hypertension, hyperlipidemia, nonalcoholic fatty liver disease, and insulin resistance) and other medical comorbidities (e.g., asthma, obstructive sleep apnea, orthopedic concerns; (Pratt et al., 2018). Though beyond the scope of the present paper, see extant literature (Medvedyuk et al., 2018) for a discussion of the nuance in how we research and communicate
about weight and a critical evaluation of theoretical models of obesity, social determinants of health, and health outcomes.

In addition to higher medical needs on average, youth BMI > 95th percentile for age and sex assigned at birth also face high rates of weight stigma and discrimination, with the highest prevalence seen in youth in large bodies with intersecting marginalized identities (Puhl & Lessard, 2020). Weight-based discrimination and bullying takes many forms including outright verbal abuse, microaggressions, in addition to lack of access to properly sized furniture (e.g., chairs in a medical office) and medical equipment (e.g., blood pressure cuffs; (Puhl & Brownell, 2003). Weight-based stigma and discrimination often comes both from same-age peers and adults, including parents and teachers (Puhl & Lessard, 2020). Moreover, the American Academy of Pediatrics acknowledges that pediatricians “have been—and remain—a source of weight bias (Hampl et al., 2023). This can lead to avoidance of healthcare, along with detrimental health (including mental health) effects (Mold & Forbes, 2013). Person-centered care of youth with large bodies must consider the multitude of factors that impact health and wellbeing, including not only genetics and behavior, but also the sociocultural environment/context in which youth live (which unequally distributes access to health-promoting opportunities and life stressors based on personal characteristics).

Spencer and colleague’s phenomenological variant of ecological systems theory (PVEST; (Spencer et al., 2006) can be utilized to conceptualize an individual’s sociocultural context. Consistent with Bronfenbrenner’s ecological systems theory (Bronfenbrenner, 1992), PVEST asserts that individuals both influence and are influenced by their proximal/immediate contexts (such as school, family, and neighborhood) and distal/societal contexts (Spencer et al., 2006). These societal, or systemic, contexts include the political climate of the country, media
messages, and systemic inequities based on discrimination. This can also include the way
individuals in large bodies are portrayed in academic research and media (e.g., television shows,
news articles) and how society views weight/obesity. PVEST uniquely synthesizes that
individuals have different risk contributors (e.g., race, socioeconomic status, sex assigned at
birth, physical status, and biological characteristics) which predict health and behavioral
outcomes (favorable and adverse) based on discrimination (Spencer et al., 1997). It is important
to note that race is a socially, not biologically, defined construct which serves as a proxy for the
consequences of racism and structural inequity. Individuals lacking adequate support and/or
experiencing significant life stressors (in proximal and/or distal contexts), such as individuals of
intersecting marginalized identities (e.g., an individual who identifies as Black living in a large
body), are more likely to experience adverse behavioral and health outcomes (Velez & Spencer,
2018). The differential impact of social determinants of health on weight status and health has
been formally acknowledged in the American Academy of Pediatrics’ Clinical Practice
Guideline for the Evaluation and Treatment of Children and Adolescents With Obesity (Hampl
et al., 2023).

Children of color are more likely to experience systemic stressors such as economic
disadvantage (as a result of structural racism), which has been associated with increased
likelihood of having a BMI > 95th percentile (Cossrow & Falkner, 2004). Specifically 20.4% of
Non-Hispanic Black youth and 23.6% of Hispanic youth have BMI in this range, compared to
14.7% of Non-Hispanic White youth (Skinner et al., 2018). Systemic stressors and lack of access
to supports include the higher rates of Black individuals living in “food swamps” (Cooksey
Stowers et al., 2020), “areas in which large relative amounts of energy-dense snack foods,
inundate healthy food options” (Rose et al., 2009). This is at least partially due to the impact of
housing segregation and income distribution throughout history. See (Kramer & Hogue, 2009) for a discussion of segregation’s impact on health. Empirical research shows that these “food swamps” significantly predict BMI, even more strongly than “food deserts,” areas with limited access to affordable and nutritious food (Cooksey-Stowers et al., 2017; Wrigley, 2002).

Importantly, social justice advocates have recently argued for the term “food apartheid” to be used instead of “deserts” or “swamps,” terms which have been argued to obscure the systemic racism and oppression that created and maintains these areas (Sevilla, 2021). Further, media targeted at Black youth contains more ads for lower-nutrient and calorie-dense food (e.g., fast food) than for health/physical activity-related content (Outley & Taddese, 2006). To address the multitude of intersecting factors across proximal and distal socioecological levels, intervention targeted across levels is needed. Relevant to the present research, healthcare providers intervening at the individual and family levels must develop and deliver treatments that are sensitive to youth’s and families’ unique sociocultural context and needs.

**Comprehensive Treatment**

Consistent with a chronic illness model of obesity, the American Academy of Pediatrics’ asserts the need for comprehensive treatment to meet the health needs of youth with BMI > 95th percentile (Hampl et al., 2023). See Figure 1 for details of comprehensive treatment components from the guideline. Intensive health behavior and lifestyle treatment, which “educates and supports families in nutrition and physical activity changes that improve weight status and comorbidities and promote long-term health,” is the foundation of comprehensive weight-focused treatment (Hampl et al., 2023). Intensification of treatment to include pharmacotherapy and bariatric surgery is recommended to support attainment of health goals depending on individual factors.
Bariatric surgery has become increasingly researched for adolescents and found to be “well tolerated and effective (McGinty et al., 2015).” The term bariatric surgery encompasses a wide variety of surgical procedures, including Roux-en-Y gastric bypass, vertical sleeve gastrectomy, and laparoscopic adjustable gastric banding (Bolling et al., 2019). Bariatric surgery typically results in significant weight loss, resolution of preexisting comorbidities including hypertension and prediabetes, and increased quality of life (Paulus et al., 2015). Bariatric surgery is considered in youth with either a) BMI ≥ 35 kg/m$^2$ or 120% of the 95th percentile (whichever is lower) with clinically significant comorbid conditions, or b) BMI ≥ 40 kg/m$^2$ or 140% of the 95th percentile (whichever is lower) regardless of the presence of comorbidities (Hampl et al., 2023). A referral to a comprehensive pediatric metabolic and bariatric surgery center, where medical and psychosocial assessment for surgery take place, is recommended for youth 13 and older who meet the above criteria. Not all youth who are referred will go on to receive surgical intervention, depending on experts’ collaborative assessment of goals and eligibility (medical and psychosocial) with youth and their families. It is up to the child and their family to consider, with education and guidance provided by interdisciplinary teams specializing in pediatric bariatric surgery, if surgery is right for their particular needs and context.

The Healthy Lifestyle Clinic

Relevant to the present study, one clinic focused on the comprehensive treatment of youth with BMI > 95th percentile is the Healthy Lifestyle Clinic (HLC) at Le Bonheur Children’s Hospital. The HLC is an interdisciplinary clinic that aims to “manage obesity and comorbid conditions in a traditionally underserved region of the United States,” (Burton et al., 2018). It is situated in the Mid-South region of the United States, part of the American South (in which over half of the US Black American population lived as of 2019; (Tamir et al., 2021). With its
longstanding history of systemic oppression, from enslavement of Black individuals to laws that legalized racial segregation that perpetuated economic disadvantage, racial inequity persists to this day and can be seen starkly when examining health outcomes. The Mid-South has significantly higher rates of chronic medical conditions including hypertension, asthma, depression, and arthritis, with the highest rates seen in Black individuals and those with lower access to financial resources and/or education levels (Oates et al., 2017). This area is also part of the “diabetes belt,” with the nation’s highest rates of type 2 diabetes (Barker et al., 2011). Undoubtedly, this is an area with great need for flexible, culturally humble interventions to improve health and wellbeing.

The HLC provides comprehensive treatment, including health behavior and lifestyle treatment, pharmacotherapy, and bariatric surgery (when indicated) consistent with American Academy of Pediatrics recommendations. Youth for whom bariatric surgery is indicated, and who express interest in learning more about this intervention, attend a progression of at least six monthly pre-surgical visits at the HLC. This goal of these visits is to increase youth and their families’ knowledge of the risks and potential benefits of surgery, discuss behavioral/lifestyle modification to implement in pre- and post-operative periods, and to support youth and their families’ decision making as they determine if they would like to move forward with surgery. Each visit to the HLC includes approximately 30-minute-long visits with provider(s) from each discipline (behavioral health, medicine, nutrition, and exercise physiology).

The role of behavioral health in HLC visits for those seeking bariatric surgery includes assessment of factors that impact weight, health, and overall quality of life. The pediatric psychologist and trainees (which include pre-doctoral interns and advanced doctoral students) use motivational interviewing to evaluate health-related goals and support families in
determining feasible and acceptable ways of meeting these goals within their life context (Naar-King & Suarez, 2011). The behavioral health team also assesses for psychosocial concerns that require more targeted outpatient psychological treatment (such as suicidal ideation, eating disorders, etc.) and refers individuals to mental health professionals in the community for more frequent/intensive psychological care. Developing acceptable and feasible behavioral health interventions that meet the needs of diverse families seen in the HLC aligns strongly with the clinic mission and dedication to research that advances the health of children and adolescents.

**Three Pillars of Psychological Flexibility & the Multicultural Orientation Framework**

The American Psychological Association’s Clinical Practice Guideline for Multicomponent Treatment of Obesity and Overweight in Children and Adolescents supports “the use of family-based multicomponent behavioral interventions that address behavior change, diet, and physical activity (Llabre et al., 2018).” Though no specific intervention was recommended, the APA did recommend flexibility and adaptability in implementing interventions in this population (Llabre et al., 2018). For the present study, Focused Acceptance and Commitment Therapy (FACT), a targeted application of Acceptance and Commitment Therapy (ACT) was evaluated and refined to meet the needs of this population given its flexibility and adaptability. The goal of ACT is to increase psychological flexibility, or one’s ability to live consciously in the present moment, be open to internal experiences, while choosing behaviors based on personal values (Hayes et al., 2011). ACT has shown promise in pediatric populations, with a systematic review of over 21 studies (containing 707 children and adolescents) suggesting that ACT is associated with improvements in psychological flexibility and quality of life (Swain et al., 2015). Psychological flexibility is considered to be inherent in all humans in differing degrees (Kashdan & Rottenberg, 2010). This “fundamental aspect of
health” has been conceptualized as six distinct and interconnected processes (Kashdan & Rottenberg, 2010).

FACT was developed to apply ACT principles in brief, targeted sessions in primary care settings (Strosahl et al., 2012). The flexibility and adaptability of FACT is likely feasible to implement in clinics such as the HLC given its brief duration compared to traditional therapies. FACT consolidates the six-part ACT psychological flexibility processes into three pillars (see Figure 2): open, aware, and engaged (Strosahl et al., 2012). “Open” processes (defusion and acceptance in the ACT model), focus on one’s ability to recognize distance from thoughts, choose when to allow thoughts to influence behavior, and describes the ability to allow unpleasant experiences to exist (e.g., worry, anxiety), without trying to deny or change what is out of one’s control. “Aware” processes (mindfulness and self-as-context) focus on one’s ability to be nonjudgmentally aware of the present moment and experience a sense of self that is defined in a fluid and context-specific, not rigid, manner. “Engaged” processes (values clarification and committed action) focus on one’s ability to perform behaviors consistent with their chosen values (whatever brings meaning and richness to their life). Behaviors are judged as effective, or workable, if they support a rich meaningful life defined by an individual’s values and within their current life context. FACT therapists are encouraged to embody these processes while delivering the intervention and in their own lives.

FACT thus focuses on helping clients/patients foster a different relationship to their thoughts, instead of trying to change the content or frequency of the thoughts (such as in traditional cognitive behavioral therapies), in the service of living the life they want to lead. It has been suggested that this focus can be received by clients/patients as more collaborative, less pejorative, and “may show promise in addressing the unique concerns” of individuals of
historically oppressed and underrepresented groups (Fuchs et al., 2013). This therapeutic approach assumes that pain is an inevitable, universal human condition. Intervention focuses on understanding the context in which a client/patient experiences suffering from this pain. It normalizes and validates human experience and the tendency to behave based on mental rules, with the goal of moving towards values-consistent behaviors even in the presence of pain (Fuchs et al., 2013). FACT’s focus on understanding the workability of behaviors within one’s life context and chosen values is consistent with a multicultural orientation.

Synergistically, the three FACT pillars of open, aware, and engaged map well onto the multicultural orientation framework (see Figures 2 and 3). Considering the diverse population served at the HLC, the disparities in its geographical location, and the social justice values of the team, incorporating a multicultural orientation was vital when developing and delivering an intervention in the HLC. Therapists’ multicultural orientation is “concerned with how the cultural worldviews, values, and beliefs of the client and the therapist interact and influence one another to co-create a relational experience that is in the spirit of healing” (Davis et al., 2018). Similar to a therapeutic orientation (e.g., behavioral, psychodynamic), multicultural orientation is not focused on a specific list of competencies (e.g., “what to do”), but rather on an overall approach to case conceptualization, treatment planning, and intervention (e.g., “ways of doing”). Multicultural orientation is framed within three constructs: cultural humility, cultural opportunities, and cultural comfort.

