7-30-2019

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Cogent Social Sciences

Taylor & Francis
Taylor & Francis Group

ISSN: (Print) 2331-1886 (Online) Journal homepage: https://www.tandfonline.com/loi/oass20

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To cite this article: Kailey Snyder, Zainab Rida, Emily Hulse, Dipti Dev & Danae Dinkel | (2019) Exploring rural and urban Go NAP SACC trained child care providers perceptions and needs regarding the promotion of physical activity and healthy eating, Cogent Social Sciences, 5:1, 1650412

To link to this article: https://doi.org/10.1080/23311886.2019.1650412

Accepted author version posted online: 30 Jul 2019.
Published online: 16 Aug 2019.

Snyder et al., *Cogent Social Sciences* (2019), 5: 1650412
https://doi.org/10.1080/23311886.2019.1650412

cogent social sciences

SOCIOLOGY | RESEARCH ARTICLE

Exploring rural and urban Go NAP SACC trained child care providers perceptions and needs regarding the promotion of physical activity and healthy eating

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Received: 25 March 2019
Accepted: 26 July 2019
First Published: 30 July 2019

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Reviewing editor:
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Abstract: Introduction: Early childhood is an optimal time to support the development of physical activity and healthy eating behaviors. As over half of children are cared for in family child care homes and child care centers it is crucial to ensure these behaviors are being supported in the childcare setting. One such process that supports provider's education and implementation of healthy behaviors in the childcare setting is the Nutrition and Physical Activity Assessment in Child Care (Go NAP SACC). However, after participation in Go NAP SACC, little is known regarding how to further support providers in their promotion of healthy behaviors. More research is needed in the United States (U.S.), especially in rural populations, to understand providers' reported perceptions of health behavior promotion after receiving Go NAP SACC training and implementing best practices. Purpose: The purpose of this study was to assess the nutrition and physical activity reported practices and perceptions of U.S. rural and urban providers who had received Go NAP SACC training and implemented Go NAP SACC best practices within the last two years. Methods: Semi-structured interviews were completed with 12 providers (6 rural, 6 urban) in the Midwestern U.S. based on constructs of the Social Cognitive Theory (i.e., personal behaviors, cognitive factors, and socioenvironmental factors). Data were analyzed via immersion and crystallization and validated with reflexivity and peer debriefing. Results: Findings indicated Go NAP SACC trained providers in both rural and urban areas felt they had the resources and knowledge needed to

ABOUT THE AUTHOR

Kailey Snyder The authors of this manuscript are committed to improving the health and well-being of Nebraska children and childcare providers. Combined, they have over 30 publications focused on Physical Activity and/or Nutrition in the childcare setting. This paper has led to additional investigations focused on how childcare providers communicate and engage with parents regarding health behavior promotion. Further, it has led to multiple grant submissions related to projects focused on enhancing childcare provider health and well-being. The authors firmly believe that a healthier childcare provider means a healthier child.

PUBLIC INTEREST STATEMENT

This paper examined rural and urban childcare providers reported perceptions and experiences with physical activity and health eating promotion after participating in the Go Nap Sacc program. Our findings demonstrated providers readily utilized Go NAP SACC resources for health promotion however many were unable to state physical activity and nutrition recommendations specifically. Further, providers' confidence to promote physical activity and nutrition is influenced by their personal history and focusing on providers' personal health and well-being could improve their health promotion strategies as well as the physical activity and nutrition environment of the childcare center or home.

promote physical activity and healthy eating. However, they still struggled with barriers related to adequate space for activity, funding for equipment, parent engagement, and health promotion among staff and parents. Conclusion: Incorporating opportunities for follow-up interactions after initial training may help reduce the barriers that persist after Go NAP SACC training. In addition, future interventions should consider the factors of parent engagement and staff wellness during intervention development and execution.

Subjects: Childcare; Behavioral Medicine; Early Childhood

Keywords: physical activity; nutrition; childcare; qualitative

1. Introduction

Early childhood (0–5 years old) represents an optimal time for the initiation and development of healthy behaviors such as physical activity and healthy eating. The influence of child care providers on children's health behaviors is especially important as the Center for Disease Control & Prevention (CDC) reports 6 in 10 children aged 3–5 are cared for in non-parental care arrangements such as child care centers or family child care homes (CDC, 2017). Thus, child care providers have the potential to serve as an important facilitator in young children's health behaviors.

