

Comparison of Urban and Rural Physical Activity and Outdoor Play Environments of Childcare Centers and Family Childcare Homes

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The purpose of this study was to examine the physical activity environment in childcare programs across type (childcare centers [CCCs] and family childcare homes [FCCHs]) and geographic location (urban and rural) as assessed by physical activity best practices according to the Go Nutrition and Physical Activity Self-assessment in Child Care. Results showed CCCs compared with FCCHs reported higher achievement of best practices. Further, urban childcare programs (CCCs and FCCHs) reported higher achievement of best practices in comparison to rural childcare programs. There is a need to deliver targeted interventions that promote children's physical activity in FCCHs and CCCs in rural areas.

Key words: childcare, day care, physical activity, play, policy

GLOBALLY, approximately 41 million children younger than 5 years are overweight or obese.¹ Within the United States (US), 8.1% of 0- to 2-year-olds and 22.8% of 2- to 5-year-olds are overweight or obese.² Being overweight or obese as a child increases one's risk for obesity in adulthood and developing consequential chronic health conditions such as type 2 diabetes and cardiovascular disease.^{1,3-5} Due to the high rates of overweight/

obesity and associated chronic conditions, national and international organizations alike have emphasized the need for all sectors (eg, government and education) to make health a priority to have a greater impact on childhood obesity.^{1,6-9}

One sector that has been shown to impact health behaviors in early childhood is childcare settings. In the US, approximately 62% of children younger than 6 years receive some form of nonparental regular childcare.^{10,11} Thus, the childcare environment can have a significant impact on children's development including health behaviors such as physical activity (PA).¹²⁻¹⁶ PA is an important behavior to establish in early childhood because PA cannot only help young children to attain energy balance and subsequently positively impact weight, but it also positively contributes to numerous developmental milestones (physical, social, and psychological).^{17,18} Importantly, specific recommendations from national and international organizations such as the World Health Organization and the US Department of Health and Human Services are to provide daily opportunities for PA consistently throughout the day.^{1,6} Unfortunately, up to one-half of children may not be obtaining enough PA in childcare.¹⁹ Efforts are needed to better implement policies and practices targeting increases in PA in childcare settings.^{17,19}

An important consideration when developing policies and practices to improve children's PA in childcare is to understand the type of childcare setting. Two types of childcare settings include childcare centers (CCCs) and family childcare homes (FCCHs). CCCs typically consist of multiple classrooms separated by age, while FCCHs are typically a smaller group of children of differing ages

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within one area.²⁰ CCCs usually have bigger facilities and more staff as compared with FCCHs, thus FCCHs may lack indoor space required to provide PA and fewer staff. However, owing to fewer staff to manage, and that the FCCH owner is the provider, FCCH providers may feel more accountable and have flexibility to implement PA policies compared with centers.^{21,22} On the other hand, in counties where FCCHs may not require licensing and have fewer regulations, they may have less motivation to implement PA best practices. Due to the variety of potential variances, different types of childcare settings may require unique resources and interventions. Other research has found FCCHs may be less likely than CCCs to offer a variety of fixed and portable play equipment.²³ Further, CCCs may have more space to support outdoor PA through the provision of wide, curvy wheeled pathways, which have been associated with increased motivation for PA for preschool children.²⁴ More research is needed to understand what specific areas may require distinctive approaches to increase PA.

In addition to the type of setting, geographic location may have an impact on the achievement of PA policies and practices.²⁵ Specifically, some research suggests that rural children may be more likely to receive nonparental care.²⁶ Previous research has found that children and adults in rural counties are more likely to be overweight or obese.^{27,28} While studies have not found differences in the amount of PA accumulated between urban and rural childcare facilities, the type of resources available and/or type of resources needed by childcare providers could vary.²⁹ For example, rural facilities may have limited access to in-person staff training and lack funding/resources to encourage PA.³⁰ Taking these distinctive characteristics into account as they potentially influence the childcare PA environment and practices is the first step for implementing targeted PA interventions based on the childcare setting environment.