Cultural humility is the guiding value of practicing with a multicultural orientation, with cultural opportunities and comfort serving as cultural humility’s behavioral expressions “within the therapy context” (Davis et al., 2018). Whereas cultural competence is focused on “ways of doing” clinical work with clients of differing sociocultural contexts, cultural humility is a “way
of being” that is characterized by *intrapersonal* and *interpersonal* aspects (Mosher et al., 2017). These include therapists’ critical self-examination of cultural biases and identity, being other-oriented, and taking a nonjudgmental/open stance when exploring another’s cultural background, lived experience, and values (Mosher et al., 2017). By not assuming an individual’s values, considering the context in which they live and behave (including systemic factors discussed previously that can serve as stressors and decrease health and quality of life), FACT can be readily delivered in a culturally humble manner.

*Cultural opportunities* can be described as “markers that occur in therapy in which the client’s cultural beliefs, values, or other aspects of the client’s cultural identity could be explored” (Owen et al., 2016). For example, when a client discusses their values, beliefs, or other details important to their lived experience, this creates an opportunity for the therapist to explore the client’s cultural identities. A multicultural orientation helps therapists relate to clients in a way that lends itself to recognizing and capitalizing on these opportunities as they are presented and relevant. The final component of the multicultural orientation framework, *cultural comfort*, describes therapists’ level of feeling open, relaxed, and calm before, during, and after conversations on culturally focused content and their overall level of comfort working with diverse individuals (Owen et al., 2016). It is equally important for a therapist to acknowledge their cultural *discomfort*, and to persist with cultural humility and values-consistent behaviors. This is the case even though a knee-jerk (and human) reaction based on mental rules might lead one to alleviate the discomfort by avoiding culturally focused material (often based on fear of “saying the wrong thing”).
Current Study

This leads us to the current study, focused on meeting the clinical need of youth and families at the HLC with multicultural orientation-informed FACT. The intent of the current study can be best captured by the classification of a pragmatic trial, focusing on ecological validity and the benefits of the intervention in everyday practice instead of rigid experimental conditions (MacPherson, 2004). The primary aim of the present pragmatic pilot trial was to develop a multicultural orientation-informed FACT intervention for adolescents seeking bariatric surgery in the HLC, and to refine it based on acceptability and feasibility data. The intervention and research study were developed consistent with principles of multicultural orientation. Following suggestions of improving pilot/feasibility trials in the *Journal of Pediatric Psychology*, the present study does not focus on preliminary efficacy (Hilliard et al., 2021). The study is situated in Phase II, Preliminary Testing, of the Obesity Related Behavioral Intervention Trials (ORBIT) model for developing behavioral treatments (Czajkowski et al., 2015). Specifically, it falls within both Phase IIA (Proof-of-Concept) and Phase IIB (Pilot Testing). Phase IIA takes the treatment manual written in Phase I and tests it out with a small number of participants, and Phase IIB assesses acceptance of all aspects of the protocol including the treatment (Czajkowski et al., 2015). For the current study, acceptability was defined as a multidimensional construct that evaluates the extent to which those receiving an intervention “consider it to be appropriate, based on anticipated or experiential cognitive and emotional response to the intervention (Sekhon et al., 2017).” Specifically, the theoretically and empirically developed Treatment Acceptability Framework was utilized (see Figure 4), which asserts the importance of seven domains of acceptability, across three key timepoints in the intervention process, as perceived by those delivering and receiving the intervention (Sekhon et al., 2017).
It was hypothesized that the intervention would be feasible to implement in the clinic (with $\geq 80\%$ of those consented completing the intervention) and acceptable to adolescents ($\geq 70\%$ average acceptability ratings for adolescents, see Methods section for analysis details). Consistent with the stage of the study, specific hypothesis testing with assessment measures was not conducted; outcome measures were analyzed descriptively. The goal of this manuscript is to describe the development of the intervention, present pilot acceptability and feasibility data from the intervention in a bariatric surgery context, and close with conclusions relevant to this population and areas for continued research, including its adaptation to other pediatric populations.

**Methods**

**Participants and Procedure**

It is important to contextualize that data collection occurred during mid-late 2021, about 1 year after the murder of Georgy Floyd and the start of the COVID-19 pandemic. Institutional Review Board approval for study procedures conducted at Le Bonheur Children’s Hospital was obtained from the University of Tennessee Health Science Center and the University of Memphis. The present study focuses on adolescent-relevant perspectives/outcomes collected as part of the Bariatric Resilience: Awareness, Valued Living, and Openness (BRAVO) study. See Table 1 for an overview of the BRAVO study design. BRAVO is a pragmatic trial, exploring the acceptability and feasibility of the clinical intervention designed for adolescents seeking bariatric surgery and their caregiver in the HLC. During the study recruitment period, all adolescents in the HLC who expressed interest in potentially pursuing bariatric surgery were approached to participate in BRAVO to make the results most generalizable. Of note, the clinical intervention and study was designed to also include young adults, but all of those referred for bariatric
surgery appointments at the HLC during the BRAVO study period happened to be adolescents. Eligibility criteria included: age 14-22 at the time of consent, pursuing bariatric surgery in the HLC, and having a caregiver who could participate in BRAVO. Adolescents and caregivers who could not communicate in English would be excluded from the present study, since study therapists were not competent in treatment delivery in non-English languages and study measures were validated only in English. This criterion did not result in any exclusions in the present study, however.

BRAVO was designed with a multicultural orientation framework, both the clinical intervention itself and the research study. The goal was to reduce burden caused by the research study on both families and clinic staff, recognizing the demands on time that families and staff in the HLC typically face. For recruitment, the primary caregiver listed on the adolescents’ medical record was contacted via phone by the BRAVO interventionists before their upcoming HLC visit to assess willingness to participate, confirm eligibility, and answer questions about the study details. If a dyad was interested in participating, electronic consent forms and the T1 assessment battery were sent via email for electronic completion at home. Parents/legal guardians provided electronic consent for themselves and adolescents under 18 to participate in BRAVO. Adolescents provided electronic assent to participate. Families who were unreachable by phone/email, and those who did not complete the electronic consent or assessment battery, were approached at the HLC by the interventionists at their appointment. They were given the opportunity to join the study and provide consent/assent at that time. Families were given the opportunity to complete the assessments electronically in clinic before they began their scheduled HLC visit if they were not completed prior. During recruitment discussions, families were informed that if they chose not to participate in BRAVO, they would receive their typical
clinical care as part of routine HLC pre-surgical visits, in effort to reduce potential coercion. $5 gift cards were provided for each assessment battery completed (with a possible total of $15 across T1, T2, and T3) to compensate youth for their time and added burden. The next section details the BRAVO intervention using the Template for Intervention Description and Replication (TIDieR) checklist (Hoffmann et al., 2014). This standard was developed to improve reporting of clinical interventions, specifically to ensure that publications include sufficiently detailed descriptions to allow for replication of the intervention, thus supporting future research.

**BRAVO Intervention Description Using the TIDier Checklist**

**Why: Rationale & Theoretical Basis of the BRAVO Intervention**

As previously described, there is scant literature on effective psychological interventions for pediatric bariatric surgery candidates. Development of the current intervention was guided by FACT and multicultural orientation principles, with the BRAVO intervention designed to broadly support the wellbeing of diverse adolescents (and their families) who are pursuing bariatric surgery. FACT was chosen, as previously mentioned, because of its flexibility, intentional development for use in multidisciplinary healthcare settings, and brief session length. The flexible delivery of FACT allowed clinicians to respond to the client/family in the room instead of feeling the need to adhere to a rigid session protocol. It also synergizes well with the multicultural orientation, seeking to listen and develop feasible plans for individuals based on their unique lived experiences. Clinicians strived to 1) interact with families in a manner consistent with cultural humility, 2) take advantage of opportunities to discuss culturally relevant points as they were brought up by families, and 3) to continually seek to increase their cultural comfort and notice sources of discomfort. In this way, the BRAVO intervention was designed to meet families where they were at the time of the intervention, metaphorically walk beside them.
to clarify their needs, and to collaboratively develop a plan for ways to improve their wellbeing (i.e., psychological flexibility) through present moment awareness, openness to internal experiences, and values-consistent behavior change.

**What were the Intervention Materials and Procedures?**

**Intervention Materials.** To meet the logistical demands of working in an interdisciplinary clinic, the intervention was designed so that no specific materials were needed to conduct BRAVO sessions. The flexible session guide was kept on hand for all sessions to take notes for treatment refinement, however the content of the guide could be easily remembered by a clinician after initial practice. Having printouts of commonly used tools such as the values bullseye (Lundgren et al., 2012), was convenient, however a clinician could quickly draw such visuals in session. Scratch paper or a small white board could be useful for drawing to engage the family in session material but is not necessary to deliver the intervention.

**Intervention Procedures.** See Appendix A for the original session guide, which was refined based on clinician feedback in the BRAVO study into the revised version in Appendix C. Following the FACT guiding principles, a brief assessment phase was first conducted to understand adolescents’ life circumstances (Strosahl et al., 2012). This also served as an intervention element to support adolescents in identifying what matters to them in a culturally humble manner, including personal values, how they define health, and how health relates to/is one of their values. Further, in line with the culturally humble spirit of the intervention, interventionists did not assume why an adolescent was pursuing bariatric surgery, but instead elicited the patients’ own intended outcomes and reasons for seeking surgery.

The interventionists sought to understand the client in their developmental and cultural context and develop strategies for increasing psychological flexibility that were likely feasible,
given their constellation of challenges and supports. Adolescents were asked to identify a problem or barrier on which they wanted to focus and were asked to rate it from 0 (not a big problem) to 10 (a big problem). To address this problem, a behavioral experiment was collaboratively designed and aimed to increase one or multiple of the three core pillars of psychological flexibility from the FACT perspective: identifying and doing what matters (i.e., values clarification and/or committed action), increasing awareness of the present moment and their role in it (i.e., mindfulness, self-as-context), and increasing openness/ willingness to experience “tough stuff” (e.g., feelings of anxiety, depressive symptoms, self-doubt, etc.). If an adolescent could not identify a problem (e.g., some stated that they wanted to remain consistent in their current committed actions instead of incorporating new ones), values clarification and reinforcement of values-consistent behaviors served as the intervention. Adolescents were asked to rate their confidence that they would perform the activity/plan from 0 (not at all confident) to 10 (very confident), with the goal of having a rating of seven or higher (Strosahl et al., 2012). It is important to note that sometimes attaining this rating numerically was substituted for descriptively gathering the information (e.g., in a personalized manner using an adolescent’s own language) to maintain session flow and present-moment focus.

Who Provided?

The interventionists were two pediatric psychology-focused doctoral candidates in clinical psychology, who had extensive clinical and research exposure to ACT for approximately 3-4 years each and received over 10 hours of training specifically in FACT before developing the intervention. Their training including attending an in-person workshop held by Kirk Strosahl, PhD, and completing a virtual training lead by Patricia Robinson, PhD, and Dr. Strosahl, Focused ACT for Brief Interventions (Robinson & Strosahl, 2020), in addition to mentorship and
consultation with members of the study team familiar with FACT principles. Both interventionists were also trained and experienced in providing behavioral healthcare to adolescent patients in the HLC, including those pursuing bariatric surgery. The interventionists also participated in numerous diversity-related trainings over 3–4 years tailored for psychologists working with diverse families and use of cultural humility in clinical interactions. Given the interventionists background in multicultural orientation and ACT/FACT, it is likely to be beneficial if future clinicians seeking to deliver this intervention have theoretical understanding and introductory clinical experience with ACT principles and delivering interventions to diverse populations with cultural humility. During the intervention sessions, one interventionist was the primary clinician, mostly focused on interacting with the dyad. The other interventionist served primarily as a record keeper, recording de-identified information used for intervention improvement and fidelity assessment, though this interventionist sometimes also joined in to facilitate the intervention. The second interventionist was largely there to support refinement of the intervention and for research purposes; the intervention could easily be delivered by one clinician. In the present study, the interventionists alternated roles to provide both with the opportunity to deliver the intervention.

The intervention was developed with guidance and support of two pediatric psychologists whose clinical work is informed by cultural humility: the behavioral health director of the HLC (at the time of study completion) with clinical and research expertise serving diverse families seeking lifestyle change including bariatric surgery in the Mid-South, and the other with extensive clinical and research expertise in pediatric populations and ACT. Both were licensed clinical psychologists in the state of Tennessee, where the intervention took place, and served as supervisors to the interventionists to ensure ethical and competent care of patients.
**How & Where?**

The intervention took place in person in the Healthy Lifestyle Clinic during the behavioral health portion of the outpatient interdisciplinary appointments. The behavioral health session typically is allotted thirty minutes. Caregivers and youth were seated in an exam room for the duration of their appointment and the providers came to the family to conduct the session. Caregivers and youth both remained in the room together during Session A and B. Though Session A was focused on the adolescent and Session B on caregivers, the intervention was designed as family-based and both members of the adolescent-caregiver dyad were encouraged to participate in both sessions.

**When and How Much?**

It was designed to include two intervention sessions (A and B), with each planned to take approximately 30 minutes. However, depending on the presenting concerns and/or needs of the family, some sessions extended over that time (sometimes by fifteen or twenty minutes). Similarly, some sessions were briefer than 30 minutes. Follow-up sessions were beyond the scope of the present study but could easily fit into the HLC appointment structure.