Numerous research studies have been conducted to determine how child care providers can best support the health behaviors of young children (Dowda et al., 2009; Lanigan, 2014; Lindsay, Salkeld, Greaney, & Sands, 2015; Sisson, Smith, & Cheney, 2017). Importantly, previous quantitative work has determined initiatives developed to improve young children's health must consider the child care providers' existing belief set, and providers may not feel they have the necessary skills to promote healthy behaviors (Dev et al., 2017; Dowda et al., 2009; Lanigan, 2014). Previous work has demonstrated providers have a strong influence on children's behaviors and are a trusted source of health information by parents (Johnson et al., 2013). Research has also shown empowering the provider to be a role model through education and training is beneficial (Lindsay et al., 2015; Sisson et al., 2017).

To support child care providers' promotion of healthy behaviors, several local and national organizations have developed trainings and programs to promote healthy eating and physical activity in the child care setting (Ammerman et al., 2007; Mikkelsen, Husby, Skov, & Perez-Cueto, 2014). One of the most widely implemented initiatives in the United States is the Nutrition and Physical Activity Self-Assessment for Child Care (Go NAP SACC; Ammerman et al., 2007). Go NAP SACC was designed in 2002 by researchers at the University of North Carolina-Chapel Hill to combat childhood obesity by supporting child care providers in their ability to set goals and make improvements to their health behavior practices. The Go NAP SACC process includes five steps: self-assessment (pre and post); goal setting and action planning; execution of action plans; engaging in training and technical support from Go NAP SACC trainers; and follow-up and reinforcement (Benjamin et al., 2007). Nationally recognized as an evidence-based program, Go NAP SACC has been implemented across the United States at both the local and state level. Go NAP SACC has been thoroughly studied and deemed an effective tool for promoting healthy behaviors in both family child care homes and child care centers in rural and urban settings (Battista et al., 2014; Dev et al., 2018; Dinkel et al., 2018; Ward et al., 2017).

Due to the evidence of its effectiveness, collaborators across the state of Nebraska began implementing Go NAP SACC in 2010. From July 2014 to October 2018, 443 child care facilities (home and center) in Nebraska have completed the Go NAP SACC process (Dev et al., 2018; Dinkel et al., 2018). As Go NAP SACC's presence continues to increase in the state of Nebraska, there has been a growing need to determine how to best support these providers after they have completed the Go NAP SACC process. Assessing providers reported practices and perceptions of physical

activity and healthy eating after completing Go NAP SACC could help guide efforts in Nebraska. Specifically, it could help determine how to continue to support providers in making changes to improve children's health and to understand what support providers still need.

It is also crucial in a predominantly rural state like Nebraska to include rural and urban providers. Previous research suggests rural and urban providers differ regarding how they would like to receive training on children's healthy eating and physical activity (Larson, Looby, Frost, Nanney, & Story, 2017). Specifically, while both groups appear to have similar preferences regarding how provider trainings are delivered and what content is included, rural providers may have additional barriers such as scheduling trainings and issues with travel. In addition, children in rural areas are more likely to be classified more obese than children in urban areas and issues such as limited food access and lack of outdoor play area may contribute to these disparities (Johnson & Johnson, 2015; Larson et al., 2017). Thus, it is important to examine both rural and urban providers' perceptions. Therefore, the purpose of this study was to assess the nutrition and physical activity practices and perceptions of rural and urban providers who had participated in Go NAP SACC training within the last two years.

2. Methods

Semi-structured interviews were conducted in the spring/fall of 2018. The study was approved by a University affiliated Institutional Review Board (IRB) to ensure the ethical protection of participants.

2.1. Participants & recruitment procedure

Participants (n = 12) were included in the study if they either served as a family child care home provider or a director of a childcare center and had personally attended a Go NAP SACC training within the last two years. In addition, all participants needed to have completed 1) the pre-assessment, 2) the Go NAP SACC training in the last two years, 3) and an action plan with their Go NAP SACC trainer that allowed them to develop and implement nutrition and physical activity goals for child care facilities. To recruit providers, the state coordinator for Nebraska Go NAP SACC provided a list of eligible facilities who met the criteria above. The Go NAP SACC coordinator also sent out an introductory e-mail to all eligible participants informing them they would be contacted to participate in a research opportunity to discuss their promotion of healthy behaviors. In addition, the primary investigator utilized a cold calling strategy from lists obtained from Nebraska Go NAP SACC as well as the Nebraska Department of Education's, Step up To Quality agency. Participants were selected based on maximum variation purposive sampling with a goal of having half of the participants work in the child care center setting and half of providers work in family child care homes as well as half of providers reside rural communities (<20,000 residents) and half of providers reside in urban communities (>20,000 residents; Harris et al., 2009). The primary investigator, a trained, experienced qualitative researcher conducted all 12 interviews. The researcher contacted participants via telephone and/or e-mail to determine interest in participating and to schedule an interview time. A total of 38 providers were contacted with 16 noting initial interest. Of those 16, 12 responded and an interview was scheduled. Participant demographic data can be seen in Table 1.

