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Understanding how Overweight and Obese Emerging Adults Make Lifestyle Choices

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Abstract

Purpose—To better understand health-related decision making among overweight and obese emerging adults.

Design and Methods—A cross-sectional design was used in the parent study involving overweight and obese emerging adults, ages 18–29 years. The goal of the parent study was to screen participants' diabetes risk and identify characteristics of emerging adults with prediabetes ($N = 107$). A sub-sample of respondents ($n = 34$) from the parent study were invited to participate in focus group interviews depending on whether they had prediabetes (three groups) or they did not have prediabetes (four groups). Each focus group interview lasted 90–120 minutes following a semi-structured interview guide. Conventional content analysis was used in the data analysis. Because of the similarities between participants with and without prediabetes, the findings were synthesized and reported in the aggregate. Moreover, during the analysis, the authors decided that Rational Choice Theory provided a useful organizing structure for presenting the data.

Results—Emerging adults' behavioral decisions were rational reactions to their personal competence, perception of health, environment, and availability of resources to handle problems. Trade-offs calculation and estimations of resource availability were often used when making decisions.

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Conflicts of Interest
None

Conclusions—Emerging adults choose unhealthy behaviors due to inaccurate information and insufficient competence to practice healthy lifestyles rather than because of laziness or being irrational.

Keywords

Emerging adults; Healthy behavioral choices; Rational Choice Theory; Health promotion

Emerging adulthood, a period between ages 18–29, is a new life stage introduced by developmental psychologists in the 1960's (Arnett, 2000; Arnett, Zukauskienė, & Sugimura, 2014). This new developmental stage was created in response to the societal changes related to the increasing marital age, timing of parenthood, and expected higher education and training as preparation for being in the workforce until retirement (Arnett, 2000). Physical and emotional maturity, financial independence, and successful role transitions distinguish mature adults from emerging adults (Arnett, 2003).

During the past four decades, obesity prevalence has grown faster among emerging adults than in the general population (Flegal, Carroll, Ogden, & Curtin, 2010; Ogden, Carroll, Kit, & Flegal, 2012). A potential reason for this obesity epidemic among emerging adults is their lifestyle behaviors differ from those of more mature adults. Emerging adults often consume calorie-dense foods and beverages, eat a “fourth meal” (a meal between supper and breakfast; (Nelson, Story, Larson, Neumark-Sztainer, & Lytle, 2008), and have lower basal activity (Cha et al., 2015; Nelson et al., 2008). Emerging adults also tend to stay up late. Evidence shows that individuals who go to bed after 11:00 pm and sleep less than 6 hours/night are more likely to engage in unhealthy behaviors (e.g., late night snacking, physical inactivity, smoking, alcohol consumption; (Bayon, Leger, Gomez-Merino, Vecchierini, & Chennaoui, 2014; Rosenberg, Maximov, Reske, Grinberg, & Shah, 2014; Schoenborn & Adams, 2008). These unhealthy behaviors have been linked to increased risk of imbalanced glucose metabolism leading to prediabetes or diabetes (MacLeod, Terada, Chahal, & Boule, 2013; Morselli, Leproult, Balbo, & Spiegel, 2010).

Prediabetes is defined by one of three measures: (a) fasting glucose (100–125mg/dL); (b) 2-hour 75g oral glucose tolerance test (140–199 mg/dL), or (c) HbA1C (5.7–6.4%). Community-based lifestyle coaching programs are available to assist persons with prediabetes and/or metabolic abnormalities (Center for Disease Control and Prevention; Katula, Blackwell, Rosenberger, & Goff Jr, 2011; Knowler et al., 2002). Such programs, however, are not designed to consider age-specific lifestyle modifications. Emerging adults often have different perceptions of health risks and also may perceive psychosocial and structural barriers to participating in these programs (Adriaanse, Snoek, Dekker, van der Ploeg, & Heine, 2002; Andersson, Ekman, Lindblad, & Friberg, 2008).