**Tailoring**

By design and consistent with FACT and multicultural orientation principles, BRAVO intervention sessions were tailored to each individual’s presenting concerns, expressed needs, in addition to adolescent and family’s developmental and sociocultural contexts.

**Modifications**

The BRAVO intervention was iteratively improved. Revisions were based on feedback from participants in addition to clinician and supervisor perceptions of acceptability. Further, the session guide was modified to include example questions and vignettes, to make the intervention
more easily reproduced by independent clinicians, to support future research. Modifications to the original session guide were 1) to highlight multicultural orientation-relevant topics that are consistent with FACT but not necessarily highlighted in the original materials and 2) revisions due to the differing context of FACT as it was originally implemented and how it took place in the HLC clinic structure. FACT as detailed by Strosahl and Robinson in their training materials (Robinson & Strosahl, 2020) usually was framed in a primary care context including a warm handoff from a medical provider to a therapist. Services were initiated because of the client’s need/desire for mental health services. However, in the HLC, all patients regardless of “need” assessed by other providers have a behavioral health session to discuss their current functioning and movement towards values-consistent living (typically with a health focus). Further, instead of meeting the families for the first time, since families come to at least six-monthly visits before deciding if bariatric surgery seems fitting with their goals, clinicians are usually more familiar with families. Therefore, there was an intentional shortening/refining of the assessment phase of the session. Additionally, given the HLC context, some families did not identify a problem or barrier necessarily, and instead discussed their accomplishments since last session and expressed a desire to remain consistent with committed action. In this case, the intervention focused on more on clarifying what was going well in terms of values-consistent actions and highlighting openness to internal experiences and/or present moment focus strategies that supported the committed action. This was added in the revised session guide.

*How Well? (Fidelity)*

After each session, interventionists had an audio-recorded discussion with each other about culturally relevant content that arose during session and clinician-perceived acceptability. Audio recordings and fidelity ratings were used to identify possible intervention
modifications/improvements and areas for interventionist growth (in terms of consistency with multicultural orientation and FACT principles). This was discussed with the treatment development team at regular supervision meetings. Consistent with multicultural orientation, interventionists discussed relevant cultural information from the visit, such as cultural opportunities, cultural (dis)comfort, and cultural identities. Clinicians also completed the ACT Fidelity Measure (O’Neill et al., 2019) to assess consistency with FACT principles. Since FACT sessions are abbreviated and might not contain all relevant aspects of the psychological flexibility model, the inconsistency scales were used to identify any interventionist behaviors that were inconsistent with F/ACT principles, with the goal of having these scores as low as possible. Specifically, the interventionist was rated on their inconsistency with ACT’s Open Response Style, Aware Response Style, and Engaged Response Style, and Therapist Stance).

The intervention session guide was edited based on feedback from participants and the development team. Three sessions’ fidelity was rated as 2, one as 1, and the remaining eight as 0, with zero being least inconsistent (i.e., most consistent) with ACT principles. Fidelity ranged from 0-2, with a mean of .64, mode of 0, and median of 0, out of a possible 36 with 36 being most inconsistent with a F/ACT approach, 0 being least inconsistent/most consistent.

Measures

Feasibility and Acceptability

Feasibility was defined as the percentage of participants consented who completed the intervention sessions (with a cutoff of ≥ 80% considered feasible). Additional data on recruitment and eligibility was collected to complete a flowchart for feasibility trials (see Figure 5), adapted from the CONSORT diagram for feasibility and pilot trials for the present nonrandomized study (Eldridge et al., 2016). Sekhon et al. (2017)’s Treatment Acceptability
Framework was used to develop a self-report measure that was completed by adolescents and their caregiver at T1-T3 (see Appendix B). Consistent with the framework provided by Sekhon et al. (2017), acceptability was assessed prospectively (at T1), concurrently (in session), and retrospectively (at T2 and T3). T1, T2, and T3 measures of acceptability included questions on affective attitude, burden, ethicality, intervention coherence, opportunity costs, perceived effectiveness, and self-efficacy. Consistent with the acceptability framework and FACT approach, concurrent acceptability was also evaluated by asking participants to rate the helpfulness of the session at its conclusion from 1 (not helpful) to 10 (very helpful) A cutoff of 7 and above was considered to support acceptability of the intervention (Strosahl et al., 2012).

**BMIz & Demographics**

BMIz (body mass index standardized based on adolescents’ sex assigned at birth and age) was extracted from adolescents’ medical record. Adolescents self-reported their race, ethnicity, sex assigned at birth, gender, age, and grade level. Their caregiver reported annual household income.

**Acceptance and Action Questionnaire-2**

The Acceptance and Action Questionnaire-2 is a 7-item measure of general psychological (in)flexibility (Bond et al., 2011). It asks individuals to rate how much they agree with statements about their inability to pursue valued living while experiencing psychological barriers from 1 (never true) to 7 (always true). It has demonstrated high internal consistency ($\alpha = .84$) and test-retest reliability, in addition to good convergent, discriminant, concurrent, incremental, and predictive validities. To score, item responses were summed. Higher scores indicate greater psychological inflexibility, lower scores indicate higher psychological flexibility. Past research
developed and explored the use of this instrument in undergraduate students (mean age 19 years old), which supports its use in an adolescent/young adult sample (Bond et al., 2011).

**Health-Related Acceptance and Action Scale for Use in Time Limited Occasions (HAASito)**

The 9-item Health-Related Acceptance and Action Scale for Use in Time Limited Occasions (see Appendix B) used in the present study is adapted from the Diabetes Acceptance and Action Scale for Use in Time Limited Occasions (DAASito-9), a short form of the Diabetes Acceptance and Action Scale validated to measure values impairment, fusion, and avoidance in youth with type 1 diabetes (Berlin et al., 2020; Keenan et al., 2021). The DAASito-9 was found to have good internal consistency ($\omega_{\text{Values}} = .90$, $\omega_{\text{Avoidance}} = .86$, $\omega_{\text{Fusion}} = .79$, $\omega_{\text{Total}} = .93$) in addition to measurement invariance and structural and convergent validity evidence (Keenan et al., 2022). It was adapted for use in the present study by changing the diabetes-specific language to “health concerns.” Items were reverse scored and averaged to create subscales (reflecting the constructs of values engagement, defusion, and acceptance) with high scores reflecting greater health-related psychological flexibility.

**Pediatric Quality of Life Inventory™ General Wellbeing Scale**

The Pediatric Quality of Life Inventory (PedsQL) contains modules assessing aspects of health-related quality of life in youth ranging in age from childhood to young adulthood (Varni et al., 2001). The PedsQL generic core scales were found to be valid, reliable ($\alpha = .88$ for the total score), and practical to use (Seid et al., 2000; Varni et al., 2001). The General Wellbeing Scale contains six items that ask youth to indicate how much wellbeing items sound like them from 0 (never) to 4 (almost always) and one general health question (“In general, how is your health?”), which respondents rate from 0 (Bad) to 4 (Excellent). Scores are linearly transformed to a 0-100 scale with higher scores indicating greater wellbeing and health related quality of life.
The general health question is used on its own and the other six items are averaged to form a general wellbeing scale.

**Valuing Questionnaire**

The Valuing Questionnaire is a measure of values impairment and engagement (Smout et al., 2014). Respondents are asked to rate ten items from 0 (not at all true) to 6 (completely agree) over the past week. Five items are focused on living consistent with one’s values and are summed to create a Progress subscale (higher scores indicate greater values engagement), with the other five focused on barriers to valued living which are summed to create an Obstruction subscale (with higher scores indicating greater values impairment). The measure was found to have good internal consistency ($\alpha = .87$ for both subscales) and evidence of convergent validity in past research in a sample of undergraduate college students (Smout et al., 2014). It has been used in youth with a variety of presenting concerns, see for example (Petersen et al., 2022).

**Analyses**

Study aims were investigated using descriptive statistics (e.g., frequencies, means, standard deviations). As stated previously, feasibility was calculated as the percentage of individuals consented who completed the intervention (with 80% or greater indicating a feasible intervention). Total prospective acceptability from self-report of adolescents and their caregiver was calculated within-person as the average across all acceptability self-report items from T1 (with negative items first reverse coded, see Appendix B). The group mean of prospective acceptability for all adolescents evaluated by averaging all participants’ total score, and the group means were also evaluated for each subconstruct (affective attitude, burden, ethicality, intervention coherence, opportunity costs, perceived effectiveness, and self-efficacy). The same was repeated for retrospective acceptability with the T2 and T3 self-report items. Concurrent
acceptability was measured by computing the average helpfulness rating across adolescent participants from their intervention session. Following recommendations for improving pilot/feasibility studies (Hilliard et al., 2021), formal hypothesis testing of treatment efficacy was not conducted, given the small sample size, and outcome data were presented solely descriptively. For each outcome measure, the minimal clinically important difference (MCID; Wright et al., 2012) was calculated using reliability estimates (McDonald’s ω or Cronbach’s α) and SD from published validation studies of each measure (Cronbach, 1951; Hayes & Coutts, 2020). McDonald’s ω was preferred since it does not assume tau equivalence, or equal factor loadings of items onto scales, but was only available for the DAASito-9. Modified Brinley plots (Black et al., 2019) were generated to visualize meaningful changes from T1-T2 and T2-T3 (see Figures 6 and 7 along with figure notes to interpret the plots).

Results

Regarding feasibility, one adolescent declined to complete research measures but did consent to the clinical intervention. See Table 2 for demographic and health-related information on study participants who provided informed consent for research measures (10 out of the 11 who completed Session A). Out of the 12 adolescents who consented and assented to participate in BRAVO, 11, or 93%, participated in Session A, supporting its feasibility. See Figure 5 for an adapted CONSORT diagram indicating completion of clinical intervention sessions and research measures at each timepoint. Of 13 adolescent-caregiver dyads assessed for eligibility and contacted (in person or in clinic) to participate in BRAVO, one declined to participate and 12 provided informed consent and assent to participate. One adolescent did return to clinic during the study period for unknown reasons and thus did not receive the clinical intervention. Of those 11 who participated in Session A, 10 completed research surveys at T1, one declined to do
survey measures. After Session A, seven adolescents completed T2 measures, one declined to complete surveys, and three did not complete surveys or return to clinic during the study period for unknown reasons. Of the 11 who completed Session A, 8 completed Session B. Of the 8 adolescents who were present during Session B (the caregiver focused session), 5 completed T3 measures, 1 declined to complete surveys, and 2 did not complete the surveys for unknown reasons. See Table 3 for descriptive statistics for acceptability measures at each time point (T1, during Session A, T2, and T3). All acceptability measures indicated intervention acceptability. Acceptability averages across participants ranged from 79/100 for the T2 (post-session A) self-report measure total score to a 9/10 on the in-session ratings, with all being above the pre-determined cutoff of 70%.

See Table 4 for group means of psychosocial measures by timepoint. Refer to Figure 6 for modified Brinley plots of outcome data showing changes from T1 to T2 and Figure 7 for changes from T2 to T3. Outcomes on self-report measures of psychological flexibility (general and health-focused) and health-related quality of life were not examined for significance consistent with pilot study recommendations and given inadequate power. Plots descriptively do allow for visual inspection of changes on these variables after each intervention session. On the adapted measure of health-related psychological flexibility, 4/6 participants with data at T1 and T2 experienced clinically significant improvement (looking at the total score), and 2 did not experience clinically meaningful change. From T2 to T3, 1/4 participants with T2 and T3 data experienced clinically significant improvement, 1 experienced clinically significant decline, and 2 did not experience clinically meaningful change. Examination of subscale changes shows that clinically significant improvements in acceptance, defusion, and values engagement occurred in 3, 2, and 4 people (respectively). Regarding general psychology flexibility measures from T1-T2,
1/6 participants reported clinically significant improvement in values progress, 3/6 reported clinically significant improvement in values obstruction, and 2/6 reported clinically significant improvement in total general psychological (in)flexibility. From T2-T3, no participants reported clinically significant improvement in values progress, 2/4 reported clinically significant improvement in values obstruction, and 2/4 reported clinically significant improvement in total general psychological (in)flexibility. Health related quality of life from T1-T2 did not change for 3/6 participants and declined clinically significantly for 3/6. From T2-T3, health-related quality of life did not change meaningfully for 3/4 participants, and clinically significantly increased for 1/4 participants. See Table 5 for themes that arose regarding clinical intervention implementation during post-session interventionist discussions. These themes are expanded upon in the next section, along with discussion of feasibility of the research study procedures.