2.2. Interview protocol

The interview guide was developed based on constructs of Social Cognitive Theory (SCT) and focused on the provider's behaviors (e.g., offering, intentions, reinforcement), cognitive factors (e.g., self-efficacy, knowledge) and socioenvironmental factors (e.g., normative beliefs, opportunities, barriers). The guide was developed by two trained qualitative researchers with a combined 15 years of experience conducting qualitative interviews. Once the qualitative researchers were satisfied with the questions, the guide was sent to a Go NAP SACC trainer and two researchers experienced in the Go NAP SACC process. They were asked to provide feedback on the interview guide and ensure that questions were reasonable for individuals having participated in a Go NAP SACC training. The interview guide was then finalized after minimal wording changes were

Table 1. Participant demographics

Participant	n	%
Gender		
Male	1	8.4%
Female	11	91.6%
Age		
31–40	7	58.3%
41–50	3	25.0%
51–60	2	16.7%
Race		
White	11	91.6%
African-American	1	8.4%
Residence		
Rural (population < 20,000)	6	50.0%
Urban (population > 20,000)	6	50.0%
Years of experience in child care		
1–10 years	5	41.6%
11–20 years	5	41.6%
20+ years	2	16.8%
Type of facility		
Child care center	6	50.0%
Family child care home	6	50.0%
Length of time elapsed since training		
<6 months	0	0.0%
6–12 months	2	16.6%
12–18 months	6	50.0%
18–24 months	4	33.3%

completed. Before beginning the interview, participants were informed of the purpose of the study and given a brief description of who was conducting the research. The participants did not know the interviewer in any formal or informal capacity prior to the interview.

Prior to the interview beginning, verbal **assent** was obtained. The Institutional Review Board affiliated with the University in which this study took place determined this study posed minimal risk to the participants and thus allowed for assent to be obtained verbally over the phone after a study description was read to participants. After being read a description that explained the purpose of the study and the risks involved (i.e., loss of confidentiality), participants were then asked if they were interested in participating as well as if it was acceptable for their interview to be audio recorded. Once verbal assent was received via a yes to both responses the interview was initiated. The semi-structured interview guide consisted of 35 open-ended questions, allowing the participant to elaborate freely based on their interests and experience. Guided by SCT constructs (behavior, cognitive, socioenvironmental) questions focused on providers' perceptions and experiences with promotion of physical activity and healthy eating behaviors. Sample interview questions can be seen in Table 2. At the completion of the interview, participants verbally provided the following demographic information: age, race/ethnicity and years of experience working in child-care. Interviews lasted approximately 40 min.

Table 2. Sample interview questions

SCT construct	Interview questions
Behavioral factors	What healthy behaviors do you promote at your child care center or home? How do you promote/encourage physical activity (nutrition)? Do you have any intentions to change your current nutrition or physical activity practices? If so, what are you wanting to change?
	How important is it for you to promote physical activity (healthy eating) to young children? Why? Tell me about your confidence in your personal ability to promote physical activity (healthy eating) with children in your care
	What do you think children learn about healthy behaviors by being in your care?
Personal cognitive factors	If you want more information regarding physical activity/healthy eating where do you go?
	Tell me about the physical activity (nutrition environment) in your childcare center or home.
	What do you feel like you could be done in your center or home to help children be more active (eat healthier)?
	What barriers do you have for providing a physically active (nutritious) environment?
Environmental factors	What is the health culture like at your childcare center/home for you or your staff? If you could design any type or initiative or training to improve physical activity and or healthy eating in your center or home environment, what would you do?

