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Weight loss drugs and lifestyle modification: Perceptions among a diverse adult sample

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ABSTRACT

Objectives: Explore how adults from diverse racial and socioeconomic backgrounds perceive the use of weight loss drugs (prescription, over-the counter, herbals and supplements) and lifestyle modification.
Methods: Individual, face-to-face, semi-structured interviews were conducted with persons presenting to an academic hospital-affiliated outpatient pharmacy serving ethnic minorities and low income individuals.
Results: Fifty persons were interviewed, including 21 African Americans, 11 Hispanics and 17 low-income individuals (annual income <$20,000), of whom 33 self-reported as overweight or obese. Ever-users (14/50) and nonusers (36/50) of weight loss drugs expressed a belief in the importance of diet and exercise, but were not necessarily doing so themselves. Fear of side effects and skepticism towards efficacy of drugs deterred use. Some expressed concern over herbal product safety; others perceived herbals as natural and safe. Drugs were often viewed as a short-cut and not a long-term weight management solution.
Conclusion: A range of concerns related to the safety and efficacy of weight loss drugs were expressed by this lower income, ethnically diverse population of underweight to obese adults.
Practice implications: There is need and opportunity for healthcare providers to provide weight loss advice and accurate information regarding the safety and efficacy of various types of weight loss approaches.

1. Introduction

Overweight/obesity is a highly prevalent public health problem affecting more than two-thirds of adult Americans [1]. Racial/ethnic minorities and low income individuals are disproportionately affected [1]. To combat this epidemic, the American Medical Association officially recognized obesity as a chronic disease [2]. Physicians are urged to counsel all patients to achieve and maintain a healthy weight through lifestyle modification [3]. However, the causes of obesity extend beyond excess food intake and low physical activity [4], making successful long-term weight loss difficult [5]. Obesity guidelines recommend approved weight loss medications in addition to lifestyle modification [3,6].

As many as two out of every three Americans attempt to lose weight within a given year, contributing to a burgeoning weight loss industry [7,8]. A variety of methods are used including diet reduction, exercise, meal replacements and commercial weight loss programs [5,7]. Americans also have convenient access to herbals and supplements [9,10]. Unlike prescription and over-the-counter (OTC) medications, these products do not undergo Food and Drug Administration (FDA) evaluation for safety or efficacy, and adverse effects resulting in hospitalizations have been reported [11–14]. Use of prescription weight loss drugs is estimated to be lower (3.5-4%) [7,15] than herbals and supplements (10–15%) [7,9,10,16]. Studies also suggest that Blacks and Hispanics tend to use more supplements and herbals and less prescription drugs for weight loss than Caucasians [15,17]. The underlying reasons are unclear, but public perspectives on the various weight loss options are likely one factor.

Studies originating from the United States (US) primarily focus on quantifying the patterns and frequency of weight loss drug use [18]. Research addressing patient perspectives towards weight loss drugs have been conducted outside the US, but included mostly Caucasian women or orlistat users [19–26]. Further insight into people's perspectives regarding the selection of weight management approaches in US samples can help healthcare providers counsel patients, especially minorities and low-income individuals most affected by obesity. This study explored perceptions towards weight loss drugs (prescription, herbal/supplements, OTC) and

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lifestyle management among adults from diverse racial and income backgrounds.

2. Methods

2.1. Recruitment and interviews

Participants were recruited January to May 2015 from an academic hospital-affiliated outpatient pharmacy located in urban Chicago. The pharmacy serves a predominantly mixed income and racial population. Adults were approached in the pharmacy waiting area and introduced to the study. Those interested were screened for eligibility in a private room. Eligibility included 1) 18 years of age or older, 2) English-speaking, 3) able to self-manage medications, and 4) willing to be audio-recorded. Self-identified nonusers and ever-uses (past or current) of weight loss drugs were interviewed. The University of Illinois of Chicago Institutional Review Board approved this study and all participants provided signed informed consent. Participants were not reimbursed for participation.