Discussion

This pilot pragmatic trial focused on evaluating the feasibility and acceptability of a multicultural orientation-informed FACT intervention developed for adolescents seeking bariatric surgery and their family. The present paper focused on youth’s perspective of the intervention, see Cook et al. (2023) for caregiver perspectives. As is the goal in a pragmatic trial, the purpose of this study was to evaluate the intervention in a real-world setting, not tightly controlled experimental conditions. Therefore, during the recruitment period, each individual interested in bariatric surgery was assessed for eligibility to receive the intervention as part of the BRAVO study. Further, the intervention took place at typically conducted HLC clinic visits. Adolescents reported that the intervention was acceptable across multiple measures of acceptability. The novelty of this study lays in its pragmatic approach, racially diverse sample in an underserved area of the country, in addition to its use and adaptation of FACT to meet the
needs of families from diverse life contexts in a pre-bariatric surgery context. During post-session discussions between clinicians, multiple themes arose regarding implementing and refining the intervention, research study aims, and fidelity to the guiding principles of multicultural orientation and FACT. Discussion of outcomes along with post-session discussion themes, relevant conclusions, and limitations of the present study along with suggestions for future research are detailed below.

**Acceptability and Outcomes**

Youth rated the intervention as acceptable on average, both in anticipation of receiving it (pre-session), during the session, and after the session. Given lack of power, testing to determine if differences across time are statistically significant is not possible in the present study. Measurement-focused research should explore the self-report measure’s psychometric properties (e.g., internal consistency, measurement invariance, validity evidence with focus groups or individual interviews assessing acceptability qualitatively), given that it was developed for use in the current study. It would also be interesting in further research to explore if/how perceived pre-intervention acceptability might impact treatment outcomes, both the overall score/construct and subconstructs (e.g., if someone thinks an intervention will be burdensome but also effective).

Following guidelines for pilot/feasibility trials in the *Journal of Pediatric Psychology*, psychosocial outcomes are presented descriptively, without a focus on preliminary efficacy (Hilliard et al., 2021). Examination of plots showed that response to the intervention varied across individuals as measured pre-post session (T1-T2). The construct that was most anticipated to, and did, evidence clinically meaningful improvement was total health-related psychological flexibility, which makes sense given that this was the focus of the intervention. This was driven by clinically meaningful improvement on values engagement for the majority of individuals,
followed by fewer participants with improvements on acceptance, and defusion. Less clinically meaningful change was observed on general (non-health-specific) psychological flexibility measures. Further, about half of participants (from T1-T2) experienced clinically meaningful health-related quality of life decline over the study. This could be due to a multitude of factors that impact health and the lived experiences of adolescents in large bodies across distal and proximal sociocultural contexts. It could also be that our intervention increased awareness of aspects of their health that they avoided thinking about/did not intently think about before the intervention. A general health-related wellbeing measure was used in the present study. It would be interesting to see if a similar trend would be evident on a weight-specific measure of health-related quality of life, or if a different pattern would emerge. Measures such as the Impact of Weight on Quality of Life (Kolotkin et al., 2006) could be helpful to assess how weight might impact adolescents’ lived experiences, including the impact of weight/body size-based stigma and discrimination. Given the small sample size, plots were examined visually to determine if patterns of missingness were present (e.g., if all individuals with high or low values on a measure were more/less likely to be missing at follow-up). No meaningful patterns were observed.

It is important to note that given the uncontrolled nature of the study, it is unclear if these changes would have occurred in a control group, or if they are primarily due to participation in the intervention. Alternative explanations to the improvement include the possibility that goal-based discussions with other disciplines at HLC visits were associated with increased psychological flexibility, or that external factors supported increased psychological flexibility. Future research would benefit not only from exploring treatment outcomes in a larger sample but would also benefit from use of a control group. Additionally, given the diversity of change observed on measures (improvement, no improvement, and decline), future trials should include
person-centered analytic approaches, such as mixture modeling. This would allow for exploration to identify and characterize potential subgroups obscured by mean-level data, such as responders vs. non-responders, and evaluation of person-specific characteristics that could predict change over time.

Feasibility Including Themes from Post-Session Discussions

Implementing the Intervention

The intervention was designed to fit within the approximately 30-minute-long block allotted for the behavioral health/psychology portion of their appointment in clinic. Thus, it was designed to not lead to additional burden to families or clinic staff (e.g., surgeons, dieticians, nurse practitioners). No special adaptations to clinic flow were required for the intervention itself; it mirrored the services and flow families would have experienced outside the context of a research study, consistent with its development as a pragmatic trial. Most sessions were completed within the ~30-minute time block, however some sessions ran over (specific numbers are not available, but several post-session discussions mentioned if a session took longer than intended). Session length appeared to depend on several family-specific factors such as need to refer to more intensive psychology services (if elevated risk for suicide was present), family discord that added complexity to the visit, and/or the amount of elaborating that the family did when asked introductory questions. The clinicians also noted that some youth more readily defined health and what it meant to them, while other youth required more support/prompting to clarify this and other values.

Regarding alignment with multicultural orientation and FACT principles, several salient themes arose in post-session discussions. Families varied in their life contexts including but not limited to, family structure, race, access to financial resources, and living situation. Clinicians
were honored by the willingness of adolescents and their parents to bring up culturally relevant material. The clinicians wanted to make space in the room for how adolescents and their family defined important aspects of their identity and lived experience that they felt comfortable discussing. Instead of assuming that one particular identity aspect (e.g., race, gender) would be salient for the adolescent to discuss, clinicians developed a humble prompt of “Is there anything else about you or your life that would be important for me to know?” which provided families with the autonomy to describe what they deemed relevant and felt comfortable discussing in session. Though content is not available for each participant and more culturally opportunities arose then were discussed in audio recordings, several salient and impactful instances of cultural opportunities that were expanded upon during sessions are described below.

During one session, a mother described that her daughter experienced significant weight/body-size based stigma and discrimination in medical settings in the past. She spoke about how her daughter’s blood test results were in the normal range for measures such as blood glucose, but how a medical provider at a previous institution wanted to prescribe a blood glucose-lowering medication that has been associated with weight loss and did not appear to even have looked at her daughter’s lab results (i.e., he walked into the room assuming that her blood glucose was high). They had to ask the doctor repeatedly to justify/explain why this medicine was being considered and they walked away from the visit without a thorough explanation. The mother and daughter’s experience was that the provider made assumptions about health based on weight before even speaking to the family, and assumed that they were interested in medication to lose weight. The family felt strong emotions (frustration, hurt, resentment) from this and spoke about how health cannot be defined by weight. This discussion came up when asked about health and how the family defined it, underscoring the importance of
allowing adolescents and families to describe this for themselves, and not allowing biases to result in a narrow focus and/or mismatch of defining health between providers and families. Regardless of a provider’s intent when describing medication information, and while acknowledging that some medications are used for off-label purposes, it is important to consider the impact, and be willing to engage in potentially uncomfortable discussions to repair any breaks in working alliance.

Similar to this experience, the clinicians reflected on working with other families who experienced weight/body stigma and how the clinicians’ own identities and lived experiences became salient in the room during these sessions. Of note, one clinician identifies as living in a large body, and the other does not. During post-session discussions it was important to have space for both clinicians to discuss how their own histories and experiences influenced the session and to notice any areas of cultural comfort and discomfort that arose. The clinicians reflected on what health means to them throughout intervention development and refinement, hoping to be as flexible and broad as needed with families and not bias the intervention based on their own definitions. The clinicians also recognized that health might itself be a value of an adolescent and/or family, or it might be better understood as a construct that supports/impairs engagement in other values. Thus, in the session guide, the prompt was kept broad “Ask how the client defines health. Clarify how health relates to personal values.”

Another session provided opportunities to be present and listen as a family described culturally salient information. A mother spoke about how her son, because of his body size, was treated as an adult by law enforcement and placed in the back of a cop car when he was only 12 years old. The family identifies as Black and described how they moved out of an urban environment for a long period and were dealing with difficulties moving back into the Memphis
area at the time of the session. The clinicians discussed after the session how they struggled with how to balance both engaging with the mother in this cultural opportunity and respecting the time allotted for the session. In the FACT trainings that both clinicians attended, a key aspect of the essential portion of FACT sessions is understanding what information to continue and expand on, and what information could be deemed more of “a rabbit hole” that might steer the session away from its goal of culminating in a practice to increase psychological flexibility. The clinicians, who both identify as White, noticed discomfort in having to decide how much to go into detail with the mother when she brought this content up, and how they felt pressured by the clock. In retrospect, taking a FACT and multicultural orientation approach, it could have been helpful for the clinicians to ask the family themselves how they were feeling about discussing it and how it connects to their values and their goals in the HLC. The clinicians noticed similar themes across several sessions regarding balancing time, wanting to be culturally humble and take advantage of cultural opportunities, in addition to a desire to practice FACT principles and meet the goal of the intervention.

Relatedly, when delivering the intervention, clinicians noticed the impact of the context of HLC visits and working with other disciplines. Given that the intervention was delivered in a multidisciplinary specialty clinic, sometimes there was information shared from other providers (e.g., the dietician, exercise physiologist, surgeon, nurse practitioner) about a particular family before meeting with them. Sometimes, other disciplines discussed factors that led to struggle in their own appointments with the family to give the behavioral health team a “heads up.” The BRAVO clinicians discussed how they tried to hold that information lightly, in a workable manner, balancing a desire to minimize bias that could negatively impact the session, and also being responsive to the needs of a family. For example, if an adolescent had a difficult time
engaging with the clinic dietician or agreeing on a goal with them, the BRAVO clinicians still tried to engage them in the behavioral health session and not assume they would be “non-participatory.” In addition to such process-based information, sometimes information from other disciplines was focused on content, such as “[name] talked about a goal to increase exercise with [other member of the HLC team].” The clinicians also held this information lightly and tried to not let it overly narrow the scope of the session in an unworkable manner, but also recognized that synergy with other disciplines generally helped families. For instance, some families wanted to make a values engagement goal consistent with content they discussed with other disciplines, and other times the family wanted to make a unique goal with the behavioral health clinicians (which ended up usually complementing and/or supporting goals developed with other disciplines).

Further themes involved FACT principles and clinician’s own comfort/discomfort with conceptualizing and implementing FACT in fast-paced sessions. Several times, clinicians mentioned in post-session discussions about a pressure to develop a goal/exercise that was “FACT-y” enough. In retrospect, the clinicians were noticing their own growing pains and potential feelings of imposter syndrome of implementing FACT in a new context and wanting to do it “well.” For newer therapists, or even seasoned therapists new to FACT, it could be helpful to be a part of a supervision or consultation group to help notice these feelings and collaborate on more challenging case conceptualizations/treatment plans to further develop their skills.

Particular experiential exercises that were developed in each session were not recorded, but overall ranged from openness practices (e.g., increasing defusion with the phrase “my mind is telling me”), present-moment awareness practices (e.g., mindful eating, using the language “I’m noticing that…” in session), to values engagement and clarification (e.g., developing SMART
goals, clarifying past goals the youth met and how to overcome obstacles/barriers). The clinicians noticed that some tools were helpful to use with some clients (e.g., the values bullseye), but that when they became overly rigid (or enthusiastic) about using a particular tool, they fell prey to using it for the sake of using it. Sometimes it was less workable/useful with a particular client, which speaks to the benefit of having tools/exercises on-hand, but tailoring them to each family.

Discussing the fidelity measure after each session helped the clinicians not only increase their FACT skills, but also helped them notice how the FACT principles were impacting the delivery of the intervention (e.g., if clinicians noticed an urge to engage in avoidance but instead persisted in values-consistent behavior). The clinicians reflected on a particular item on the fidelity measure, “therapist does not lecture.” They noticed that in the HLC context, providing psychoeducation was sometimes beneficial and necessary to the intervention. For example, one youth initially decided on a goal to lose 40 pounds in a rapid amount of time that would physically be unsafe. The clinicians reflected on a desire to not lecture the patient, but rather provide information in an easily understood, humble manner. Interestingly, in development of the fidelity measure, the creators of the measure also noticed that in some circumstances, providing information was relevant and perhaps not always ACT-inconsistent, but they chose to retain the item (O’Neill et al., 2019). This speaks to the need to have FACT principles guide the session in a flexible manner, and that overly rigid definition of fidelity might be counterproductive. Not lecturing could be interpreted to mean never providing information or disagreeing with a client, however this might be better understood as not being pedantic, demeaning, or overly verbose when describing relevant psychoeducation and using humility when gently providing alternative perspectives to clients.
Feasibility and Limitations of the Research Study with Future Directions

In addition to grounding the intervention itself in multicultural orientation principles, the BRAVO team attempted to design the research study with respect for participants and humility. The research study was designed so the only additional burden for families was the brief informed consent process and completion of study self-report measures, since they would normally complete a behavioral health visit as part of their HLC visits even if they were not in the research study. Measures were originally designed to be completed at home by families, with researchers contacting them via email and/or phone. This was intended to reduce families’ burden in clinic, and to also reduce disruptions to clinic flow. However, when asked, most families indicated that they actually preferred to use time in clinic since they had already taken off work/school and did not have time outside of clinic. The team adjusted and changed procedures to be flexible and allow measures to be completed at home or in clinic. In this way, the BRAVO team remained open to families’ life context and adapted the study to meet their needs and balanced it with, instead of prioritized it less, than clinic flow. Most families did not complete research measures at home, and thus additional time at clinic visits (usually while families were waiting to see providers) was used for research purposes. The BRAVO team had continued check-ins with the HLC staff to ensure that completing measures did not interfere with other providers’ visits and prompted each family to engage fully (i.e., not complete study measures) when in visits with other disciplines. Overall, this went well, but a few families required reminding of this after being noted to complete measures while other providers were attempting to engage with them. This speaks to the continued need for brief assessment measures, which could potentially be addressed in the future with computerized adaptive testing. Relatedly, further data should be collected on psychological flexibility measures to ensure the
equity of their use (i.e., measurement invariance), since this was not available for many measures.