2.3. Data analysis

Interviews were transcribed verbatim and uploaded into NVivo11 (QSR International, 2018). Data were analyzed via a deductive direct content analysis in which the analysis was guided by the existing theory, SCT (Hsieh & Shannon, 2005). Interviewing and data analysis occurred concurrently to ensure data saturation was achieved with the 12 interviews. Saturation was considered achieved based on the qualitative criterion of redundancy (Morrow, 2007). Specifically, once no new data were appearing and the interviewer began to hear the same information repeated, data collection was halted and a more in-depth analysis began. A reflexivity approach was taken during the in-depth analysis to reduce researcher bias. This included utilizing multiple researchers in the analysis process and having the researchers write out their biases and reflect on them prior to data analysis (Barry, Britten, Barbar, Bradley, & Stevenson, 1999). After the biases reflection, the primary researcher began by immersing herself in the data and reading through each interview transcript in its entirety multiple times. The researcher then took the time to reflect on the data prior to developing initial codes and themes based on the predetermined theoretical constructs. After codes and themes were developed validation was conducted by an outside researcher via peer debriefing. The peer debriefing process consisted of a review of all codes/quotations in order to confirm or refute findings (Lincoln & Guba, 1985). All discrepancies noted by the second researcher were discussed via multiple in-person meetings until mutual agreement was reached. Once codes and themes were established, an additional analysis occurred to determine differences between provider type (home versus center) and residence type (rural versus urban). All organized themes were divided into rural and urban based on the participant characteristics. Theme responses were then compared between the two groups by reading through all themes multiple times to see if differences could be seen. Minimal differences were seen based on provider type; however, some differences did exist based on residence. Residence-based differences are noted within themes.

Table 3. Qualitative findings overview

Theme	Subtheme	Example quote
Behavioral factors	*Ample Opportunities for Play*	*"We schedule two blocks of time morning and afternoon, usually around 45 minutes of each block."*
	Natural Promotion of Physical Activity	*"It's just a part of what we do for the day, they don't even think of it as something that's a chore."*
	Rural Providers Active Involvement in Physical Activity	*"My group of kids are all followers so it just takes me initiating doing something and then they will want to do what I am doing."*
	Verbal Promotion of Healthy Eating Promotion	*"I will talk to them about like fruit and vegetables and how those will make you big and strong and keep you from getting sick."*
Cognitive factors	*Personal Experience Impacts Self-Efficacy*	*"Oh I think um I don't know I raised six kids of my own, and we lived on a farm and our thought was you know they went outside everyday uh and I pretty much let them do, and I think if you let them do what they want to do outdoors they do get a lot of physical activity."*
	Value of Healthy Habits	*"It's very important, with social media and things you see you just know they're going to get a healthy meal here and they are going to the get physical activity here cause you don't know what they are getting at home."*
	Go NAP SACC Serves as an Ongoing Resource	*"I have that binder from the Go NAP SACC training and then I'll just go online and search for idea. I follow a couple teacher blogs."*
	Lack of Knowledge of Physical Activity and Healthy Eating Recommendations	*"You know what, I used to know exactly the recommendations and I want to say its 90 minutes and we always try for 60, the day is just so full with everything else"*
Environmental factors	*Space and Funding Hinder Physical Activity*	*"I wish I had a big gym like a center does."*
	Family Style Dining Creates Positive Food Choices & Healthy Role Models	*"I encourage them [staff] to eat with the kids you know try to avoid chugging a pop in class, encourage them [staff] to drink water throughout the day."*
	The Cost of Healthy Eating	*"The more expensive fruits or vegetables are almost impossible to purchase because again it's the expense. You want to have [cook] asparagus? Come on, asparagus is really expensive."*
	Opportunities for Further Improvements	*"I wish I had handouts to give to parents because sometimes they want to hear from an expert. Like I have one family and the kids drink [energy/sports drink] it's their favorite thing … and I'm like nope I can't have that here go ahead and take that home."*

3. Results

The determined themes based on each SCT construct can be seen in Table 3.

3.1. Behavioral factors

3.1.1. Ample opportunity for play

All providers reported an equal split between offerings of structured activity (e.g., games, yoga) and unstructured activity (e.g., free play). The most commonly reported structured activity was general games followed by yoga via a *Youtube* video. Unstructured play most commonly consisted of outdoor free play or open gym play. Only one provider reported trying to offer a certain amount of time for physical activity. She reported, *"We schedule two blocks of time morning and afternoon, usually around 45 minutes of each block"* (Rural Center Provider).