2.2. Data collection

Individual, semi-structured face-to-face interviews were conducted by a trained researcher (SX). All interviews were audio-recorded and transcribed verbatim. Interview questions were developed based upon Ajzen's Theory of Planned Behavior, a theoretical framework that has been used to describe a variety of volitional health behaviors including food choices, physical activity and weight management [26–29]. Questions focused on people's attitudes and beliefs towards weight loss drugs and diet and exercise, including perceived efficacy and safety (Appendix A). Self-reported demographics, height and weight were documented after each interview. Interviews were conducted until all coders agreed that saturation of themes was reached.

For the purpose of this study, the term "weight loss drug" was not operationally defined for participants during the interview to allow interpretation of the term from the participant's perspective. In this manuscript, "weight loss drug" refers to all prescription, OTC, herbal, and supplement products. Weight loss drugs were further subcategorized as follows: FDA-approved weight loss medications are considered "prescription"; FDA-approved OTC medication, of which orlistat is the only available medication, as "OTC"; products made from botanicals or plants as "herbal"; and all non-FDA approved weight loss products that are not herbals as "supplements".

2.3. Analysis

Obese, overweight, normal weight, and underweight cutoffs were defined according to body mass index (BMI) $\geq$30, 25.0–29.9, 18.5–24.9, and $\leq$18.5 kg/m^2 respectively, which was calculated from the participants' self-reported height and weight. Coding and analysis of transcripts were performed by all three authors. During initial coding, transcripts were read by each author independently and then discussed as a group. General concepts were first loosely assigned to categorize participant's perceptions towards weight loss drugs. These concepts were then iteratively regrouped under central emerging themes. After discussion, the three coders were able to establish an initial coding dictionary and using this dictionary, all transcripts were coded independently. The coding dictionary was further refined and reviewed against transcripts using the constant comparative method. An analytic memo recorded points of agreement, disagreement, and interest. Consensus was reached by all coders by discussion and deliberation. Content analysis and coding was organized using ATLAS ti (Scientific Software Development GmbH; Berlin, Germany) [30].

3. Results

3.1. Participants

Approximately 30% of people approached declined to be screened for eligibility due to lack of time or interest. Among the 51 screened, 50 consented and 1 refused to be audio-recorded. A total of 18 males and 32 females aged 24 to 66 years were interviewed (Table 1). Twenty-one (42%) participants self-identified as African American and 11 (22%) as Hispanic. Fourteen (28%)

Table 1
Participant self-reported weight, height, demographics and use of weight loss drugs (N = 50).

	Nonusers (n = 36)	Ever-users (n = 14)[a]
Age (median, range) years	38 (24–66)	41 (30–65)
Gender (female)	21 (58.3%)	11 (78.6%)
Race/ethnicity		
African American	12 (33.3%)	9 (64.3%)
Asian	6 (16.7%)	0 (0%)
Caucasian	10 (27.8%)	1 (7.1%)
Hispanic	7 (19.4%)	4 (28.6%)
Multiracial	1 (2.8%)	0 (0%)
Weight Category[a]		
Obese (BMI* $\geq$ 30.0 kg/m^2)	10 (27.8%)	6 (42.9%)
Overweight (BMI* $\geq$ 25.0–29.9 kg/m^2)	11 (30.6%)	6 (42.9%)
Normal weight (BMI* $\geq$ 18.5–24.9 kg/m^2)	14 (38.9%)	2 (14.3%)
Underweight (BMI* $<$ 18.5 kg/m^2)	1 (2.8%)	0 (0%)
Income		
<$20,000	12 (33.3%)	5 (35.7%)
$20,000 – <$52,000	13 (36.1%)	5 (35.7%)
>$52,000	11 (30.6%)	4 (28.6%)
Personal use of weight loss drug		
Herbal/Supplement	0 (0%)	13 (92.9%)
Prescription	0 (0%)	3 (21.4%)
Over the counter	0 (0%)	3 (21.4%)

*Body mass index (BMI) was calculated based on self-reported weight and height.
[a] Current and past users.

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