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Exploring ambivalence in motivational interviewing with obese African American adolescents and their caregivers: A mixed methods analysis

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ABSTRACT

Objective: We conducted an exploratory mixed methods study to describe the ambivalence African-American adolescents and their caregivers expressed during motivational interviewing sessions targeting weight loss.
Methods: We extracted ambivalence statements from 37 previously coded counseling sessions. We used directed content analysis to categorize ambivalence related to the target behaviors of nutrition, activity, or weight. We compared adolescent-caregiver dyads' ambivalence using the paired sample *t*-test and Wilcoxon signed-rank test. We then used conventional content analysis to compare the specific content of adolescents' and caregivers' ambivalence statements.
Results: Adolescents and caregivers expressed the same number of ambivalence statements overall, related to activity and weight, but caregivers expressed more statements about nutrition. Content analysis revealed convergences and divergences in caregivers' and adolescents' ambivalence about weight loss.
Conclusion: Understanding divergences in adolescent-caregiver ambivalence about the specific behaviors to target may partially explain the limited success of family-based weight loss interventions targeting African American families and provides a unique opportunity for providers to enhance family communication, foster teamwork, and build self-efficacy to promote behavior change.
Practice implications: Clinicians working in family contexts should explore how adolescents and caregivers converge and diverge in their ambivalence in order to recommend weight loss strategies that best meet families' needs.

1. Introduction

The percentage of obese adolescents (Body Mass Index ≥95th percentile) in the United States more than tripled from 1980 (5%) to 2012 (18%) with a disproportionate number (23.7%) of African American adolescents affected [1]. The consequences of pediatric obesity are well known: increased risk for cardiovascular disease, pre-diabetes, bone and joint problems, asthma, sleep apnea and psychosocial problems like stigmatization and poor self-esteem. Adolescents who are obese are likely to remain obese into adulthood and have a greater risk of heart disease, type 2 diabetes, stroke, cancer, and osteoarthritis [2]. However, few weight loss interventions have specifically targeted African American adolescents, and those that have were generally unsuccessful [3–6].

The American Academy of Pediatrics recommends motivational interviewing [MI] for the prevention and treatment of obesity [7]. Its efficacy for weight loss has been demonstrated in adults [8,9] and children [10,11], but the results for adolescents have been mixed [3,12]. MI is a client-centered intervention to elicit and strengthen intrinsic motivation and self-efficacy for behavior change [13,14]. MI research has an empirically defined causal chain linking counselors' communication strategies to client change talk (patients' own desire, ability, reason, and need for change) and

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commitment language (specific intentions and plans for change) and change talk/commitment language to behavior change [15–17]. We have demonstrated that MI counselors' use of MI strategies predicts change talk and commitment language in African American caregivers and adolescents engaged in weight loss treatment [18,19].

The theoretical framework of MI identifies *ambivalence* – simultaneous and contradictory attitudes or feelings toward an object, person, or action – as a key barrier to change [13,14]. The importance of ambivalence is further supported by the Transtheoretical Model [20] where ambivalence and its resolution are key factors in moving from contemplation to active behavior change. To date, no research has examined ambivalence utterances expressed during MI intervention sessions. Our research group's MI process coding scheme explicitly identifies ambivalence statements—statements composed of utterances expressing rationales that are both for and against behavior change. In this study, we used mixed methods to analyze the frequency and content of the ambivalence statements expressed by African American adolescents and caregivers during MI sessions targeting weight loss. Because there were no previous studies of ambivalence, we did not have an a priori hypothesis about the relationship between adolescent and caregiver ambivalence. We used quantitative methods to examine the frequency of ambivalence statements by targeted behaviors (nutrition, activity, and weight) and valence (whether weighted for or against change). We used both quantitative and qualitative methods to explore the specific content of adolescent and caregiver ambivalence utterances.