3.1.2. Natural promotion of physical activity

When asked how physical activity was promoted, the majority of providers did not report utilizing specific promotion strategies but rather that the routine of the day allowed for natural promotion. As one urban home provider noted, *"It's just a part of what we do for the day, they don't even think of it as something that's a chore."* Two providers (one urban, one rural) did report using verbal promotion. As the rural center provider stated, *"We always stress why we do the activities and how they keep our bodies fit and how exercise is good for our bones and muscles and puts us in a better mood."*

3.1.3. Rural providers active involvement in physical activity

Interestingly, staff participation differed between rural and urban providers. Among urban providers, facilitation of activities was more commonly mentioned than actual active participation. As one urban home provider recalled, *"Sadly, I am a slacker in that category, when we are at the park I am always walking around with them making sure everyone is staying where they are supposed to be."* Among the rural providers, all but one reported actively participating more frequently than facilitating. For example, *"My group of kids are all followers so it just takes me initiating doing something and then they will want to do what I am doing"* (Rural Home Provider). A rural center provider that reported an equal split between facilitation and modeling reported this split depended on the staff member's age. She stated:

> *"It depends on the staff. The gals we hired that were either college students or after school high school students were younger and yes get very involved with the kids. However, a lot of the other staff that made up half of our program those ladies were like grandmas you know, retired and this was like a part-time job. They aren't as likely to engage in those activities as the young ones. They might show the kids how to do it and then just watch them without actually participating."*

3.1.4. Verbal promotion of healthy eating

The primary method for promoting healthy eating was through verbal promotion of education related to healthy foods. In regard to the verbal promotion, providers stated utilizing strategies to assess hunger cues. For example:

> *"One of the big things we try to do is ask "is your belly full?" Do you really think you want that second helping or that third helping or that fourth helping? And I try to get them to think about that before they fill their plate again."* (Rural Home Provider)

A mix of rural and urban providers reported using verbal education to discuss healthy eating. Such as, *"I will talk to them about like fruit and vegetables and how those will make you big and strong and keep you from getting sick."* (Urban Home Provider). A Rural Center Provider noted, *"We do a unit on taking care of your body and being healthy and within that we will talk about what foods are good for you and you know which should you [eat and which] should [you] maybe not eat as much of."*

3.2. Cognitive factors

3.2.1. Personal experience impacted self-efficacy

Both rural and urban providers reported their personal health behaviors and experiences when discussing their level of confidence to promote physical activity or nutrition to the children in their care. This varied between positively or negatively influencing confidence. For example, related to physical activity experiences one rural center provider stated, *"I'm confident, I raised six kids of my own and we lived on a farm and our thought was you know you go outside every day and I think if you let them do what they want to do outdoors they will get a lot of physical activity."*

Related to personal behaviors of healthy eating, one rural home provider reported having lower confidence due to her own unhealthy eating, *"I'm somewhat confident, I just don't really like to cook that much. I wish I liked it more. So I always find things that are easy to cook. I try to make it so it's not always unhealthy fast stuff but that is also a struggle in my own life."*

3.2.2. Value of healthy habits

All providers felt promoting physical activity and healthy eating to be important to young children and often cited their reasoning to be related to factors outside of their control or the childcare environment. For instance, one rural home provider stated, "*It's very important, with social media and things you see you just know they're going to get a healthy meal here and they are going to the get physical activity here cause you don't know what they are getting at home."* Another urban home provider reported, "*It's important because I don't want them to see people just going to [fast food restaurant]. I really make an effort to eat the fruit and vegetables here."* Finally, a rural center provider related it to health benefits as well as external environment concerns. She noted, "*They're kids! They need to be up and moving so they can develop their muscles, the brain development they need to learn, the right things to eat, the right ways to move. Otherwise their on their screens all the time and we've got problems with obesity and unhappy kids."*

3.2.3. Go NAP SACC serves as an ongoing resource

Providers reported utilizing Go NAP SACC as a resource for physical activity and healthy eating promotion even after they were complete with the Go NAP SACC process. Specific to physical activity, when asked where providers get their information regarding physical activity promotion all of the rural providers noted Go NAP SACC as a resource in addition to the use of *YouTube* and *Google* searches. One rural home provider said, *"Well for one I have my Go NAP SACC folder, I do use that a lot, there is so much good information in there."* Urban providers were more split on use of Go NAP SACC with only half of providers reporting use of Go NAP SACC resources. One urban home provider had a positive view of the Go NAP SACC program stating, *"The NAP SACC program was very helpful as far as different things that I can know what you should be doing versus guessing or what you did when you grew up."*