Emerging adults confront many transitional demands, expectations, and role changes as they move from being more dependent adolescents to more independent adults (Garvey et al., 2014). When emerging adults are faced with managing health conditions such as obesity or prediabetes, issues unique to their developmental stage must be considered. Thus, the purpose of this study was to better understand overweight and obese emerging adults'

decision making related to obesity-linked health risks with the goal of using the findings in the future to design an age-specific health promotion program.

Methods

Study Design

Qualitative description was the method that guided this work (Sandelowski, 2000, 2010). The goal in qualitative description is to gain firsthand knowledge from informants about the topic of inquiry. Unlike other qualitative methodologies, there are few pre-existing philosophical determinants in qualitative description and a high degree of interpretation and abstraction are not required.

Setting and Participants

The parent study, aimed at screening diabetes risk and identifying the characteristics of emerging adults with prediabetes to develop an age-specific diabetes prevention program, was approved by Institutional Review Boards at Emory University and other appropriate institutions (Cha et al., 2015). Telephone screening was completed of 224 contacts. Of these, 126 overweight and obese, physically inactive emerging adults, ages 18–29, were invited for diabetes risk screening to assess their body mass index (BMI; measured using weight and height), fasting blood glucose, HbA1C, and psycho-behavioral variables (e.g., physical activity, dietary behavior over the past year measured by the Dietary Quality Index-Revised for Young adults, body image perception). Of the 126 potential participants, 107 emerging adults came to a clinical research unit and completed the informed consent process, providing written consent to participate in the parent study. These same participants were asked about their desire to attend a focus group.

Participants for the analysis reported here were a sub-sample of the parent study who agreed also to involvement in a focus group interview ($n = 34$). Using the diabetes screening test results (fasting glucose and HbA1C tests), participants were placed in either a normoglycemic group (3 groups, 18 individuals total) or a prediabetes group (4 groups, 16 individuals total). The goal was to have at least 3–6 participants in each focus group. These participants were provided information about the date, time, and place of the group. In addition, to maximize attendance, participants received three reminder telephone calls—one a week before the group, one 1–3 days prior to the group, and one on the morning of the interview.

The majority of the focus group participants were in their early twenties (mean age = 23.6 ± 3.1 years old); female ($n = 31$); African American ($n = 25$); college students ($n = 18$ undergraduates, $n = 10$ graduate students); and severely or morbidly obese ($n = 20$; BMI of 35 or higher). The median dietary quality score assessed by Dietary Quality Index-Revised for Young adults (DQIR-Y) was 59.8 (Mean $\pm$ SD = 61.3 ± 10.2 ; Range 43.3–78.8 of 95). Table 1 shows the socio-demographics of the participants.

Data Collection Procedure

A semi-structured interview guide was developed based on a literature review; it was refined by a nurse researcher with qualitative expertise (see Table 2). Prior to the focus group interviews, primary and assistant moderators were trained in their roles. A moderator pair was at each focus group. The first author (PI) was present in each group and conducted a debriefing with the participants at the end of each interview to correct myths regarding early onset type 2 diabetes, prediabetes, and healthy lifestyles. Upon completing the interviews, all participants received a \$25 gift card. The PI also debriefed with the research team to refine the interview guide.

Each focus group lasted 90–120 minutes. All interviews were digitally recorded. The de-identified interviews were transcribed by a research assistant and independently verified for accuracy by research staff.

Data Analysis

In collaboration with the first and last authors, two research assistants independently reviewed the transcripts and began open coding following the principles of conventional content analysis (Hsieh & Shannon, 2005). MAXQDA 11.0 software (VERBI software, Germany) was used for data management. The coding process was iterative with the research assistants comparing independently derived codes, reconciling differences, and achieving consensus on a coding structure. The coding structure was revised several times throughout the process. The final coding structure was applied to each focus group transcript; conceptually related codes were organized into categories. When the prediabetes and non-prediabetes group data were compared, the similarities between the groups prompted synthesizing the findings and reporting them in the aggregate.

As the analysis progressed, theories were considered for organizing the data and presenting the findings (Sandelowski, 1993). Rational Choice Theory, depicted Figure 1, was useful for examining decision making when resources are limited, a major consideration among emerging adults.

