online class

Needs Assessment Results for Online Adult SNAP-Ed Courses

Evidence suggests online education might be an effective tool for improving dietary behaviors among limited-income internet-using audiences. A needs assessment conducted among adults (n=869) eligible for the Supplemental Nutrition Assistance Program-Education (SNAP-Ed) in Utah determined interest in online classes, preferred online formats, and identified nutrition and physical activity-related concerns. Results suggest interest in online classes that build skills and knowledge needed to lead active, healthy lives. Additionally, Google, YouTube, and Facebook may be effective places for marketing and recruitment for online courses. Findings will be used to develop a free, asynchronous course based on a research-based SNAP-Ed curriculum.

RESEARCH

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Face-to-face nutrition education programs through Utah's Supplemental Nutrition Assistance Program-Education (SNAP-Ed) program have been found to be effective teaching participants nutrition and physical activity-related skills to help reduce risk of chronic disease and obesity (Savoie-Roskos et al., 2019). While SNAP-Ed reaches thousands annually in Utah, many eligible individuals remain unreached. Furthermore, the internet is now a main source of nutrition information due to increasing family/work responsibilities, time constraints, and widespread internet access (Swindle et al., 2015).

Nearly 90% of Americans have regular access to the internet (Pew Research Center, 2018a). Among households making less than $30,000 per year, 81% use the internet, and 67% have and use smartphones (Pew Research Center, 2018b), with rates of internet usage and smartphone ownership increasing each year (Pew Research Center, 2018b). SNAP-Ed participants have similar rates of internet access and smartphone usage (Loehmer, et al, 2018). Evidence suggests online education might be an effective tool for: a) reaching internet-using audiences (Campbell et al., 2013; Bensley et al., 2011; Neuenschwander, et al., 2012; Stotz et al., 2019), and b) improving dietary behaviors (Au et al., 2015; Neuenschwander, et al., 2013). It may be as effective, if not more, at improving dietary knowledge and behaviors of participants attending in-person classes, particularly low-income Americans (Bensley et al., 2011; Neuenschwander, et al., 2013). In addition to being effective at catalyzing behavior change, online programs are a cost-effective way to increase program reach (Neuenschwander, et al., 2012; Stosich, et al., 2016). There are multiple methods of online and e-learning education delivery. Stotz et al. (2019) suggest careful consideration to the format and content within online education for program success -- particularly programs targeting limited-income audiences.

OBJECTIVE

The purpose of this study was to determine a) if SNAP-Ed participants in Utah were interested in online classes on nutrition and physical activity, b) online formats the limited-income audience most frequently used, and c) concerns related to nutrition and physical activity to guide online education format and content delivery.

METHOD

A needs assessment conducted for the Utah SNAP-Ed program in 2018 established client interest in online classes. The University faculty and marketing team followed best practices to develop an evidence-based survey (Dillman et al., 2014). To reach low-income internet users, the 13-question IRB-approved survey (Exempt Protocol #9552) was sent digitally to a listserv of SNAP participants, past attendees of SNAP-Ed in-person classes who subscribed to email lists, and followers of Utah's SNAP-Ed social media. In addition, paper copies of the survey distributed in seven urban and rural counties expanded the reach. Respondents who completed the survey entered a drawing for a chance to win one of five $25 gift cards from a major online retailer.

The survey included six demographic questions and a question about participation in SNAP-Ed classes:

interest in online classes, interest in an online course series, nutrition and physical activity behaviors, and use of websites seeking information. Additionally, two open-ended questions asked about respondents' primary concern regarding healthy eating and being physically active.

Descriptive statistics of survey responses collected in Qualtrics (Qualtrics, Provo, UT) and exported into SPSS 26.0 (IBM Corp, Armonk, NY) for analysis summarized participant demographics. Associations between categorical variables and interest in classes were assessed using chi-square tests for independence. Open-ended questions independently coded by two researchers identified patterns in responses. Researchers grouped responses into various categories, met to reconcile differences in the coding, agreed upon the categories, and then identified overarching themes.

RESULTS

Eight-hundred sixty-nine (1.5%) respondents completed the online survey out of approximately 59,550 people solicited in September 2018. The majority of respondents were non-Hispanic (83%), white (88%), female (88%), and 71% had not participated in a SNAP-Ed class (Table 1). Forty-five percent of respondents expressed definite interest in online nutrition/physical activity classes, 43% stated "maybe," 38% were interested in a series of classes, and 44% responded "maybe." Females were more likely than males to express interest in online classes (p = .025), however there was no association between gender and interest in a series of classes. Hispanics were more likely than non-Hispanics to express interest in both online classes (p = .014) and a series of classes (p = .045). There were no significant associations between age or race and interest in online classes. Google (88%), YouTube (51%), and Facebook (41%) were the most frequently selected options of where respondents go to find nutrition and physical activity information online.