Specific to healthy eating promotion, all providers referenced Go NAP SACC as a resource for healthy eating promotion in addition to *Google* searches and peers. As one urban center provider said, *"NAP SACC focuses on gardening and making sure you have colorful foods and you like sit down as a family and have the teachers encourage them to try new foods."* A rural center provider noted, *"I have that binder from the Go NAP SACC training and then I'll just go online and search for idea. I follow a couple teacher blogs. There's this one that has like a teacher page store when you can get her resources."*

3.2.4. Lack of knowledge of physical activity and healthy eating recommendations

Although using *Go NAP SACC*, when providers were asked if they were familiar with the recommendations for amounts of activity children should engage in all reported yes; however, none of them were able to verbally state the specific recommendations. Responses typically included, *"You know what, I used to know exactly the recommendations and I want to say its 90 minutes and we always try for 60, the day is just so full with everything else"* (Urban Center Provider). Or as another

rural center provider stated, "they [Go NAP SACC] say children should have opportunities to go outside but I don't know they specifically state like activities or length of time". Only one provider referenced a Go NAP SACC best practice when discussing physical activity opportunities. As this rural center provider stated, *"We did just add going outside one more time a day I think was a [Go NAP SACC] best practice to go three time a day I believe*." When asked about recommendations regarding nutrition providers typically vaguely stated, "We follow the state food program".

3.3. Environmental factors

3.3.1. Space & funding barriers to physical activity

The most commonly cited barriers for providers were space to engage in activity (e.g., more open space areas) and funding for playground equipment (e.g., teeter-totters, slides). The issue of space was not limited to a certain type of child care provider as both home and center providers reported this as an issue. One urban center provider noted, *"I mean honestly if I could provide them with a bigger space that in itself would promote them to be more active, we don't have the biggest space."* Another rural center provider noted, *"We would love to have a larger playground; however, with our location it will probably never happen."* Conversely, an urban family provider mentioned wishing for the amenities a center can provide by saying, *"I wish I had a big gym like a center does."* Those who reported funding barriers primarily reported a need for larger playground equipment. For example, *"You know equipment, like I looked into buying a teeter totter for the playground, well that's $1,500. I dream big but my pocketbook is small"* (Urban Center Provider).

3.3.2. Family-style dining creates positive food choices & healthy role models

When discussing the nutrition environment within centers and homes all but one provider reported using and having a positive experience with family-style dining. As one urban home provider noted, *"I was very skeptical, I didn't understand the concept, if a child had a choice of putting it on their plate I thought they would never try it but then I had a little girl that would go a week without eating and all of a sudden one day halfway through the meal she asked if she could have some, family style dining is amazing."*

Family-style dining also allowed staff to sit next to the children and demonstrate healthy choices by modeling those choices through their own personal dietary choices. A few providers reported staff modeling occurred by having a policy in place that did not allow staff members to bring in outside food. For example, *"We don't allow the staff to bring outside food in unless they're sitting in the office eating it, so like if they go get [fast food] fine but they're not gonna sit in front of the kids … and eat crappy [fast food]"* (Rural Center Provider). Another urban center provider had a similar stance on the matter, *"I encourage them [staff] to eat with the kids you know try to avoid chugging a pop in class, encourage them [staff] to drink water throughout the day."*

3.3.3. The cost of healthy eating

The main barrier noted was cost however half of the providers reported no barriers to promoting healthy eating. Those that did struggle with cost mentioned factors such as, *"the more expensive fruits or vegetables are almost impossible to purchase because again it's the expense. You want to have [cook] asparagus? Come on, asparagus is really expensive"* (Urban Center Provider). One rural provider did note a barrier of inadequate storage space. As this rural center provider recalled, *"We did have a barrier two years ago we didn't have enough food space for fresh food we just had a standard refrigerator so we weren't able to do a lot of fresh produce but now we've upgraded and have a bigger fridge."*

3.3.4. Opportunities for further improvements

All providers regardless of residence noted they would enjoy continuing education opportunities and that any future education should be given via in-person trainings utilizing hands-on training models. Providers primarily wanted trainings to occur annually and rural providers noted that the training should be in a location convenient to everyone. Most providers wanted the training to be

delivered by an expert rather than other teachers. As an Urban Center Provider said, *"A trainer, get the best of the best expert who deals with the kids, who is in high demand and has a real talent for this stuff."* One Rural Center Provider felt a more general trainer could be helpful as she noted, *"somebody who really believes in it. It could be a teacher but it could be someone who just has a love for exercise or nutrition I don't know if they would have to have like a special degree or anything as long as you are trained in what you are doing."*