Originating in the field of economics, Rational Choice Theory (RChT) is based on the assumption that individuals make decisions according to what will yield the greatest benefit for them (Simon, 1959). Over time, RChT has been used in the social sciences to understand human behavior. According to RChT, individuals are self-interested, rational, and utility-maximizing agents who allocate limited resources among competing goals and interests based on personal preferences and values, opportunity costs (e.g., resource availability, personal competence), and institutional constraints (e.g., familial and societal norms) (Baker, 2006; Bouffard, 2007; Friedman & Hechter, 1988). Persons assign an expected utility score to possible choices based on: (a) the units of happiness they would receive from the possible outcome from each choice, and (b) the perceived probability that the actions they decide upon will yield the desired results. Choosing actions for their expected outcomes during decision making is called instrumental rationality (Baker, 2006; Friedman & Hechter, 1988). During the decision-making process, individuals contemplate trade-offs and substitutions among different choices. Because individual choices are shaped by values, preferences,

familial and societal norms, resources, and competence (e.g., health literacy, confidence), expected utility scores vary from individual to individual. Expected utility scores are estimated inaccurately when an individual has insufficient personal competence or incorrect information.

RChT posits that trade-offs in decision-making yield equilibrium, a point at which no significant change in behavior occurs because the cost of changing behaviors exceeds the expected benefit of those changes. Once individuals reach equilibrium as a result of the sum of rational decision-making processes, their behaviors are changed under one or a combination of four conditions: (a) resources increase or decrease, (b) the relative price of related or substitutable goods and services changes, (c) values or preferences change, or (d) expectations of the future change (Baker, 2006).

Results

There were four behavioral factors that affected lifestyle choices among these emerging adults: perceptions of health, social and cultural pressures, low health literacy, and developmental tasks/demands. In addition, our findings illustrated that participants used instrumental rationality when making decisions based on their personal competence and trade-offs calculation to estimate resource availability. Participants noted it was possible to change behavior, yet that required them to disrupt their existing equilibrium.

Behavioral Factors

Perceptions of health—A 25 year old female participant reported why she felt healthy despite being obese (BMI = 37.05): “I can run, jump, climb a mountain. I get up and I run to the end of the hallway without being tired and pouring sweat.” This statement illustrates how emerging adults’ perceptions differed from parameters used by health care provider to define unhealthy conditions such as obesity (e.g., body mass index). Although health care providers advised these emerging adults to modify their lifestyles and behaviors, the emerging adults’ viewed these top-down approaches as “routine and inconsiderate advice” that the emerging adults neither needed nor took seriously.

By contrast, family members had a strong influence in how emerging adults perceived their bodies. For example, the family influence on perceived body image was expressed by an obese 23 year old female (BMI = 38) who underestimated her body size: “My family told me you’re not fat, you just look soft. A fat person is somebody who has trouble getting through the door.” Family support creates a paradox in health perceptions: families’ inaccurate messages may boost self-esteem among obese emerging adults while at the same time helping to instill a misperception of body size and its potential health effects.

Cultural background and social pressures—Distinct ethnic/racial differences in obesity are known and intersect with cultural and regional factors. Southern states in the US typically have higher rates of obesity due to environmental factors (e.g., heat and humidity that may limit physical activity) and socio-economic factors (e.g., high poverty levels), and preferences in food preparation (e.g., fried foods) (Akil & Ahmad, 2011; von Hippel & Benson, 2014). Not surprisingly, the beliefs and values linked to the area or region in which

individuals live and race/ethnicity generate unique social pressures that may contribute to difficulties selecting and maintaining healthy habits. For instance, many African American participants addressed specific cooking techniques (e.g., frying) or ingredients (e.g., foods high in starch) as contributing factors of their obesity. In addition, in social gatherings they were often encouraged to eat large portions along with “clean your plates and get seconds,” sentiments that convey affection. Thus, even if emerging adults knew which foods to avoid and proper serving sizes, making healthy lifestyle choices in gatherings with family and friends could be difficult due to the cultural meaning of food.

Emerging adults emphasized that having friends or diet/workout partners who had similar weight, exercise, or diet goals was important to maintain their motivation to make healthy choices. For instance, participants who had friends who exercised regularly found it easier to exercise regularly too. By contrast, those whose friends were inactive quickly abandoned attempts at regular exercise.