Additionally, several families were lost to follow-up (i.e., did not return to clinic at all during the study period) and/or returned to clinic but did not complete research measures after Session A and/or Session B. Since an aim of the pre-surgical visits in the HLC is to support adolescents and their families to determine if bariatric surgery is right for them, it could be that families who were lost to follow-up were no longer interested in pursuing surgery. Alternatively, families might have been interested in surgery, but determined that it was not the right time for surgery. It could also have been that families faced barriers to attending clinic or prioritized other needs which prevented attendance. Past research on adolescent and young adult attrition from weight management programs has found mixed predictors of attrition including sociocultural context (African American race, use of Medicaid, single-parent household), health factors (higher BMI, lower triglycerides and cholesterol), and psychological concerns (depressive symptoms, lower self-concept, externalizing and disruptive behavioral symptoms; (Skelton & Beech, 2011; Zeller et al., 2004). Additional research has identified physical/logistical barriers, lower satisfaction and perceived quality of care as predictors, among other variables (Cote et al., 2004; Skelton & Beech, 2011). Though we will not know the reasons families in our study did not return to clinic, future studies could include a longer follow-up period and/or try to contact families who do not return to clinic to understand reasons why. Future research of clinical interventions in bariatric populations should factor in attrition due to individuals choosing to discontinue pursuit of surgery and factor this into recruitment and analytic plans.

Limitations of the present research study underscore the need for continued research on FACT interventions grounded in multicultural orientation framework across diverse pediatric
populations (i.e., individuals of differing identities and sociocultural contexts, with particular attention to those that are historically underrepresented in research). Firstly, fidelity was assessed by the interventionists instead of external raters. Though this is a limitation due to the inherent bias in self-rating, the interventionists tried to have a critical discussion and rate each other and themselves fairly in service of improving the intervention and themselves. Future research could employ both FACT fidelity assessed by external raters and client rating of therapists’ multicultural orientation. Of note, though there was a formal measure of ACT fidelity used in the current study, alignment with multicultural orientation, was assessed/discussed in a flexible manner by clinicians in the post-session discussion as it related to improving the intervention. This was done in service of minimizing burden for families (keeping the self-report battery as short as possible). However, research shows clients’ ratings of their clinicians’ multicultural orientation (rather than therapist self-assessment) is better predictive of therapy outcomes and working alliance (Owen et al., 2016). Future research should thus consider using a brief measure of clients’ perception of therapists’ multicultural orientation and explore if/how it relates to treatment outcomes. Also of note regarding the ACT fidelity measure, clinicians noted that it was useful to rate ACT fidelity after each session because they perceived that it helped improve their delivery of the intervention in future sessions (though this is subjective). Clinicians new to FACT and/or those implementing it in new settings might benefit from reviewing the guiding principles of F/ACT to maintain fidelity. There might also be therapist-specific effects (in addition to FACT experience and multicultural orientation) that could lead to differing therapeutic outcomes depending on who delivers the intervention, which could be explored/minimized in larger-scale trials. Additionally, sessions were not recorded in the present study, which limits the ability to report on/qualitatively analyze content and process-related
themes from sessions. Sessions were intentionally not recorded for the present study after consultation with the director of the HLC behavioral health team to minimize burden on families and decrease potential or perceived loss of confidentiality. In future research, it will be important to consider if the benefits of recording sessions (e.g., having the ability to do more formal qualitative analyses) would outweigh potential risks. A potential way to address this is to ask participants to opt-in to recording and have an option of study participation without recording. Future research could also explore the willingness of families to complete exit interviews. Though beyond the scope and resources of the present study, this qualitative feedback could be useful in further refining the intervention to maximize perceived effectiveness and overall acceptability. Overall, it is important to not only approach the clinical intervention itself, but also future research from a place of cultural humility and include the voices of those in the populations we seek to help as much as possible throughout the research process.

**Conclusion**

Through brief yet powerful sessions, FACT aims to support rapid and meaningful behavioral changes that can lead to a diverse repertoire of values-consistent behaviors. Multicultural orientation principles are a guide for engaging with all patients with cultural humility in addition to openness to and engagement with culturally focused content. The present study’s multicultural orientation-informed FACT intervention was designed with the intention of improving health-related psychological flexibility in youth and their families. It was designed with intentionality to maximize not only flexibility to be culturally responsive in service of patient care, but also to make it easily implemented in fast-paced multidisciplinary settings. It was developed to be readily delivered by clinicians with training and practice with multicultural orientation constructs including cultural humility, and basic ACT and/or FACT experience. ACT
shows promise in various pediatric populations, and the brevity of FACT makes its focused approach likely feasible to implement in varied settings by pediatric psychologists/trainees (e.g., in outpatient medical specialty clinics, inpatient consultation-liaison work), but more research is needed. This pragmatic trial provided support that a FACT intervention grounded in multicultural orientation can be both feasible to implement and acceptable to diverse adolescents in a bariatric surgery context. The authors look forward to continued opportunities to collaborate and further research multicultural orientation-grounded FACT in service of providing flexible, culturally responsive, care to all.
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https://doi.org/10.1023/A:1009541218764


https://doi.org/https://doi.org/10.1111/j.1467-789X.2010.00803.x


### Table 1
BRAVO Study Design

<table>
<thead>
<tr>
<th>Timepoint</th>
<th>Description</th>
<th>Measures*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Recruitment</td>
<td>Adolescents were recruited from scheduled HLC bariatric visits; caregiver was contacted to confirm eligibility &amp; interest in participating</td>
<td>N/A</td>
</tr>
<tr>
<td>T1 Pre-Session Assessment</td>
<td>Caregivers &amp; adolescents provided consent/assent and completed measures within 2 weeks before Session A; gift cards provided</td>
<td>• Adolescent &amp; Caregiver demographics, adolescent BMIz</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Adolescent &amp; Caregiver Prospective acceptability</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Adolescent &amp; Caregiver Psychological flexibility</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Adolescent &amp; Caregiver Health-related quality of life</td>
</tr>
<tr>
<td>Session A</td>
<td>Goal: increase adolescent psychological flexibility through a collaboratively designed behavior experiment; in-session measures collected, and post-session interventionist discussion conducted</td>
<td>• Adolescent rating 1-10 problem/barrier to living valued life</td>
</tr>
<tr>
<td>Adolescent-Focused Session</td>
<td></td>
<td>• Adolescent rating 1-10 confidence in enacting behavioral experiment/feasibility</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Adolescent rating 1-10 helpfulness of session/concurrent acceptability</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Interventionists met post-session to discuss treatment fidelity &amp; acceptability</td>
</tr>
<tr>
<td>T2 Post-Session A Assessment</td>
<td>Adolescents &amp; caregivers completed post-session A measures within 2 weeks after session A; gift cards provided</td>
<td>• Adolescent &amp; Caregiver Retrospective acceptability</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Adolescent &amp; Caregiver Psychological flexibility</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Adolescent &amp; Caregiver Health-related quality of life</td>
</tr>
<tr>
<td>Session B</td>
<td>Goal: increase caregiver psychological flexibility through a collaboratively designed behavior experiment; in-session measures collected, and post-session interventionist discussion conducted</td>
<td>• Caregiver rating 1-10 problem/barrier to living valued life</td>
</tr>
<tr>
<td>Caregiver-Focused Session</td>
<td></td>
<td>• Caregiver rating 1-10 confidence in enacting behavioral experiment/feasibility</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Caregiver rating 1-10 helpfulness of session/concurrent acceptability</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Interventionists met post-session to discuss treatment fidelity &amp; acceptability</td>
</tr>
<tr>
<td>T3 Post-Session B Assessment</td>
<td>Adolescents &amp; caregivers completed post-session A measures within 2 weeks after session A; gift cards provided</td>
<td>• Adolescent &amp; Caregiver Retrospective acceptability</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Adolescent &amp; Caregiver Psychological flexibility</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Adolescent &amp; Caregiver Health-related quality of life</td>
</tr>
</tbody>
</table>

*Caregiver-completed measures are discussed and reported in Cook et al. (2023).
Table 2

Sample Descriptive Statistics

<table>
<thead>
<tr>
<th>Variable</th>
<th>Statistic</th>
<th>n</th>
</tr>
</thead>
<tbody>
<tr>
<td>Race</td>
<td></td>
<td>10</td>
</tr>
<tr>
<td>Black/African American</td>
<td>90%</td>
<td>9</td>
</tr>
<tr>
<td>White</td>
<td>10%</td>
<td>1</td>
</tr>
<tr>
<td>Ethnicity</td>
<td></td>
<td>10</td>
</tr>
<tr>
<td>Non-Hispanic/Latino</td>
<td>100%</td>
<td>10</td>
</tr>
<tr>
<td>Age (years), <em>M</em> (<em>SD</em>), Range</td>
<td>15.5 (.85), 14-17</td>
<td>10</td>
</tr>
<tr>
<td>Gender</td>
<td></td>
<td>10</td>
</tr>
<tr>
<td>Female</td>
<td>90%</td>
<td>9</td>
</tr>
<tr>
<td>Male</td>
<td>10%</td>
<td>1</td>
</tr>
<tr>
<td>Grade</td>
<td></td>
<td>10</td>
</tr>
<tr>
<td>9th</td>
<td>10%</td>
<td>1</td>
</tr>
<tr>
<td>10th</td>
<td>30%</td>
<td>3</td>
</tr>
<tr>
<td>11th</td>
<td>40%</td>
<td>4</td>
</tr>
<tr>
<td>12th</td>
<td>20%</td>
<td>2</td>
</tr>
<tr>
<td>BMI z, <em>M</em> (<em>SD</em>), range</td>
<td>2.68 (.17), 2.68-2.65</td>
<td>10</td>
</tr>
<tr>
<td>Household Income Range, <em>Mdn</em></td>
<td>$20,000-$24,999</td>
<td>9</td>
</tr>
</tbody>
</table>

Note. One participant opted out of research measures. Percentages are calculated out of the total number of participants with data for each variable (n = 10).
Table 3

**BRAVO Intervention Acceptability**

<table>
<thead>
<tr>
<th>Measurement Period</th>
<th>Variable</th>
<th>M</th>
<th>SD</th>
<th>Min</th>
<th>Max</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Prospective</strong></td>
<td>T1 Acceptability Total Score</td>
<td>80.74</td>
<td>13.69</td>
<td>58.33</td>
<td>97.78</td>
</tr>
<tr>
<td></td>
<td>Affective Attitude</td>
<td>86.55</td>
<td>12.23</td>
<td>70.50</td>
<td>100</td>
</tr>
<tr>
<td></td>
<td>Burden I</td>
<td>81.25</td>
<td>20.66</td>
<td>47.00</td>
<td>100</td>
</tr>
<tr>
<td></td>
<td>Intervention Coherence</td>
<td>92.20</td>
<td>11.76</td>
<td>70.00</td>
<td>100</td>
</tr>
<tr>
<td></td>
<td>Perceived Effectiveness</td>
<td>88.20</td>
<td>16.83</td>
<td>55.00</td>
<td>100</td>
</tr>
<tr>
<td></td>
<td>Ethicality</td>
<td>76.60</td>
<td>24.44</td>
<td>32.00</td>
<td>100</td>
</tr>
<tr>
<td></td>
<td>Opportunity Cost (R)</td>
<td>57.40</td>
<td>38.10</td>
<td>0.00</td>
<td>100</td>
</tr>
<tr>
<td></td>
<td>Self-Efficacy</td>
<td>76.70</td>
<td>29.27</td>
<td>20.00</td>
<td>100</td>
</tr>
<tr>
<td><strong>Concurrent</strong></td>
<td>Session A In-Session Rating</td>
<td>9.13</td>
<td>.99</td>
<td>8</td>
<td>10</td>
</tr>
<tr>
<td>(n = 10)</td>
<td>T2 Acceptability Total Score</td>
<td>79.1852</td>
<td>18.15</td>
<td>51.67</td>
<td>99.67</td>
</tr>
<tr>
<td></td>
<td>Affective Attitude</td>
<td>83.9167</td>
<td>17.19</td>
<td>60.50</td>
<td>100</td>
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<tr>
<td></td>
<td>Blen (R)</td>
<td>83.6667</td>
<td>24.75</td>
<td>39.50</td>
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<td>Intervention Coherence</td>
<td>85.6667</td>
<td>20.36</td>
<td>59.00</td>
<td>100</td>
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<tr>
<td></td>
<td>Perceived Effectiveness</td>
<td>73.0000</td>
<td>29.92</td>
<td>21.00</td>
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<tr>
<td></td>
<td>Ethicality</td>
<td>69.5000</td>
<td>26.44</td>
<td>40.00</td>
<td>100</td>
</tr>
<tr>
<td></td>
<td>Opportunity Cost (R)</td>
<td>79.3333</td>
<td>25.23</td>
<td>39.00</td>
<td>100</td>
</tr>
<tr>
<td></td>
<td>Self-Efficacy</td>
<td>70.0000</td>
<td>22.52</td>
<td>42.00</td>
<td>100</td>
</tr>
<tr>
<td><strong>Session B</strong></td>
<td>T3 Acceptability Total Score</td>
<td>85.76</td>
<td>9.52</td>
<td>76.78</td>
<td>100</td>
</tr>
<tr>
<td>(n = 5)</td>
<td>Affective Attitude</td>
<td>95.50</td>
<td>8.49</td>
<td>80.50</td>
<td>100</td>
</tr>
<tr>
<td></td>
<td>Burden (R)</td>
<td>88.20</td>
<td>16.91</td>
<td>59.50</td>
<td>100</td>
</tr>
<tr>
<td></td>
<td>Intervention Coherence</td>
<td>97.40</td>
<td>5.81</td>
<td>87.00</td>
<td>100</td>
</tr>
<tr>
<td></td>
<td>Perceived Effectiveness</td>
<td>67.00</td>
<td>22.20</td>
<td>50.00</td>
<td>100</td>
</tr>
<tr>
<td></td>
<td>Ethicality</td>
<td>63.20</td>
<td>20.80</td>
<td>51.00</td>
<td>100</td>
</tr>
<tr>
<td></td>
<td>Opportunity Cost (R)</td>
<td>91.20</td>
<td>14.74</td>
<td>66.00</td>
<td>100</td>
</tr>
<tr>
<td></td>
<td>Self-Efficacy</td>
<td>85.60</td>
<td>19.72</td>
<td>64.00</td>
<td>100</td>
</tr>
</tbody>
</table>