Many providers made reference to the need for future education that incorporates parent education. This stemmed from a concern that despite the healthy behaviors being promoted within the child care setting, parents were not reinforcing these habits at home. For example, *"We have parents that would bring their kids in with like a can of mini potato chips and [microwavable turnovers] for breakfast."* (Urban Center Provider). Another Rural Home Provider noted, *"I wish I had handouts to give to parents because sometimes they want to hear from an expert. Like I have one family and the kids drink [energy/sports drink], it's their favorite thing … and I'm like nope I can't have that here go ahead and take that home."* One Urban Center Provider even suggested some potential programming related to parent involvement, *"one thing I've said is they have what they call a healthy kids day and they invite parents to come and its after hours, like a family night … they play games and they encourage the parents to play with the kids."*

Not only did providers want more resources and education around parent involvement but also for staff wellness as well. Half of the providers both rural and urban noted a need for staff wellness trainings when asked what future resources they would like to see. As one Rural Center Provider recommended, *"maybe not only trainings that tell staff how to promote this with kids but what can you do for yourself, you know as an adult what are ways that you can help your present situation to improve or how do you keep doing what you're doing. I think that's important too because if they're not healthy and not taking care of themselves then they certainly can't take care of anyone else."* A few staff members even gave programming suggestions such as *"some type of program where we can all get together and you know either workout together or you know track nutrition habits. I know some work places do like biggest loser games, you know just something where you can work on stuff together and not feel like you're in it by yourself."* (Rural Center Provider).

4. Discussion

This study has provided valuable insights into the perceptions of providers that have received *Go NAP SACC* training and implemented *Go NAP SACC* best practices. Overall, providers reported engagement and support of healthy nutrition and physical activity behaviors that have the potential to elicit positive health behaviors in the children they work with. These results are consistent with quantitative studies reporting that *Go NAP SACC* improved Nebraska childcare providers' nutrition and physical activity-related best practices (Dev et al., 2017; Dinkel et al., 2018).

Specific to behavioral factors, providers reported utilizing best practice strategies promoted through Go NAP SACC such as offering different types of opportunities for physical activity (structured, unstructured) and verbal promotion of healthy eating (Dev et al., 2017; E Go NAP SACC Training, 2017). However, there were several best practice strategies discussed in *Go NAP SACC* trainings that previous research has shown to be effective that were not brought up by providers such as verbal encouragement of physical activity, teaching with movement, teaching fundamental motor skills, working with parents to encourage activity and making classroom routines and transition times active opportunities (Vanderloo et al., 2014). Due to the qualitative nature of this study, we do not know if these providers were or were not exhibiting these behaviors. However, given the plethora of information providers receive during training and knowledge of the positive influence of these best practices on children's behaviors, a follow-up targeted training focused on promotion of physical activity-specific behaviors could prove beneficial. Interestingly, one of the few differences found between providers based on residence revealed rural providers more often reported active participation with children during physical activity while urban providers more often reported facilitation of activities. While active engagement has shown to increase children's

physical activity, facilitation of activities is also necessary; thus, more research is needed to determine the level of active engagement needed to significantly impact children's physical activity (Gunter, Rice, Ward, & Trost, 2012).

In line with cognitive factors of SCT, providers who had positive mastery experiences with physical activity or healthy eating within their own lives or with their own families reported higher self-efficacy for promoting these behaviors within the childcare setting (Kelder, Hoelscher, & Perry, 2015). Interestingly, the personal experiences providers mentioned were not always in reference to their own health behaviors but also in reference to their experiences promoting healthy behavior with their family. As previous research has reported childcare providers' experience high levels of stress, sleep disturbances, obesity, and chronic diseases compared to the general population, a need to focus on providers own health behaviors has been suggested previously (Faulkner, Gerstenblatt, Lee, Vallejo, & Travis, 2016; Tovar et al., 2017). However, to our knowledge, this is the first study to identify that promoting these behaviors with their own family may be just as influential on their confidence for promoting similar health behaviors within the childcare facility as participating in the behavior themselves. Previous research has found that provider's self-efficacy for promotion of healthy behaviors is associated with their actual promotion of these health behaviors (Figueroa & Wiley, 2016). Additional research is needed to further examine the influence of different types of mastery experiences (e.g., personal health behaviors, verbal promotion within the home setting) on providers' self-efficacy for promoting healthy behaviors in the childcare setting as well as the resulting impact on children's behaviors. Additionally, future interventions could consider utilizing the SCT framework as research has shown self-efficacy, self-regulation and social support to be mediators of change in nutrition and physical activity interventions (Anderson, Winett, Wojcik, & Williams, 2010).