An intervention that has been utilized in both CCCs and FCCHs in urban and rural settings and deemed to be one of the best early childhood programs for prevention of childhood obesity is Go Nutrition and Physical Activity Self-Assessment in Child Care (Go NAP SACC).^{11,16,31-39} Go NAP SACC is designed to assist childcare providers to improve the health of children through the implementation of policies and practices with a specific focus on PA.^{32,33} Participation in Go NAP SACC consists of completion of a pre-/post self-assessment, workshops focused on healthy eating and PA, as well as action planning with technical assistance provided by a Go NAP SACC trainer. The Go NAP SACC self-assessment instrument was developed based on

extensive research and national health recommendations to identify evidence-based best practices indicative of meeting and exceeding childcare standards related to increased PA in children.^{11,35-40} The PA best practice guidelines include recommendations for active opportunities, fixed play environment, portable play environment, staff behavior, staff training/education, and policies.^{32,33} Despite its widespread use, minimal research has utilized the Go NAP SACC tool to determine if differences exist between childcare settings and geographic location.^{16,34} Therefore, the purpose of this study was to compare achievement of meeting evidence-based PA childcare standards between: (1) CCCs and FCCHs in urban areas; (2) CCCs and FCCHs in rural areas; (3) CCCs across geographic location (urban-rural); and (4) FCCHs across geographic location (urban-rural).

METHODS

Study design

Using a cross-sectional design, all eligible childcare settings in Nebraska were invited to participate in the study between August 2014 and August 2016. Two sections of the Go NAP SACC self-assessments covering 9 categories were used for this study: infant and child PA and outdoor play and learning.⁴¹ Once individuals agreed to participate in Go NAP SACC, they completed the baseline self-assessment. Assessments were completed by the center director at CCCs or owner of FCCHs. The assessment was hosted through a secured online server at the University of Nebraska-Lincoln.³² The University of Nebraska-Lincoln Institutional Review Board deemed the study exempt due to the lack of identifying information given to the researchers.

Sample

Participants were CCCs ($n = 203$) and FCCHs ($n = 314$) who completed the Go NAP SACC baseline assessment during the study's time frame. All licensed CCCs ($n = 985$) and FCCHs ($n = 2151$) in Nebraska who provided care to children younger than 6 years were eligible to participate. Additionally, unlicensed FCCHs were eligible to participate. Childcare settings were actively recruited for Go NAP SACC through a variety of methods including e-mails, newsletters, organizations that Go NAP SACC trainers worked for (eg, Nebraska Extension, nonprofit organizations, and local healthcare systems), the NE Go NAP SACC online training calendar, the Nebraska Department of Education's Early Childhood Professional Record System, and word of mouth. Once directors/providers agreed to participate in Go NAP SACC, they completed the

baseline self-assessment. Directors/providers self-identified as either a CCC or FCCH as well as if they participated in the Child and Adult Care Food Program (CACFP), a federal program that reimburses providers for serving healthy meals and snacks.⁴²

In this study, counties were used as a basis for rural-urban designation into 1 of 3 categories of metropolitan, micropolitan, and rural.⁴³ Metropolitan status was defined as any area with a population of 50 000 or more residents ($n = 2$ counties) an additional 7 of which were metropolitan “outlying” counties ($n = 7$). Micropolitan status was defined as an area with a population of 10 000 or more residents ($n = 10$). Rural status consisted of any population smaller than micropolitan ($n = 74$). For the purpose of the analysis and consistent with other literature, micropolitan and rural counties were combined to be able to compare differences across urban (metropolitan) and rural (micropolitan and rural).⁴⁴