Low health literacy—Despite wanting to meet the internal and external expectations of being healthy, the successful lifestyle adoption of these emerging adults was limited by their lack of knowledge and health literacy about what to do or how to do it. They reported using token behaviors, the display of accepted gestures associated with healthy living that were actually ineffective in achieving a healthy lifestyle. Token exercise behavior is exemplified by a participant whose exercise was his 20 minute walk to and from school. “After that walk, I don’t really want to exercise.” This 20 minute walk is better than no activity, yet it falls short of the current minimum physical activity recommendation for adults that are either 10,000 steps per day or at least 150 minutes per week of moderate to vigorous aerobic activity along with muscle strength training two or more days a week (Health gov, 2008; Tudor-Locke et al., 2011). For an individual to obtain extensive health benefits (i.e., losing weight or preventing diabetes), exercise needs to increase (e.g., 300 minutes per week) (American Diabetes Association, 2016; Health gov, 2008). Many emerging adults, however, have an inaccurate understanding of the amount of physical activity needed to achieve health benefits.

Likewise, emerging adults conveyed an inability to correctly understand and interpret nutritional recommendations/guidelines despite their desire to become healthier. For instance, these participants rarely reported reading food labels comprehensively. Rather, food labels were read with a focus on one or two dietary components such as calories or fat content instead of assessing overall dietary quality. Avoiding foods to limit specific nutritional elements such as sugar, fat, cholesterol, carbohydrates, and calories, occurred based on myths or lay knowledge about what constituted a healthy diet. Specific foods such as bread, eggs, bananas, and meat also were often named as foods they avoided. One participant said, “I don’t eat sugar. I don’t eat bread. I don’t eat meat. I don’t eat basically anything [bad].” These decisions to eliminate or restrict certain foods often led these emerging adults to have poor quality, unbalanced diets rather than the healthy eating they desired.

Developmental tasks and demands—Preparing for life success throughout adulthood is a major development task and a demand for emerging adults. Adopting a healthy lifestyle

during the transition from dependence, relying on family to take care of them, to independence, taking care of themselves, was often challenging. There are many definitions of what constitutes a successful transition to adulthood. The hallmark of the transition, and thus a significant dimension of success for emerging adults, is the ability to live independently (Koc, 2007). To achieve this goal, emerging adults have to be financially secure; that makes them concerned about employment after graduation. Emerging adults often traded time to invest in health for time to invest in achieving financial security. For instance, participants said they exercised regularly before college, but stopped doing so once in college because they were stressed, had difficulties making and keeping a schedule, and had to spend hours attending class and studying. One participant described a ten-hour study session in the library before taking a break to smoke, exemplifying how important participants claim academics to be to their future success, and how they may not see the negative health consequences of some behaviors (e.g., smoking).

The willingness to trade health for success, however, was not absolute. A noteworthy difference in values was found among emerging adults who had family members with diabetes compared with those who did not have a familial connection to diabetes. Participants with familial insights had witnessed diabetes and its complications (e.g., blindness, amputation) and regarded their prediabetes condition as more serious than those who did not have familial insights. A participant with prediabetes voiced that “School is important but ... What’s that diploma going to mean if you have diabetes? It’s going to be nothing.” Thus, participants who had a family member with diabetes seemed more aware of their health, their risk for developing diabetes, and the significance of lifestyle modifications compared to participants without diabetic family members.

Using Instrumental Rationality When Making Decisions

Key to altering behavioral outcomes is resource availability combined with adequate competence to use the available resources. As an example, a chef in a well-stocked kitchen can create complex meals that are beyond the abilities of a lay person who has access to the same well-stocked kitchen. The chef is unable, however, to make the same quality meal if required resources are unavailable. Emerging adults who have a set of available resources and adequate personal competence (e.g., skills, confidence, health literacy) may achieve a healthy lifestyle more easily than those who lack resources and competence.

Personal competence—Emerging adults often carefully and rationally considered all possible choices and substitutes based on opportunity costs, and the cost of the next best alternative that was consistent with their values. Chosen behaviors often were still unhealthy, however, due to insufficient personal competence to accurately calculate utility scores and reconcile values and strategies to use available resources in the face of competing demands.