2. Methods

2.1. Participants in the parent study

Detroit, Michigan is a city with a majority African American population and high rates of overweight (40%) and obesity (23%) [21]. Participants were recruited from an urban children's hospital located within the city of Detroit. Adolescents meeting the following inclusion criteria were eligible: (1) BMI (kg/m2) $\geq$95th percentile, (2) self-identified Black, and (3) age 12.0–17.0. Exclusion criteria were: (1) obesity secondary to medication, e.g. steroid; (2) comorbid medical condition preventing normal exercise; (3) pregnancy or a medical condition where weight loss is contraindicated; (4) comorbid thought disorders, i.e. schizophrenia; (5) moderate or severe mental retardation; and(6) psychosis or suicidality.

Forty adolescent-caregiver dyads participated in the parent study. Three were excluded from this analysis because they were accompanied to the intervention session by a second caregiver and the coding instrument was not designed to code sessions with multiple caregivers. The mean adolescent age was 14.7 (SD = 1.63) and most were female (n = 27) living in two parent homes (n = 25). Most caregivers were biological mothers (n = 36); others were a biological father, adoptive mother and two female guardians. The median family income was $16,000–$21,999 ranging from less than $1,000 to $50,000–$74,999. All caregivers provided informed consent and adolescents provided assent. The parent study was approved by the Institutional Review Board affiliated with the academic institution.

2.2. MI sessions in the parent study

Participants received a single MI session, approximately 60 min long, aimed at four target behaviors—nutrition, activity, weight, and program participation. Sessions were conducted by three MI counselors who were members of the Motivational Interviewing Network of Trainers (1 PhD psychologist, 1 PhD dietician, and 1 Master's level psychologist). Counselors met first with adolescents alone, then with caregivers alone and ended with both together. Sessions were semi-structured and focused upon developing a weight loss plan. Beginning with an open-ended discussion about their current weight status, adolescents were given the option of focusing on nutrition or physical activity. Counselors used a variety of MI communication strategies to elicit adolescent change talk and commitment language while guiding adolescents toward setting behavior change goals consistent with their current motivational level. Adolescents were offered the opportunity to develop a change plan which, with permission, was later shared with their caregivers. Caregivers' sessions followed a similar format but focused on how they might support their adolescent's weight loss goals and plans. The session ended with adolescents, caregivers, and counselors discussing together their weight loss/support goals and plans.

2.3. Data coding in the parent study

Intervention sessions were video recorded using digital processing technology allowing simultaneous recording of the adolescents/caregivers and counselor resulting in a split-screen image on a single monitor [22]. Video recordings were transcribed by a professional transcription service. Sessions were coded using the Minority Youth—Sequential Coding of Process Exchanges (MY-SCOPE) [18]. Adolescents' and caregivers' talk was coded by turn, defined as one speaker holding the floor. Turns could consist of a single utterance, like *uh-huh* or *maybe,* or a series of utterances. Adolescent/caregiver turns were coded for commitment language, change talk, or ambivalence if they addressed one or more target behavior—nutrition, activity, weight or program participation; other codes were assigned to turns not addressing a target behavior. Counselors' talk was coded for MI communication strategies (for a full description of the MY-SCOPE Code System, see Idalski Carcone et al., 2013) [18]. A primary coder independently coded all 37 sessions and a secondary coder co-coded a randomly selected 20% of the transcripts to monitor reliability, which was good (κ = .696).

2.4. Data extraction for the current study

For this secondary analysis, we extracted from the coded dataset all adolescent and caregiver statements assigned the ambivalence code. A total of 268 statements were extracted from 25 (67.6%) of the 37 participating families. (We excluded five statements about program engagement due low frequency). During MY-SCOPE coding, ambivalence statements were assigned a valence: statements weighted towards making behavior changes supportive of weight loss were coded ambivalence positive (AMB^{+}), as in Excerpt A. Statements weighted equally for and against change were coded ambivalence neutral (AMB°), as in Excerpt B. Statements weighted against change were coded ambivalence negative (AMB^{-}), as in Excerpt C.

Excerpt A: I wouldn't get teased any more, I would be able to shop at regular stores, and I probably would feel better about myself, but I would be hungry all the time (***AMB*$^{+}$**).

Excerpt B: I'm really not sure about this. Sometimes I want to lose weight, and other times it feels like there's no point in trying (***AMB*$^{\circ}$**).

Excerpt C: Well, I'd look better, but I would be hungry. I would have to eat like a white girl—salads all the time and I would have to start sweating (***AMB*$^{-}$**).