Measure

Go NAP SACC offers 6 independent self-assessments to address different health behaviors.⁴⁵ The 2 Go NAP SACC self-assessments related to PA covering 9 categories were used for this study: infant and child PA and outdoor play and learning.⁴¹ Due to differences in the CCC and FCCH environment, Go NAP SACC provides separate self-assessments for CCCs and FCCHs. Our analysis compared similar questions between the assessments. The infant and child PA self-assessment consists of 5 categories with a total of 20 questions: time provided ($n = 5$), indoor play environment ($n = 4$), daily practices ($n = 4$), educational and professional development ($n = 6$), and policy ($n = 1$). The outdoor play and learning self-assessment consists of questions covering 4 categories with a total of 15 questions: outdoor playtime ($n = 3$), outdoor play environment ($n = 7$), educational and professional development ($n = 4$), and policy ($n = 1$). All questions are based on evidence-based best practices that meet or exceed childcare standards.³³ Examples from each section can be found in Table 1, and the entire assessment can be found on the Go NAP SACC website (<https://gonapsacc.org/self-assessment-materials>). Providers answered on a 4-point Likert scale developed by previous Go NAP SACC research.⁴⁶ Answers varied based on the question and were coded as 1 = marginally meeting childcare standards, 2 = meeting childcare standards, 3 = exceeding childcare standards, and 4 = far exceeding childcare standards and meeting best practice based on Go NAP SACC recommended best practices. The Go NAP SACC self-assessments have been shown to have acceptable reliability and validity and have been widely used in childcare

studies.^{34–39} Assessments were completed by the center director at CCCs or owner of FCCHs. The assessment was hosted through a secured online server at the University of Nebraska-Lincoln.^{32,47}

Statistical analyses

Using the results from the Go NAP SACC baseline self-assessments for the 2 PA-related sections, 20 items from the infant and child PA and 15 items for the outdoor play and learning were analyzed, with each individual question representing a best practice in childcare. First, descriptive statistics were calculated. Due to the likelihood of higher rates of best practices among providers who participate in the CACFP and increased access to trainings and material related to PA, participation in the CACFP was identified as a potential confounder. Two multivariate analyses of covariance were used to determine whether there were any statistically significant differences between the adjusted means of PA best practices at CCCs and FCCHs in rural communities compared with urban communities, having controlled for CACFP participation in each of the 2 self-assessments. The Sidak-Bonferroni correction was applied to adjust the multiple comparisons.⁴⁸ The P value for the infant and child PA items was Sidak-Bonferroni = $1 - (1 - 0.05)^{0.05} = .003$, and the P value for outdoor play and learning items was Sidak-Bonferroni = $1 - (1 - 0.05)^{0.067} = .003$.

RESULTS

A total of 698 providers began an assessment in the online database, but only 517 (FCCHs = 314, CCCs = 203) completed the baseline assessment and thus were used for analysis. Of those who completed, approximately 7544 children from different age groups received care from these CCCs and FCCHs (Table 2). Overall 47.2% of childcare settings were located in urban areas, and 52.8% of childcare settings were located in rural areas. About 80% of the 517 childcare settings reported CACFP participation. The CCCs and FCCHs demographic data were significantly different by CACFP participation ($P < .01$).

Comparison of urban CCCs and FCCHs

When comparing differences in urban CCCs and FCCHs, significant differences were found for 6 items related to PA and the outdoor play environment (Table 3). Urban CCCs reported higher levels of offering portable play equipment for children during indoor free playtime ($F(1,241) = 9.54, P = .0023$); offering families information on children’s PA and outdoor play ($F(1,241) = 4.69, P = .0017$; $F(1,241) = 3.76, P = .0020$); and completing professional development on outdoor play and learning