Although the usefulness of *Go NAP SACC r*esources was reported, the majority of providers were unable to definitively recall physical activity or dietary recommendations that they would have been taught in their training. Further, this did not differ based on the time elapsed since the training. While it is unrealistic to expect all providers to remember every recommendation shared this does suggest that follow-up trainings should continue to emphasize specific guidelines to increase providers' knowledge.

Finally, several themes emerged within the environmental domain of SCT. The barriers to physical activity within the childcare environment appear more physical in nature (e.g., space, equipment funding) than individual (i.e., motivation, knowledge, confidence). Interestingly, several providers, a mix of rural and urban, reported a need for larger playground equipment such as teeter-totters or slides. While this may aid in physical activity, several other studies have found that smaller portable equipment is associated with improvements in children's physical activity (Bower et al., 2008; Dowda et al., 2009; Temple & Naylor, 2010). Future efforts may need to not only focus on low-cost resources but also educate providers on the effectiveness of these materials in the promotion of physical activity. In addition, not all providers reported utilizing the Go NAP SACC resources when looking for activity ideas. Additional follow-up efforts could be placed on dissemination of resources especially since so many tangible takeaways are provided and there is already a focus on low-cost ideas. Dissemination strategies could include a resource of the month which is sent out via e-mails and/or through existing social media pages for early childhood organizations.

Related to the nutrition environment, family-style dining was one of the most common practices and reported as highly effective by providers. Not only was it reported to promote children's healthy choices but it also staff's own behaviors in their ability to make healthy dietary choices. This finding suggests family-style dining could be an effective approach to target the health behaviors of both child and provider and thus should continue to be promoted. To encourage family-style dining, future interventions will need to address barriers reported in other studies such as perceptions that family-style dining is messy, resource intensive, or in violation of the child and adult care food program (Dev, Speirs, McBride, Donovan, & Chapman-Novakofski, 2014). More

research is needed to determine if family-style dining influences providers cognitive and behavioral factors within the SCT constructs.

Finally, providers mentioned several ideas for opportunities to further expand their health efforts. All providers reported a desire for additional annual training-based education involving hands-on activities. Providers also made recommendations for the inclusion of components related to parent and staff wellness education. This is consistent with previous literature that has found there is a greater need for interventions to educate parents and promote staff wellness (Barnes, Guin, Allen, & Jolly, 2016; Ward et al., 2018). Further, it is consistent with our finding mentioned above that a focus on the provider's wellness could have an impact on their health promotion behaviors.

This study had several strengths and limitations that should be noted. This study was strengthened by the use of a diverse sample of rural, urban, home and center child care providers. Given that quantitative work has been conducted, a qualitative line of inquiry provided a better understanding of childcare providers' practices and barriers. Providers were not specifically asked about their experiences with the *Go NAP SACC* training or the *Go NAP SACC* resources as the researchers wanted to see if these views came out naturally. This study was weakened by the fact that the providers had completed the training in the last two years and thus their recall may have been effected. Further, the small sample size and voluntary nature of the study are also limitations. Providers might have been more interested in discussing this topic due to an already invested interest in the promotion of physical activity and nutrition. However, the achievement of saturation within the data is positive.

4.1. Conclusion

In conclusion, *Go NAP SACC* trained providers' confidence to promote physical activity and healthy eating was influenced by their personal history with these behaviors and may have impacted how they promoted physical activity and healthy eating as well as their perceptions of the childcare environment. When considering SCT, a focus on the providers' personal health behaviors could then influence their health promotion strategies (personal factor) and perceived environment and barriers. Further, a focus on ensuring recommendation retention post-training may also improve health promotion of physical activity and nutrition. Future health promotion interventions involving training should consider increasing the amount of interaction between staff and trainer to increase knowledge retention and likelihood for best practice implementation as well as connect providers to other health promoting organizations for ongoing professional development, particularly focused on staff wellness.

Funding
The authors received no direct funding for this research.

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Citation information
Cite this article as: Exploring rural and urban Go NAP SACC trained child care providers perceptions and needs regarding the promotion of physical activity and healthy eating, Kailey Snyder, Zainab Rida, Emily Hulse, Dipti Dev & Danae Dinkel, *Cogent Social Sciences* (2019), 5: 1650412.

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Cogent Social Sciences **(ISSN: 2331-1886) is published by Cogent OA, part of Taylor & Francis Group.**