*Note.* R = reverse coded score presented. Higher scores indicate higher acceptability. In-session rating was out 10, all others were out of 100.
Table 4
Psychosocial Self-Report Measures (Averages by Timepoint)

<table>
<thead>
<tr>
<th>Construct</th>
<th>T1</th>
<th>T2</th>
<th>T3</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M(SD)</td>
<td>M(SD)</td>
<td>M(SD)</td>
</tr>
<tr>
<td>Total Health-Related</td>
<td>n = 10</td>
<td>n = 6</td>
<td>n = 5</td>
</tr>
<tr>
<td>Psychological Flexibility</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Acceptance</td>
<td>2.24 (0.60)</td>
<td>2.85 (0.64)</td>
<td>2.78 (0.71)</td>
</tr>
<tr>
<td>Defusion</td>
<td>2.30 (0.85)</td>
<td>2.67 (0.94)</td>
<td>2.60 (0.72)</td>
</tr>
<tr>
<td>Values Engagement</td>
<td>2.37 (0.58)</td>
<td>3.00 (0.70)</td>
<td>3.13 (0.61)</td>
</tr>
<tr>
<td>General Values Progress</td>
<td>19.6 (5.25)</td>
<td>16.5 (2.74)</td>
<td>16.60 (3.58)</td>
</tr>
<tr>
<td>General Values Obstruction</td>
<td>15.6 (4.12)</td>
<td>13.17 (5.19)</td>
<td>11.40 (6.66)</td>
</tr>
<tr>
<td>General Psychological Inflexibility</td>
<td>4.01 (1.28)</td>
<td>3.02 (1.20)</td>
<td>3.03 (1.18)</td>
</tr>
<tr>
<td>Health-Related Quality of Life</td>
<td>67.08 (13.67)</td>
<td>58.33 (13.17)</td>
<td>71.67 (13.94)</td>
</tr>
<tr>
<td>Health Rating</td>
<td>45.00 (30.73)</td>
<td>30.00 (11.18)</td>
<td>25 (20.412)</td>
</tr>
<tr>
<td>Session Length Constraints</td>
<td>Session length depended on youth/family factors such as elevated risk for suicide, family discord, response style (more elaborating = longer session); some youth took longer to define health and what it meant to them/required more prompting</td>
<td></td>
<td></td>
</tr>
<tr>
<td>---------------------------</td>
<td>--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Youth and Family’s Life Context</td>
<td>Youth and their families were from diverse backgrounds in terms of family structure, race, access to financial resources, and living arrangements.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cultural Comfort</td>
<td>Interventionists discussed balancing engagement with cultural opportunities vs. defining a tangent/&quot;rabbit hole&quot; that would be less productive to follow in session given time limitations (as FACT training discusses). They reflected after session that it would be helpful to ask families themselves if it seemed unclear, to embody cultural humility, instead of deciding for families (i.e., to not assume what was important to them).</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cultural Humility</td>
<td>Interventionists let cultural humility guide the assessment portion of the intervention, allowing youth/families to define relevant aspects of their identity with open ended questions. Interventionists also reflected on their own experiences with weight and how shared or different identities impacted the experience in the room. Interventionists discussed that health was a value for some youth. For others, it was better conceptualized as supporting other values.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cultural opportunities</td>
<td>Youth and families openly discussed weight/body size-based stigma in medical settings, intersection of weight/body size with other marginalized identities (e.g., race), and lack of access to financial resources among other salient aspects of their identities and life context.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Interdisciplinary Context</td>
<td>Interventionists remained open to information from other team members (e.g., the dietician or exercise physiologist) but strived to not let it overly restrict their own intervention, or negatively impact interactions with youth (e.g., if another team member mentioned having a difficult interaction with a family). Sometimes goals from other disciplines were similar to behavioral health goals, but sometimes they were different.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intervention Delivery and Fidelity</td>
<td>Interventionists discussed their own growth and comfort delivering the intervention, the ACT fidelity measure, and flexibly using tools (such as the values bullseye) as relevant in session.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Comprehensive Obesity Treatment from the Clinical Practice Guideline for the Evaluation and Treatment of Children and Adolescents with Obesity (Hampl et al., 2023)

Comprehensive treatment includes:

- Providing intensive, longitudinal treatment in the medical home
- Evaluating and monitoring child or adolescent for obesity-related medical and psychological comorbidities
- Identifying and addressing social drivers of health
- Using non-stigmatizing approaches to clinical treatment that honor unique individual qualities of each child and family
- Using motivational interviewing that addresses nutrition, physical activity, and health behavior change using evidence-based targets for weight reduction and health promotion
- Setting collaborative treatment goals not limited to BMI stabilization or reduction, including goals that reflect improvement or resolution of comorbidities, quality of life, self-image, and other goals related to holistic care
- Integrating weight management components and strategies across appropriate disciplines, which can include intensive health behavior and lifestyle treatment, with pharmacotherapy and metabolic and bariatric surgery if indicated
- Tailoring treatment to the ongoing and changing needs of the individual child or adolescent and the family and community context
Figure 2

Principles of Focused Acceptance and Commitment Therapy

Open
• Accepts distressing thoughts and feelings
• Creates a safe observational distance from distressing thoughts and feelings
• Uses experiences to inform behavior, rather than habits and rules

Aware
• Intentionally focuses on present moment experience
• Uses self-reflective awareness to promote sensitivity to context
• Can change perspectives on stories told about self and others

Engaged
• Speaks about values with emotion, recalls moments of values-in-action, and accepts vulnerability that comes with caring
• Plans and implements behavior change experiments that promote vitality

FACT aims to increase psychological flexibility in rapid and powerful sessions

Figure 3

*Principles of Multicultural Orientation*

---

**Cultural Comfort**
- Therapists’ level of feeling open, relaxed, and calm regarding culturally focused content and working with diverse individuals
- *Be open* to culturally focused content, and open to acknowledge discomfort, too

**Cultural Humility**
- The ability to maintain a stance that is other-oriented regarding aspects of cultural identity that are most important to the client/patient
- *Be aware* of others’ life context, your own context, and your shared experience

**Cultural Opportunities**
- Markers that occur in therapy in which the client’s cultural beliefs, values, or other aspects of the client’s cultural identity could be explored
- *Engage* with these opportunities

Figure 4

Treatment Acceptability Framework from Sekhon et al. (2017)

Acceptability
A multi-faceted construct that reflects the extent to which people delivering or receiving a healthcare intervention consider it to be appropriate, based on anticipated or experiential cognitive and emotional responses to the intervention.

- **Affective Attitude**: How an individual feels about the intervention
- **Burden**: The perceived amount of effort that is required to participate in the intervention
- **Ethicality**: The extent to which the intervention has good fit with an individual’s value system
- **Intervention Coherence**: The extent to which the participant understands the intervention and how it works
- **Opportunity Costs**: The extent to which benefits, profits or values must be given up to engage in the intervention
- **Perceived Effectiveness**: The extent to which the intervention is perceived as likely to achieve its purpose
- **Self-efficacy**: The participant’s confidence that they can perform the behaviour(s) required to participate in the intervention

---

**Prospective acceptability**: Prior to participating in the intervention

**Concurrent acceptability**: Whilst participating in the intervention

**Retrospective acceptability**: After participating in the intervention
Figure 5

Adapted CONSORT Diagram

Enrollment

Assessed for eligibility (n = 13)

Excluded (n = 1)
- Did not consent or return to clinic (n = 1)

Consented & Allocated to intervention (n = 12)

Session A (Adolescent-focused session)
- Completed (n = 11)
- Not completed (n = 1)
  - No return to clinic (n = 1)

Session B (Caregiver-focused session)
- Completed (n = 8)
- Not completed (n = 4)
  - No return to clinic (n = 4)

Measures for those who completed Session A (n = 11)

Time 1 measures
- Completed (n = 10 A, 10 C)
- Not completed (n = 1 A, 1 C)
  - Declined (n = 1 A, 1 C)

Time 2 measures*
- Completed (n = 6 A, 7 C*)
- Not completed (n = 5 A, 5 C*)
  - Declined (n = 1 A, 3 C)
  - Lost to follow-up (n = 4 A, 2 C)

Time 3 measures
- Completed (n = 5 A, 4 C)
- Not completed (n = 6 A, 7 C)
  - Declined (n = 1 A, 3 C)
  - Lost to follow-up (n = 5 A, 4 C)

Note. A= adolescents, C= caregivers; *In one dyad, the adolescent’s mother attended Session A but the child’s father attended Session B. The mother completed measures at Time 1-3, the father was completed relevant measures at T2. Thus, the caregiver total for Time 2 adds up to 12 instead of the total of 11 seen at T1 and T3.
Figure 6

*Modified Brinley Plots Showing Changes in Outcomes from T1 to T2*

*Note.* Each point represents a participant’s pre (T1) and post (T2) score on the given construct. Participants with missing T2 data are indicated by points with red Xs along the x axis. The diagonal solid line represents no change. Dotted lines represent minimal clinically important difference thresholds (MCID; calculated using published SD and reliability estimate). Vertical solid line indicates direction of improvement (e.g., if someone increased on acceptance this is considered improvement). It would be *clinically significant* improvement if it were both in the expected direction and beyond the MCID threshold. Points are labeled with participant identification number and change score from pre to post. For example, on Health-related Acceptance, participant 1 increased by .67 from pre to post, a *clinically significant* change (since it is above the dotted line), which is in the direction of improvement.
Figure 6 (continued)

Modified Brinley Plots Showing Changes in Outcomes from T1-T2

- General Values Progress T1-T2
- General Values Obstruction T1-T2
- General Psychological Inflexibility T1-T2
- Health-related QOL T1-T2
Note. Each point represents a participant’s pre (T2) and post (T3) score on the given construct. Participants with missing T3 data are indicated by points with red Xs along the x axis. The diagonal solid line represents no change. Dotted lines represent minimal clinically important difference thresholds (MCID; calculated using published $SD$ and reliability estimate). Vertical solid line indicates direction of improvement (e.g., if someone increased on acceptance this is considered improvement). It would be clinically significant improvement if it were both in the expected direction and beyond the MCID threshold. Points are labeled with participant identification number and change score from pre to post. For example, on Health-related Acceptance, participant 3 increased by 1.33 from pre to post, a clinically significant change (since it is above the dotted line), which is in the direction of improvement.
Figure 7 (continued)

Modified Brinley Plots Showing Changes in Outcomes from T2 to T3
Appendix A

Intervention Session Guide for Session A, Original

1. **Intro/Setting the stage (introduce ourselves, purpose of session, instill hope for change)**

2. **Rapid assessment of love, school/work, play, health**
   a. **Love:**
      i. Who lives in your home with you?
      ii. How long have you lived there?
      iii. Does everybody get along okay?
      iv. Who makes the rules in your house? Are they good rules?
      v. Who are you close to? Family? Friends?
   b. **School/Work**
      i. Are you going to school?
      ii. What do you like about school?
      iii. Do you make good grades?
      iv. Are your teachers nice?
      v. Are the kids at school nice to you?
      vi. What do you want to be when you grow up?
      vii. Do you work? Study? Do you enjoy it?
      viii. If not in school or working, what do you do with your time?
   c. **Play**
      i. What do you do for fun?
      ii. For relaxation?
      iii. To get together with your friends or others in your community?
   d. **Health**
      i. What does health mean to you? What is your definition of health?
      ii. What types of things do you do to care for your health?
      iii. What makes you interested in bariatric surgery?
      iv. How does health relate to your values/things that are important to you?

**Values:** If you could wave a magic wand and live any way you want, what would you live?

   v. Why is this so important to you?
   vi. What could you do differently?
   vii. Who or what matters the most to you?