Healthy eating concerns reported in response (n = 859) to the open-ended question about their number one concern when it comes to healthy eating were coded into three themes-- knowledge, preferences, and prohibitive factors. Table 2 summarizes the themes and subthemes identified from this question.

Knowledge encompasses barriers or or concerns addressed through direct education and skill building. Subthemes included knowledge gaps, time, portion sizes, specific food/nutrient concerns, and variety. Examples included confusion about how to eat healthy because of many different ideas on what is healthy, and healthy seems to take too much time.

Preferences refer to the perception that healthy eating would leave the respondent or his/her family unsatisfied, therefore making it difficult to sustain. Subthemes included family/child preferences, other food/taste preferences, and satiation. Examples were having to give up the food you love, finding ways to incorporate healthy foods into picky kids' diets, and healthy eating will keep one full, and feeling like "when I eat healthy I can eat a ton of food."

Prohibitive factors include tangible barriers that make it difficult to obtain or consume healthy foods or perceived as difficult for the individual to alter or control. Subthemes included special dietary needs, access/cost, pesticides/chemicals, and shelf-life of fresh food. Examples were price on a low-income budget it is difficult to always pick healthy choices for oneself and family and "choosing foods that have not been contaminated with pesticides."

Physical activity concerns identified from responses (n = 852) to the question about their number one concern when it comes to being physically active included external individual factors, internal individual factors, motivators, and community level barriers. Table 3 summarizes the themes and subthemes identified for this question.

External individual factors include barriers that affect the individual, but do not pertain to the physical body, including time, family responsibilities, and lack of childcare, knowledge, motivation, or enjoyment. Examples included getting someone to watch the kids or understanding how to do physical activity with them, "limited time, and not knowing what to do."

Internal individual factors impact the individual -- primarily the physical body or self, such as lack of energy, physical limitations, safety concerns, and dietary concerns. Examples include long term/permanent injuries preventing physical activity and overdoing and leading to injury.

Motivators include why people feel motivated to be active, including the subthemes of staying healthy and

losing weight. For example, being able to manage weight, feel better with more energy, a better mood, feel more relaxed, and sleep better.
Community level barriers include barriers environment, cost, and access. Examples are not having access to equipment or facilities to exercise due to cost, and cold weather preventing or reducing the desire to go outside to exercise.

DISCUSSION

Results from a sample of predominantly females and Hispanics suggest there is interest in Utah for online SNAP-Ed programming. Results also suggest that desired online education should focus on building knowledge and skills about how to eat healthfully with limited time and money. SNAP-Ed programs focus on building healthy eating skills with limited time and money, making it an ideal program to move to online formats. Additionally, education, ideas, and skills on safety during physical activity for all ability levels would likely help SNAP-Ed eligible participants become more active. The results from this study reinforce the need for knowledge, and skills, and concerns of SNAP-Ed audiences. It also provides insight into how SNAP-Ed programs, in-person and online, can motivate and inspire behavior change based on barriers to eating healthy and being physically active (Au et al., 2015; Bensley et al., 2011; Lee, et al., 2019; Neuenschwander, et al., 2013).

While online SNAP-Ed classes build the knowledge and skills needed to live an active and healthy life, many respondents expressed community-level or external barriers that make healthy living difficult. Nationally, SNAP-Ed programs are in unique positions to address community-level factors through changes in policies, systems, and environments. This combination of direct nutrition education and community level change is more likely than direct education alone to result in behavior changes among the target audience (U.S. Department of Agriculture Food and Nutrition Service, 2020).

Furthermore, while programming targets participants who are interested in online courses, course developers should also consider if some of the reasons why people selected "not interested" can be remedied in course content or in the marketing of the course. Online programming marketed and maximized by paid ads on Google, YouTube, Facebook, Pinterest and Instagram, takes in consideration the study results showing where most participants spend their time online. These findings will be used to develop a free, asynchronous course based on the Create Better Health research-based SNAP-Ed curriculum (Savoie-Roskos et al., 2019).

STUDY LIMITATIONS

The study was on a convenience sample representing 1.5% of the target group. Similar studies could consider extending the time allowed for completion of the survey and send follow-up reminders to increase response rate. Data was self-reported, which increases the risk for response bias. The survey results represent Utah and is limited to is geographical reach.