Participants often reported that insufficient resources were a source of unhealthy behaviors, with time and money most often identified as the resources seeming to be in too short supply. In exploring issues surrounding time and money resources, it became evident that emerging adults often lacked sufficient personal competence (e.g., healthy literacy, problem

solving,) to use their existing resources to achieve a healthy lifestyle; existing resources were often sufficient to maintain a healthy lifestyle.

For instance, health literacy—emerging adults' ability to obtain, process, and understand health information and available resources to make healthy lifestyle choices—was lacking in many participants. The participants often reported sufficient knowledge about macronutrients and the health risks of certain behaviors. They did not, however, address the consequences of unbalanced diets, unhealthy behaviors, and the potential health risks due to them. Additionally, although many of the participants reported having sufficient resources to buy and prepare food from a grocery store, they encountered challenges related to their personal competence to prepare meals because of inadequate skills and insufficient time for preparing meals. Due to insufficient health literacy and personal competence, they relied on fast food or grocery store prepared food instead of preparing their own food. The way in which inadequate personal competence relates to low health literacy was reflected in comments from a 20 year old undergraduate student with prediabetes who noted that her food choices were guided by: "Whatever is fastest. Whatever is closest. Whatever is cheapest. College people don't have money and time; [we] have to study. When I go to the library, I get food [that is] available in 10 minutes because I have to study."

Trade-offs—Emerging adults had to make trade-offs to select an action in choosing among possible behavioral options within their budget, limited resources, and their competency. Because of the high cost of tuition, schooling had a big influence on their choices. A male student who was juggling school and work expressed: "[Because of the cost of tuition] I put the priority into studying for the class instead of exercising. Instead of one hour of exercise, I could do one hour of studying. When I was in high school there was no tuition. I used to go to the gym instead of studying as hard."

Poor time management and parenting responsibilities affected behavioral choices and actual behaviors. For instance, required physical education courses were the incentive for some participants to use resources on campus to remain physically active. For many, however, physical activity ceased when the physical education course ended. The time used to exercise was reallocated to other, often unhealthy behaviors (e.g., screen time) or other tasks (e.g., studying in the library). Participants who were parents stated that their desire to be healthy was prompted, in part, by becoming a good role model for their children or ensuring their children were healthy. A 29-year-old female graduate student who had responsibilities as a parent showed a willingness and "determination" to invest time into "clipping coupons in five different newspapers, or going to three or four different [grocery] stores to have healthy food in my refrigerator." The participant voiced that "It does take a lot of time [to clip coupons]. What I'm saying is it's [taking a lot of time to clip coupons] a trade-off [to eat healthy food]".

Disrupting the equilibrium—Changing from unhealthy to healthy behavior is an achievable but challenging goal for emerging adults because it requires disrupting the current equilibrium. Many participants voiced that the cost of changing to healthy behavior was much higher than their current choices, most of which were unhealthy. Although they were aware of the negative long-term effects of the unhealthy behaviors, the perceived

immediate benefit of not disturbing the existing equilibrium was very high. They did, however, express a conditional willingness to change behavior if they had the necessary personal competence and were able to envision the benefits of changing behaviors.

Discussion

Rational Choice Theory (RChT), derived from economics, was a unique and useful lens for viewing our data; it adds to our understanding of how and why emerging adults make decisions to modify or not to modify their behaviors. Insights into how and why emerging adults make lifestyle decisions supports enhancing the precision and appropriateness of behavioral interventions for this population.

In our study, emerging adults differently perceived benefits and the cost to change behaviors compared to mature adults; they also had different orientations with regard to health, confronting health risk (youth often masks health risk), personal competence, and prioritization. Researchers and clinicians must be mindful of how emerging adults perceive health and health risk based on what and why they select a certain behavior. For instance, our severely obese participant identified herself as healthy because she can do a 20-minute walk, jump, and run. She may, however, re-evaluate her health status if she experiences a challenge during a cardiorespiratory fitness test (e.g., symptom limited treadmill exercise test), a better predictor of cardiometabolic health (Carnethon et al., 2009).