3. **3Ts (Problems)**
   a. Identify a current problem to living in a way that they describe as healthy (in line with their value of health)
      i. What are things that get in the way of you living the way you want to live/be the type of person you want to be
   b. **Time**
      i. When did this start?
      ii. How often does it happen?
iii. What happens before/after the problem?
iv. Why do you think it is a problem now?
c. Triggers
   i. Is there anything—a situation or a person—that seems to set it off?
d. Trajectory
   i. Has this always been a problem? How has it changed over time?
   ii. Have there been times when it was less of a concern? More of a concern?
   iii. How has it been most recently?
e. Severity
   i. On a scale of 1 to 10, how big of a problem has this been? How much has it gotten in the way of healthy behaviors?

4. Workability
   f. What are you doing now to cope with this problem?
g. Who helps you with this problem?
h. What have you tried to address the problem?
i. How has that worked in the short run?
j. How has it worked in the long run or in the sense of helping you be the person you want to be?

5. Overview/Conceptualization:
   a. The client’s strengths
   b. The client’s values related to the problem
   c. Barriers the client faces to addressing the problem in a more optimal way

6. Intervention: Identify options for addressing the problem with greater psychological flexibility
   a. Option A – Requires less effort and less risk; has more certain results
   b. Option B – Requires greater effort and potentially promotes more radical change

How helpful was this session/visit? 1-10
How confident are you in your ability to practice this skill? 1-10
Appendix B: Measures

Prospective Adolescent Acceptability Measure for Session A (Completed at T1)

Thinking about your behavioral health visit at the Healthy Lifestyle Clinic, please rate how much you agree with the following statements from 0 (I do not agree) to 100 (I strongly agree).

<table>
<thead>
<tr>
<th>Statement</th>
<th>Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) What I discuss at the visit will fit with my values (what is important to me)</td>
<td><img src="0/100" alt="Rating" /></td>
</tr>
<tr>
<td>2) I feel positively about how the visit will go</td>
<td><img src="0/100" alt="Rating" /></td>
</tr>
<tr>
<td>3) I feel negatively about how the visit will go (R)</td>
<td><img src="0/100" alt="Rating" /></td>
</tr>
<tr>
<td>4) It will be easy to participate in the visit.</td>
<td><img src="0/100" alt="Rating" /></td>
</tr>
<tr>
<td>5) It will be hard to participate in the visit. (R)</td>
<td><img src="0/100" alt="Rating" /></td>
</tr>
<tr>
<td>6) I understand how the visit was helpful.</td>
<td><img src="0/100" alt="Rating" /></td>
</tr>
<tr>
<td>7) I had to give up meaningful things in my life to engage in the visit. (R)</td>
<td><img src="0/100" alt="Rating" /></td>
</tr>
<tr>
<td>8) The visit will help/helped me engage in health behaviors that fit with my values (what is important to me).</td>
<td><img src="0/100" alt="Rating" /></td>
</tr>
<tr>
<td>9) During the visit was able to talk about what gets in the way of accomplishing important health goals.</td>
<td><img src="0/100" alt="Rating" /></td>
</tr>
</tbody>
</table>

*Note.* R indicates items to be reverse-coded.
### Retrospective Adolescent Acceptability Measure for Session A (Completed at T2)

Thinking about your most recent behavioral health visit at the Healthy Lifestyle Clinic, please rate how much you agree with the following statements from 0 (I do not agree) to 100 (I strongly agree).

<table>
<thead>
<tr>
<th>Statement</th>
<th>Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) What I discussed at the visit fit with my values (what is important to me)</td>
<td></td>
</tr>
<tr>
<td>2) I feel positively about how the visit went</td>
<td></td>
</tr>
<tr>
<td>3) I feel negatively about how the visit went (R)</td>
<td></td>
</tr>
<tr>
<td>4) It was easy to participate in the visit.</td>
<td></td>
</tr>
<tr>
<td>5) It was hard to participate in the visit. (R)</td>
<td></td>
</tr>
<tr>
<td>6) I understand the visit was helpful.</td>
<td></td>
</tr>
<tr>
<td>7) I had to give up meaningful things in my life to engage in the visit. (R)</td>
<td></td>
</tr>
<tr>
<td>8) The visit helped me engage in health behaviors that fit with my values (what is important to me).</td>
<td></td>
</tr>
<tr>
<td>9) During the visit I was able to talk about what gets in the way of accomplishing important health goals.</td>
<td></td>
</tr>
</tbody>
</table>

*Note.* R indicates items to be reverse-coded.
### Retrospective Adolescent Acceptability Measure for Session B (Completed at T3)

Thinking about your behavioral health visit at the Healthy Lifestyle Clinic, please rate how much you agree with the following statements from 0 (I do not agree) to 100 (I strongly agree).

<table>
<thead>
<tr>
<th>0</th>
<th>10</th>
<th>20</th>
<th>30</th>
<th>40</th>
<th>50</th>
<th>60</th>
<th>70</th>
<th>80</th>
<th>90</th>
<th>100</th>
</tr>
</thead>
</table>

1) What I discussed at the visit fit with my values (what is important to me)

2) I feel positively about how the visit went

3) I feel negatively about how the visit went (R)

4) It was easy to participate in the visit.

5) It was hard to participate in the visit. (R)

6) I understand the visit was helpful.

7) I had to give up meaningful things in my life to engage in the visit. (R)

8) The visit helped me engage in health behaviors that fit with my values (what is important to me).

9) During the visit, my family was able to talk about what gets in the way of accomplishing important health goals.

*Note.* R indicates items to be reverse-coded.
Acceptance and Action Questionnaire II

Please rate how true each statement is for you.

<table>
<thead>
<tr>
<th>Never</th>
<th>Very Seldom</th>
<th>Seldom</th>
<th>Sometimes</th>
<th>Frequently</th>
<th>Almost</th>
<th>Always True</th>
</tr>
</thead>
<tbody>
<tr>
<td>True</td>
<td>True</td>
<td>True</td>
<td>True</td>
<td>True</td>
<td>Always</td>
<td>True</td>
</tr>
</tbody>
</table>

1. My painful experiences and memories make it difficult for me to live a life that I would value.
2. I’m afraid of my feelings.
3. I worry about being unable to control my worries and feelings.
4. My painful memories prevent me from having a fulfilling life.
5. Emotions cause problems in my life.
6. It seems as if most people are handling their lives better than I am.
8. Worries get in the way of my success.
Health-Related Action and Acceptance Questionnaire for Use in Time Limited Occasions (HAASito)

Please select the number that tells how much you agree with each sentence.

<table>
<thead>
<tr>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Neither Agree nor Disagree</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

1. My life can’t be good because of my health concerns.
2. I do things to forget about my health concerns.
3. My health concerns get in the way of me living a good and meaningful life.
4. My health concerns mess up my life.
5. I do whatever I can to forget my health concerns.
6. My health concerns stop me from doing what I want to do.
7. My negative thoughts about my health concerns can make their health worse.
8. I stay away from people and places that remind me of my health concerns.
9. My health concerns stop me from having fun.
Pediatric Quality of Life Inventory™ General Wellbeing Scale

In the past one month, how much does this sound like you…

<table>
<thead>
<tr>
<th>Never</th>
<th>Almost Never</th>
<th>Sometimes</th>
<th>Often</th>
<th>Almost Always</th>
</tr>
</thead>
<tbody>
<tr>
<td>= 0</td>
<td>= 1</td>
<td>= 2</td>
<td>= 3</td>
<td>= 4</td>
</tr>
</tbody>
</table>

1. I feel happy.
2. I feel good about myself.
3. I feel good about my health.
4. I get support from my family or friends.
5. I think good things will happen to me.
6. I think my health will be good in the future.

In the past one month,

<table>
<thead>
<tr>
<th>Bad</th>
<th>Fair</th>
<th>Good</th>
<th>Very Good</th>
<th>Excellent</th>
</tr>
</thead>
<tbody>
<tr>
<td>= 0</td>
<td>= 1</td>
<td>= 2</td>
<td>= 3</td>
<td>= 4</td>
</tr>
</tbody>
</table>

1. In general, how is your health?
Valuing Questionnaire

Please read each statement carefully and then select the number which best describes how much the statement was true for you DURING THE PAST WEEK, INCLUDING TODAY.

<table>
<thead>
<tr>
<th></th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Not at All</td>
<td>Completely True</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. I spent a lot of time thinking about the past or future, rather than being engaged in activities that mattered to me.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. I was basically on &quot;auto-pilot&quot; most of the time</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>3. I worked toward my goals even if I didn't feel motivated to</td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. I was proud about how I lived my life</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. I made progress in the areas of my life I care most about</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Difficult thoughts, feelings or memories got in the way of what I really wanted to do</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. I continued to get better at being the kind of person I want to be</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. When things didn't go according to plan, I gave up easily</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. I felt like I had a purpose in life</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10. It seemed like I was just &quot;going through the motions&quot;, rather than focusing on what was important to me</td>
<td></td>
<td></td>
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<td></td>
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</tbody>
</table>
Appendix C

BRAVO Intervention Session Guide for Session A, Revised

Being Resilient: Awareness, Values, and Openness (BRAVO)

Multicultural Orientation-Informed Focused Acceptance and Commitment Therapy for Use in Pediatric Populations

Intervention Guide Co-Developed by Jessica L. Cook, MEd & Mary E. Keenan-Pfeiffer, MS

with

Kristoffer S. Berlin, PhD, and E. Thomaseo Burton, PhD, MPH

(the Bariatric Resilience: Awareness, Values, and Openness, BRAVO team)

Acknowledgements

The BRAVO team would like to thank the Healthy Lifestyle Clinic at Le Bonheur Children’s Hospital for supporting initial development of this guide, especially the families who participated in the pilot pragmatic trial focused on developing and refining this guide.

Positionality Statement

In our work with youth and families and in the development of this intervention, the developers would like to acknowledge and strive to understand our positionality and the ways in which our backgrounds influence our work. MEK-P is a White U.S.-born doctoral candidate with expertise in understanding and promoting thriving (psychological flexibility) in youth with health concerns. MEK-P also identifies as living in a large body and moves about the world attempting to find common ground between a) body diversity and social justice needs of people
in large bodies and b) medical models of often weight-focused definitions of health that have been historically prominent in academic research and professional discourse. MEK-P acknowledges their privilege as an educated, White, cisgender person with adequate access to financial resources. Though every effort was made to infuse cultural humility, openness to noticing cultural (dis)comfort, and engagement with values of social justice and healthy equity in the development of this intervention and research on its use, these are areas of continued (lifelong) growth.

It is our hope that those using this session guide will be actively engaged in the lifelong pursuit of increasing their awareness, knowledge, and skills related to systems of privilege/oppression, and their own reflexivity related to their positionally in the context of research and practice.

**Intervention Development**

This intervention guide was developed from a pragmatic trial in which sessions were conducted by advanced clinical psychology graduate students (JLC and MEK-P) in an interdisciplinary outpatient medical setting with teens seeking bariatric surgery and their caregiver (Keenan-Pfeiffer et al., 2023). Our work to develop, refine, and implement this guide was grounded in the multicultural orientation framework detailed in Davis et al. (2018). We adapted Focused Acceptance and Commitment Therapy (FACT) principles and materials from Brief Interventions for Radical Change: Principles and Practice of Focused Acceptance and Commitment by Kirk D. Strosahl PhD, Patricia J. Robinson PhD, and Thomas Gustavsson MSc, and related FACT trainings given by Dr. Strosahl and Dr. Robinson. See Figures 1 and 2 for graphics summarizing the principles of the multicultural orientation framework and FACT. We strived to make this intervention and its guide flexible enough for use in various pediatric
consultation settings and have noted where it may be helpful to use population-specific content such as prompts/questions. In the clinic in which we developed the intervention, families were provided with education about bariatric surgery across visits with each member of the interdisciplinary team and were encouraged to ask questions. Depending on the location of the intervention delivery/level of integration in a medical clinic, and the population, it might be important to have similar educational resources available if youth/families would benefit.
Figure 1

Principles of Focused Acceptance and Commitment Therapy

Figure 2

Principles of Multicultural Orientation

Collaboration and Ongoing Research of this Intervention

The authors look forward to future collaboration to refine this intervention guide and continued research with fellow clinicians and researchers. While ACT has been researched extensively, research on this particular adaptation is limited to a pilot pragmatic trial that assessed feasibility and acceptability. Please contact us at mary.keenan@cchmc.org, to discuss collaboration and use/adaptation of this guide.
Relevant Experience Prior to Delivering this Intervention

Given the developers’ background in multicultural orientation and F/ACT, it is likely to be beneficial if future clinicians seeking to deliver this intervention have both theoretical understanding and introductory clinical experience with FACT principles and delivering interventions to diverse populations with cultural humility. Supervision/consultation with other FACT and multicultural orientation-informed clinicians could be helpful to ensure continued fidelity to FACT and multicultural orientation principles. Recommendations for continued learning are presented in section 5: Collaborative Intervention Planning.