FUTURE RESEARCH IMPLICATIONS

This study identified the needs and interest of SNAP-Ed eligible adults in Utah for online nutrition and physical activity classes, future research should compare online participants' knowledge gain and behavior change to in-person participants' results. Additionally, program curriculum and endeavors in policies, systems and environments SNAP-Ed programs could help identify participants' perceived barriers to adopting nutrition and physical activity recommendations. Further research on intervention adoption to minimize the barriers discussed in this study and its effectiveness has the potential to strengthen both in-person and online programs.

You may click here to access the references, tables, and graphs for this article.

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Table 1

Demographic Characteristics of Survey Respondents (N = 869)

Characteristic	Respondents	
	n	%
Gender		
Female	760	88
Male	97	11
No response	12	1
Age, years		
18-34	439	50
35-59	402	46
60+ years	22	3
No response	6	1
Race		
American Indian/Alaskan Native	25	3
Asian	13	2
Black	21	2
Native Hawaiian/Pacific Islander	18	2
White	766	88
No response	26	3
Ethnicity		
Hispanic	118	13
Non-Hispanic	719	83
No response	32	4
Previously participated in a SNAP-Ed class		
Yes	171	20
No	617	71
Unsure	72	8
No response	9	1

Table 2

Participants' Top Healthy Eating Concerns

Themes	Subthemes	Key Example Quotes
Knowledge	Knowledge gap	"Knowledge. [There are] so many different ideas on what is healthy right now. I'm confused at how to eat healthy."
	Time	"That I am not fooled by "healthy" products that are not healthy."
	Portion sizes	"The types of foods that are considered healthy and how to integrate them into my daily routine."
	Variety	"Healthy seems to take too long."
		"Time. Cooking healthy almost always takes more time."
	Specific food/nutrient concern	"Getting enough vegetables and less sugar."
		"Variety and not eating the same healthy food over and over."
		"Getting enough nutrients for the day. Balancing calories with 3 meals plus snacks everyday as well as watching the ingredients."
Preferences	Child/family preferences	"I won't be able to get my kids to eat stuff that's good for them."
		"Finding ways to incorporate healthy foods into picky kids' diets."
	Other food preferences	"I love sugar and fatty desserts and it's hard to give that up."
	Satiation	"Will it taste as good as unhealthy things?"
		"That it will keep me full, lately I feel like when I eat healthy I can eat a ton of food."
Prohibitive factors	Access	"Being able to find high quality produce."
		"Finding the right food to eat."
	Cost	"The cost of eating healthy is expensive."
		"Being able to afford the food I need to be healthy."
		"Reducing sodium and sugar on a budget."
	Pesticides/chemicals	"Processed food/chemical additives."
	Shelf-life	"Constant shopping (fresh foods go bad fast)."
	Special dietary needs	"My daughter has multiple severe food allergies, so balancing healthy, allergies, and prep time is my biggest challenge."

Table 3

Participants' Top Physical Activity Concerns

Themes	Subthemes	Key Example Quotes
External individual factors	Childcare	"Being able to do so while taking care of children/finding time alone or figuring out to be active with children."
	Knowledge	"How much activity do I need to be healthy?"
	Family responsibilities	"Finding activities that the whole family likes."
	Enjoyment	
	Motivation	"Finding something I like doing."
		"Just finding the motivation to start and keep going."
	Equipment	
		"Clothes, shoes to exercise in."
Internal individual factors	Physical limitations	"What activities I can do with limited mobility."
		"Long term/permanent injuries preventing physical activity."
		"Chronic pain."
	Safety concerns	"Injuring myself due to not fully knowing the exercise or because of trying too much too soon."
		"Wearing out my joints."
	Lack of energy	"It takes effort and energy I don't feel I have."
		"My energy levels are always so low that I don't have enough to exercise."
	Diet/food concerns	"Am I eating right food to help with growth?"
Motivators	Staying healthy	"Being able to manage our weight, feel better with more energy, a better mood, feel more realized and sleep better."
		"Having energy to live long and keep up with my kids."
		"Staying on this planet as long as I can for my daughter. I'm all she has."
	Losing weight	"Slimming down."
		"Weight loss."
Community level barriers	Cost	"There is no community for it without extreme costs."
		"Affordable exercise options in the winter."
	Access	"Accessibility."
	Environment	"Air quality in the winter. I can't walk outdoors in the inversion season."
		"To stay active in the heat of the summer."