TABLE 1. Sample Questions From Go NAP SACC Physical Activity Self Assessments^a

	Question	Response Choices
Infant and child physical activity		
Time provided	Our program/I offer tummy time to noncrawling infants:	<ul style="list-style-type: none"> • 1 time per day or less • 2 times per day • 3 times per day • 4 times per day or more
Indoor play environment	I/teachers offer portable play equipment to children during indoor free playtime	<ul style="list-style-type: none"> • Rarely or never • Sometimes • Often • At least a few items are always available to encourage physical activity
Daily practices	To manage challenging behaviors, I/teachers may take away time for physical activity or remove children from physically active playtime for longer than 5 min	<ul style="list-style-type: none"> • Always • Often • Sometimes • Never
Education and professional development	I/teachers/staff receive professional development on children’s physical activity	<ul style="list-style-type: none"> • Never • Less than 1 time per year • 1 time per year • 2 times per year or more
Policy	My/our written policy on physical activity includes the following topics: <ul style="list-style-type: none"> • Amount of time provided each day for indoor and outdoor physical activity • Limiting long periods of seated time for children • Shoes and clothes that allow children and teachers to actively participate in physical activity • Teacher practices that encourage physical activity • Not taking away physical activity time or removing children from long periods of physically active playtime to manage challenging behaviors • Planned and informal physical activity education • Professional development on children’s physical activity • Education for families on children’s physical activity 	<ul style="list-style-type: none"> • No written policy or policy does not include these topics • 1-3 topics • 4-6 topics • 7-8 topics
Outdoor play and learning		
Outdoor playtime	I/our program does the following types of activities with children outdoors: <ul style="list-style-type: none"> • Free play • Structured learning opportunities • Seasonal outdoor activities • Walking trips • Outdoor field trips 	<ul style="list-style-type: none"> • None • 1 activity type • 2-3 activity types • 4-5 activity types

(continues)

TABLE 1. Sample Questions from Go NAP SACC Physical Activity Self Assessments^a (Continued)

	Question	Response Choices
Outdoor play environment	An open area for outdoor games, activities, and events is:	<ul style="list-style-type: none"> • Not available • Large enough for some children to run around • Large enough for most children to run around safely • Large enough for all children to run around safely
Education and professional development	I/teacher/staff complete professional development on outdoor play and learning:	<ul style="list-style-type: none"> • Never • Less than 1 time per year • 1 time per year • 2 times per year or more, including at least 1 in-person or online training, when available
Policy	My/our program's written policy on outdoor play learning includes the following topics: <ul style="list-style-type: none"> • Amount of outdoor playtime provided each day • Ensuring adequate total playtime on inclement weather days • Shoes and clothes that allow children to play outdoors in all seasons • Safe sun exposure for children • Not taking away outdoor playtime to manage challenging behaviors • My participation in professional development on outdoor play and learning • Education for families on outdoor play and learning 	<ul style="list-style-type: none"> • No written policy or policy does not include these topics • 1-2 topics • 3-5 topics • 6-7 topics

^aThe full assessments can be found at <https://gonapsacc.org/self-assessment-materials>.

TABLE 2. Characteristics of FCCHs and CCCs Facilities^a

	FCCH n	CCC n	Total N	Percentage
Providers who completed, n	314	203	698	74.07%
Total children	7 544	13 269	20 813	
0-23 mo	1 849	3 785		27.07%
24-35 mo	2 574	4 321		33.13%
3-5 y	3 121	5 163		39.80%
CACFP participation	253	162	517	80.27%
Residence/location			517	
Urban classification	143	101		47.20%
Rural classification	171	102		52.80%

Abbreviations: CACFP, Child and Adult Care Food Program; CCC, childcare center; FCCH, family childcare home.

^aAll the school-aged children (>5 years old) were excluded from the analysis.

TABLE 3. Significant Effects for Physical Activity and Outdoor Play in Urban and Rural CCCs and FCCHs