Parents influence emerging adults' perceived body image leading to various health problems and a failure to modify lifestyles. Our findings show emerging adults were more likely to accept their larger body size and underestimate obesity related health risks when parents accepted a body size that exceeded the medically-determined BMI. Inaccurate parental messages about body size are explained in two ways. First, parents of overweight/obese children often have misconceptions of their body size and deliver inaccurate messages about their child's body size (Parkinson et al., 2015). Second, there is a social stigma to obesity. Overweight/obesity is frequently regarded as an offensive description; mentioning body size is avoided, therefore, especially if a large person looks healthy (Ellis, Rosenblum, Miller, Peterson, & Lumeng, 2014). Also, these persons may not clearly see the problems causing obesity because obesity may have a genetic connection (e.g., family) as well as a social connection where there are shared ideas about food, lifestyle, and/or values about body size (Christakis & Fowler, 2007). Because accurate body image improves adherence to obesity treatment regimens and the effect of weight loss programs (Dorsey, Eberhardt, & Ogden, 2009; Duncan et al., 2011), an intervention targeting overweight and obese emerging adults would benefit from using scripted information that reframes comments about body size to avoid being regarded as offensive while improving the accuracy of perceptions of their bodies (Lerner, Klapes, Mummert, & Cha, 2016)

Emerging adults experience many demands, expectations, and role changes as they transition from dependent adolescents to independent mature adults (Garvey et al., 2014; Nelson et al., 2008). Thus, they need to make many changes quickly and simultaneously while also improving personal competence given available resources (i.e., less time due to college demands; less help from parents). As our findings show, many emerging adults used

instrumental rationality to deal with challenges and make rational behavioral choices, although they often calculated inaccurately the cost and benefits of their behaviors and the consequences. Not surprisingly, they frequently believed that the cost of changing behaviors from unhealthy to healthy (disrupting equilibrium) was pricy and unaffordable. They put lifestyle modification as a low priority, therefore, a choice that could lead to conflict or tension between emerging adults and health care providers. Health care providers may consider emerging adults as non-adherent and emerging adults may perceive providers as offering useless advice.

Findings from this study also offer insights into how to better design behavioral interventions to advance emerging adults' skills in solving problems. Many behavior change theories and frameworks do not include knowledge as a critical factor for changing behavior based on the belief that improving knowledge does not lead to behavior change (Ajzen, Joyce, Sheikh, & Gilbert Cote, 2011; Becker, 1990). For instance, Social Cognitive Theory (SCT) stresses the dynamic and continual interactions between personal factors, environmental influences, and behavior (Bandura, 1989). A major premise of SCT is that behavior can be learned by viewing the actions of others and by observing the results of the modeled behavior as well as through personal experiences, not knowledge enhancement. Knowledge improvement, however, needs to be considered as a path for improving health literacy among emerging adults.

From the perspective of Rational Choice Theory, the design of behavioral interventions might incorporate improvements in health literacy, enabling emerging adults to accurately calculate benefits and risks of certain behaviors thereby enhancing self-efficacy and helping to modify behaviors (establishing a new equilibrium). Improving nutritional knowledge and learning to read food labels accurately, for example, may change emerging adults' probability estimations in how likely different foods are to achieving the health outcomes they value. Such knowledge may modify their behavior as illustrated by changes in food-buying preferences.

Despite the new ideas discovered in this study, there are limitations. The participants who chose to engage in the focus groups were predominantly African American women living in one geographical region. Thus, our findings do not adequately reflect a full range of cultural differences related to overweight and obesity. In addition, the findings may not fully reflect the range of male views pertaining to overweight and obesity. Retrospectively, it is evident that using focus groups to generate data may be another limitation given existing time constraints expressed by emerging adults. These time constraints may have contributed to the high "no show" rate. Individual interviews may be better in this age cohort. Moreover, a qualitative study using a form of purposeful sampling may help to determine what overweight and obese emerging adults want in an intervention. The sampling criteria would guide the selection of information rich cases. For instance, individuals from various cultural and ethnic perspectives as well as males and females could be recruited for individual interviews to elucidate information from those who are overweight, obese, and within normal weight standards.