BRAVO Intervention Guide

The goal of each section of the session, with sample prompts/questions and notes on delivery is presented in an outlined box. A vignette (created from combining and de-identifying themes from the amazing teens we worked with in our pilot pragmatic trial) is presented in italics after each section for illustrative purposes. We encourage you to be flexible, creative, and interactive as much as possible when implementing this intervention (i.e., consistent with FACT). Regarding condition-specific psychoeducation, we encourage an open, curious, and non-lecturing stance of providing information when youth/families ask/agree to receive such information (e.g., asking “would it be okay if I told you a little bit about XYZ”) and inviting families to describe what they know about the topic (consistent with FACT and motivational interviewing approaches). Further, though clinicians might find benefit from identifying different psychological processes when formulating a case conceptualization, it is likely most helpful with families to avoid jargon and instead use language such as “open up” and “do what matters to you” in session.
1) Setting the stage/Introduction
GOAL: Introduce yourself, purpose of sessions, instill hope for meaningful change

VIGNETTE

Therapist: Hi, my name is ___ and I will be working with you today for your behavioral health session. In our session, we will talk about what is important to you and how your health plays a role in what matters to you. We will also talk about what a healthy lifestyle looks like for you and how bariatric surgery* might fit into that lifestyle. We will work together to identify a specific step you can take before your next session that moves you in the direction of the life you want to lead. How does that sound?

Client: Ok, that sounds great.

2) Assessment of Life Context and Values
GOAL: Learn who the client is (including their sociocultural context, important identities) and what matters to them (values). Provide space for client to discuss their culture, salient identities, and information about family’s sociocultural context as they find relevant.

EXAMPLE QUESTIONS/PROMPTS
- Tell me a little bit about yourself, what would be important for me to know as we work together?
- Who lives in your home with you?
- Who provides you support when times get tough?
- What do you do with your time (school/work, hobbies)?
- Is there anything else about you or your life that would be important for me to know?
- If you could wave a magic wand, how would your life look?

NOTES: Some clients might need more prompting than others. Some might not feel safe/and or comfortable describing aspects of their identity based on past experiences and context of the session. We encourage cultural humility, noticing cultural opportunities, and how you feel as the clinician in the room during this discussion especially. It is important to validate a client’s own values and not push/force values on to them, which might occur when discussing health in other contexts.

* Content with an asterisk throughout this guide could be adapted for use with other pediatric populations/practice contexts as relevant
**VIGNETTE (summarized to reduce length)**

**Client Information:** Taylor is a 16-year-old who identifies as a Black female. She is presenting to an interdisciplinary weight management clinic to potentially pursue bariatric surgery. She is accompanied by her mother, Brianna, a 37-year-old who identifies as a Black female. During the adolescent-focused session, Taylor described herself as a freshman in high school. She has a part-time job at a local fast-food restaurant. She is also a member of the school marching band and enjoys spending time with her friends. Taylor identified values of being a hard worker, dependable, and a good friend and family member.

Members of the interdisciplinary team informed the behavioral health team with the information that Taylor had been having difficulties meeting exercise goals and taking her daily medication as prescribed.

### 3) Health & Values

**GOAL:** Ask how the client defines health. Clarify how health relates to personal values.

**EXAMPLE QUESTIONS/PROMPTS**

**Defining health example questions:**
- What does health look like for you?
- If you are living a “healthy” lifestyle what would that look like?
- What are you doing during a day of “healthy” living?
- How does bariatric surgery fit into your health journey?*

**Health & values example questions:**
- How does health play a role in your life/things that matter (reference specific values from previous section)?
- Does/could your health ever keep you from doing things that matter to you (currently or in the future)?
- How do your values (reference specific values from previous section) play a role on your health journey?
- Ask what the teen learned from meeting with other providers (if in an interdisciplinary setting), things they noted they want to change and/or do moving forward with them*

**NOTES:** It’s important to ask the client to define health themselves. It may also be helpful to ask the client about their thoughts on pre-existing health conditions and/or aspects of health identified by other health providers and/or family members to see if they are truly meaningful/relevant to the client.
Therapist: Health can mean different things to different people, so I am curious how you define health? If you were living a healthy lifestyle, what would that involve?

Client: Hmm..maybe, drinking water and eating healthy, like fruits and vegetables. Doing exercise. That’s all, I think.

Therapist: Those sound like some great ideas and parts of a healthy life. Sometimes we think of physical health first. Are there any other parts of health or wellbeing that would be important?

Client: Oh yeah, I guess like feeling happy and not feeling stressed out all of the time is healthy.

Therapist: Ok, so it sounds like your feelings are important to notice, too, to live a healthy life. Thanks for thinking about that. Is there anything else that you think is important for living a healthy life?

Client: Well, I just talked with the nurse about taking my Metformin every day. That is important too, I guess.

Therapist: Oh, gotcha. So to you, being healthy means drinking enough water, eating fruits and vegetables, staying active, and taking your medicine every day, as well as feeling good mentally and emotionally, too.

I wonder how these parts of health, and living a healthy lifestyle, relate to the things you told me were important to you, like being a hard worker and a good friend?

Client: Yeah, I mean I guess I need to be healthy to be able to do things I like to do. Like I want to have the energy after work to hang out with my friends and sometimes I get tired and out of breath when I am marching in band.

Therapist: Thanks for sharing that. That helped me understand why a healthy lifestyle, like you described before, is important. It sounds like when you are not feeling well it can be difficult to do things that are meaningful to you. And that making health changes could help you be more like the person you want to be.

I know you are here to learn more about bariatric surgery. I am curious how surgery may play a role in help you do the things you want to do and be the person you want to be?
Client: Well after bariatric surgery I will be healthier. I will have more energy, marching will be easier, and I will just feel better.

Therapist: Wow, it sounds like bariatric surgery might be a great tool to live your ideal healthy lifestyle. I’m wondering if you think about where you are today, how close are you to living your ideal life? Think about what you mentioned matters to you, like being a hard worker, dependable, and a good friend and daughter.

-The bullseye tool might be helpful to draw or have printed out for use in this discussion-

### 4) Identify Barriers to Valued Living

**GOAL:** Identify barriers to living the type of life the client wishes to live, validate systemic barriers/barriers outside of their control, and try to identify an area for intervention. If no barrier is identified by the client, clarify values-consistent behaviors to reinforce.

**EXAMPLE QUESTIONS/PROMPTS**
- What gets in the way of living this life you described?
- What gets in the way of being the type of person you’d like to be?
- How do you deal with these barriers now?

**NOTES:** It’s important to recognize that there are systemic factors (along with internalized, interpersonal, institutional, and ideological oppression) that serve as barriers to valued living. Work with the client/family to identify which barriers are within their control/could feasibly be changed. We encourage validation and addressing any cultural opportunities that arise especially during this discussion.

### 5. Collaborative Intervention Planning

**GOAL:** Collaborate with the client to develop a realistic, achievable, and values-consistent behavioral goal that represents meaningful change in their life.

**NOTES:** It can sometimes be helpful to come up with 2 options, an easier goal and a “reach” goal and allow the client to choose. Other times, it can become clear throughout the session that one particular exercise could be most helpful. It is important that the client collaborates on this and understands how it can be helpful to them in their life context.

**EXAMPLE QUESTIONS/PROMPTS**
- What is one step you could take to get closer to living the life you want to live/get closer to the healthy lifestyle you described?
NOTES: This can be framed as a goal or a behavioral experiment. Creating a SMART (specific, measurable, achievable, realistic/relevant, and time-based) goal may be helpful depending on the intervention. In session practice, if relevant/workable, can also be helpful.

*Examples of interventions/experiential exercises (this is not an exhaustive list, note that some exercises target multiple FACT processes):*

**Open exercises:** practice phrases to increase defusion (e.g., my mind is telling me…, I’m noticing the thought that), speaking a feared thought/concept out loud in different voices (e.g., saying “I’m not good enough” in a humorous voice), using a metaphor to build/explain acceptance (e.g., passengers on the bus or tug of war)

**Aware exercises:** mindfulness practice with a particular focus, such as mindful eating, or practicing mindfulness while in stressful situations by checking in with current thoughts and emotions, metaphor to build/explain self-as-context (e.g., chessboard, clouds in the sky)

**Engaged exercises:** clarifying values with the values bullseye or using values cards, creating a SMART goal to take one step closer towards the person they want to be and engage with their values

We recommend developing a few interventions to target each process that you can adapt readily. Consult published resources such as:

- *Brief Interventions for Radical Change: Principles and Practice of Focused Acceptance and Commitment Therapy* by Kirk D. Strosahl, PhD, Patricia J. Robinson, PhD, and Thomas Gustavsson, MSc

- *Learning ACT: An Acceptance and Commitment Therapy Skills Training Manual for Therapists, 2nd Edition,* by Jason B. Luoma, PhD, Steven C. Hayes, PhD, and Robyn D. Walser, PhD

- *The Big Book of ACT Metaphors: A Practitioner's Guide to Experiential Exercises and Metaphors in Acceptance and Commitment Therapy* by Jill A. Stoddard, PhD, and Niloofar Afari, PhD

**6. Confidence & Helpfulness Ratings**

**GOALS:**
- Ask the client to rate their confidence in doing the planned behavior/experiment 1-10
- Ask the client to rate the helpfulness of the session 1-10
NOTES: If their confidence rating is below a 7, problem solve/troubleshoot barriers. It may be necessary to identify supports (e.g., caregiver or other family member) to increase confidence and feasibility of performing the desired behavior. It important to reinforce if the client thinks doing this might be hard, and to remind them that they’ve identified it as important/meaningful. In some cases, offering/developing two interventions (one that is easier and the other that results in more rapid change) can be helpful. Other times, you and the client might quickly identify a single goal/intervention that would be beneficial. If their helpfulness rating is below a 7, it can be helpful to elicit ways that it could have been more helpful, and/or identify other ways the client would benefit from support.

VIGNETTE

The vignette below is such an example in which the therapist and client gradually and collaboratively identify a specific target for intervention and barriers that have prevented them from already engaging in the values consistent action (in this case, avoidance).

Therapist: Ok, thank you for your honesty there. So, it seems like you are taking some steps toward the center of the bullseye. And that you think there are some things you could do to get you even closer to living your ideal life. We have already talked about what you feel you need to do to live a meaningful life. What are some of the things, then, that are getting in the way of you getting closer to the center of the bullseye?

Client: Sometimes I just don’t have the time to exercise after work and marching, and I get free food at work which isn’t the healthiest. And I don’t like taking my Metformin, it makes my stomach feel upset most days.

Therapist: You did a great job there identifying a few obstacles keeping you from getting closer to the center of that bullseye. Like I mentioned before, I like to try to use these sessions to work together and come up with a plan that can get you one step closer to being the type of person you want to be. Which one of the things that you mentioned do you feel would be the most helpful to focus on?

Client: Well, I don’t think I can do much about exercise until marching season is over and I have more time. I eat pretty healthy when I am not at work so I feel like taking my metformin is probably the most important thing to figure out right now.

Therapist: I love how you worked through that. It sounds like some things, like exercise, aren’t feasible to really change right now, but that metformin might be a good change to target. You mentioned that the metformin sometimes makes you feel crummy. Is there anything else that makes taking it difficult?
Client: No, that’s really the main reason.

Therapist: Yeah, that must be tough to take it when it causes you to feel bad. Have there been things you have done in the past that have helped you take metformin even though it’s difficult?

Client: Well, my mom used to make me take it when I was at home, but since I am so busy now I usually just choose not to take it so I don’t have to feel bad.

Therapist: Gotcha, so when you choose not to take it, you can avoid feeling bad in the short-term. And at the same time, you described taking metformin as part of the ideal healthy life you want to live. Remind me how taking Metformin as prescribed is important to that ideal healthy lifestyle?

Client: Umm, I think it might help with my sugars and I’d have more energy in the long run. That way I would feel up to hanging out with my friends after work and be less tired after marching a long time.

Therapist: Wow, so it sounds like taking your Metformin regularly really would be helpful in living the life you want live. What is one step that you could take towards that life between now and next session?

Client: I don’t know, I guess just take it. I already have reminders in my phone, but when it goes off, I just think about how much my stomach might feel bad and it’s so hard to make myself take it.

Therapist: That does sound really tough. When you hear the reminder on your phone, you notice the thought that the medicine will give you a stomachache. And at the same time, you just identified how it could make you feel better in the long run and help you do the things that are most important to you. Can both be true at the same time?

Client: Yeah, that’s true, they are both true.

Therapist: It’s almost like that thought, “I will feel crummy when I take my medicine”, is deciding how you act when that alarm goes off instead of things that are important to you.

Let me know what you think about this plan: when the alarm goes off, you acknowledge the thought that the metformin could make you feel a little crummy, AND remember the ways that taking metformin helps you do what matters? You can listen to that thought and
avoid the possibility of discomfort, or you can take a step towards that ideal healthy lifestyle and doing what is important. That way you intentionally make the choice.

Client: Yeah, I think I could do that! It will be helpful to remember that I will have more energy and feel better in the long run so I can hang out with my friends and do more things that are important to me!

Therapist: Great! So you’re juggling a lot of activities and it is important to think about how realistic it will be to practice this in your everyday life. Thinking of everything you’ve got going on then, how confident are you that you will be able to practice this every day when your phone alarm goes off?

-Ensure that confidence is at least a 7, if not, problem-solve ways to achieve a 7. Ask helpfulness question, gather feedback about what was/was not helpful especially if below a 7-