Nevertheless, the novel use of RChT to organize the findings shows how emerging adults' needs differ from the needs of more mature adults, suggesting that interventions need to be tailored to the needs of emerging adults. Additionally, other theoretical orientations may be useful as well to help use better understand emerging adults' behavioral choices. For instance, Social Marketing that emphasizes 4P's (Product, Price, Place and Promotion) (Lefebvre & Flora, 1988) might be used in combination with RChT because it provides the rationale for different prices (or perceived opportunity costs) and promotion strategies to sell the same product (i.e., healthy lifestyle).

Practice Implications

Improving emerging adults' competence and enhancing their personal skills are important features in helping them achieve independence and self-sufficiency. Appropriate programs are needed to help overweight/obese emerging adults use existing resources well and calculate accurately the cost and benefits of choices. Health care providers need to invest time in creating a relationship with emerging adults' and then, from a foundation of trust, probe to elicit emerging adults' current knowledge and their interpretations of lifestyle recommendations. In this way, specific, practical, individualized, and detailed problem-solving guidance and advice can be discussed with emerging adults to help them make better lifestyle choices.

Conclusions

Our informants expressed that they select unhealthy behaviors due to inaccurate information and insufficient competence to practice healthy lifestyles rather than because they were being lazy or making irrational choices. A behavioral intervention designed specifically for emerging adults may help them make choices using accurate cost and benefit calculations. Reducing perceived costs and increasing perceived benefits may be keys to success in lifestyle modification during emerging adulthood.

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Highlights

- Emerging adults' decisions are rational reactions to their environment and limited resources.
- Behavioral interventions for emerging adults are necessary to decrease the perceived cost of making healthy choices.
- Emerging adults need to develop skills to enhance health literacy and problem solving thereby allowing them the ability to calculate the cost of healthy choices.

Practice Implications

Behavioral interventions for emerging adults need to help them develop skills to enhance health literacy and problem solving thereby enhancing their awareness of available resources and decreasing the perceived cost of making healthy choices.

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Figure 1.

A conceptual framework based on the Rational Choice Theory.

†Bold lines indicate a person's rational decision making process ; dashed lines show a person's impromptu behavioral decision process.

‡The conceptual framework was created based on Friedman and Hechter's explanations of the basic assumptions of Rational Choice models (Friedman & Hechter, 1988)

Table 1

Informants' socio-demographic characteristics

	Non-Prediabetes (<i>n</i> =18)	Prediabetes (<i>n</i> =16)	By race/ethnicity
# of group	3 groups	4 groups	
Gender	17 females, 1 male	14 females, 2 males	
Age (years old)	(Range: 19.6–29.2)	(Range :18.9–29.3)	
Race/ethnicity	14 African Americans; 2 Hispanics; 2 Asians	11 African Americans; 2 Caucasians; 1 Hispanic; 2 Asians	
Mean BMI	37.1±7.7 (Range: 29.4–57.6)	41.0±10.0 (Range: 26.4–55.7)	African Americans (<i>n</i> =25): 40.0±9.1 Caucasians (<i>n</i> =2): 44.1±5.8 Hispanics (<i>n</i> =3): 38.2±13.0 Asians (<i>n</i> =4): 31.7±1.1
Dietary Quality Score	61.9±10.3 (Range: 57.6–77.0)	60.7±10.5 (Range: 55.7–78.8)	African Americans (<i>n</i> =25): 61.1±10.2 Caucasians (<i>n</i> =2): 68.4±14.8 Hispanics (<i>n</i> =3): 60.2±14.7 Asians (<i>n</i> =4): 60.0±7.5
Residence	1 Dormitory 6 Parent's house 10 Own housing	1 dormitory 8 Parent's house 7 Own housing	
Schooling or Employment	9 Full-time student 1 Full-time worker 7 part-time worker or student 1 Unemployed	11 Full-time student 1 full-time worker 4 unemployed	

Table 2

Interview questions

•	Tell us what you know about diabetes and your risk for diabetes in the future.
•	Where did you get your information related to health or diabetes?
•	Tell us specific things you do now (wish to adopt) to avoid (or prevent) diabetes?

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