	<i>df, df Error</i>	<i>F</i>	<i>P</i>	<i>Setting</i>	<i>Means</i>
Urban					
<i>Infant and child physical activity</i>					
Time provided ^a					
Indoor play environment					
Offering portable play equipment to children during indoor free playtime	1, 241	9.54	.0023 ^b	FCCH CCC	3.21 3.52
Daily practices					
Supervising, verbally encouraging and participating in children's physical activity	1, 241	10.21	.0026 ^b	FCCH CCC	3.45 3.13
Education and professional development					
Offering families information on children's physical activity	1, 241	4.69	.0017 ^b	FCCH CCC	2.50 2.81
Policy ^a					
<i>Outdoor play and learning</i>					
Outdoor playtime ^a					
Outdoor play environment					
Offering enough portable play equipment so that it is available for each child	1, 241	12.34	.0021 ^b	FCCH CCC	3.64 3.32
Education and professional development					
Completing professional development on outdoor play and learning	1, 241	4.15	.0015 ^b	FCCH CCC	2.41 2.73
Offering families information on children's physical activity	1, 241	3.76	.0020 ^b	FCCH CCC	2.10 2.42
Rural					
<i>Infant and child physical activity</i>					
Time provided					
Amount of daily time provided for children's indoor and outdoor physical activity	1, 270	6.25	.0013 ^b	FCCH CCC	3.15 2.83
Indoor play environment					
Offering portable play equipment to children during indoor free playtime	1, 270	9.67	.0021 ^b	FCCH CCC	3.19 3.47
Daily practice ^a					
Education and professional development					
Offering families information on children's physical activity	1, 270	3.72	.0014 ^b	FCCH CCC	2.20 2.63
Policy ^a					
<i>Outdoor play and learning</i>					
Outdoor playtime ^a					
Outdoor play environment					
The open area used for outdoor games and group activities is large enough for children	1, 270	11.56	.0025 ^b	FCCH CCC	3.46 3.15
Education and professional development					
Completing professional development on outdoor play and learning	1, 270	4.83	.0017 ^b	FCCH CCC	2.33 2.64

Abbreviations: CCC, childcare center; FCCH, family childcare home.

^aIndicates no significant differences were found in this section.^bSignificant difference ($P < .003$); Sidak-Bonferroni correction was applied.

($F(1,241) = 4.15, P = .0015$). Urban FCCHs reported significantly higher levels of supervising, verbally encouraging and participating in children's PA ($F(1,241) = 10.21, P = .0026$) and offering enough portable play equipment for each child ($F(1,241) = 12.34, P = .0021$).

Comparison of rural CCCs and FCCHs

Five items were significantly different when comparing rural CCCs and FCCHs (Table 3). Rural CCCs reported offering more portable play equipment during indoor free playtime ($F(1,270) = 9.67, P = .0021$); offering families information on children's PA ($F(1,270) = 3.72, P = .0014$); and completing professional development on outdoor play and learning ($F(1,270) = 4.83, P = .0017$). Rural FCCHs scored higher than CCCs in regard to the amount of daily time provided for children's indoor and outdoor PA ($F(1,6.25) = 9.67, P = .0013$) and availability of a large space for outdoor games and group activities ($F(1,270) = 11.56, P = .0025$).

Comparison of urban and rural CCCs

In regard to urban and rural CCCs, significant differences on 8 items were found (Table 3). For all 8 items, urban CCCs reported higher scores than their rural counterparts. Specifically, urban CCCs reported higher levels of daily adult-led PA time ($F(1,200) = 5.49, P = .0018$); removal of children from active playtime for no longer than 5 minutes ($F(1,200) = 13.97, P = .0015$); using PA during daily routines, transitions, and planned activities ($F(1,200) = 10.15, P = .0021$); leading planned lessons for children focused on building gross motor skills ($F(1,200) = 12.24, P = .0016$); having a written policy on PA including a variety of topics ($F(1,200) = 4.26, P = .0021$); providing ample shade in outdoor play spaces ($F(1,200) = 10.69, P = .0010$); providing a variety of portable outdoor play equipment ($F(1,200) = 12.77, P = .0013$); and offering families information on outdoor play and learning ($F(1,200) = 4.14, P = .0024$).

Comparison of urban and rural FCCHs

Differences in urban and rural FCCHs were also found for 7 items (Table 4). Similar to differences in urban and rural CCCs, urban FCCHs reported higher scores on all items. Urban FCCHs reported significantly higher amounts of daily adult-led PA ($F(1,311) = 5.67, P = .0014$); availability of indoor and outdoor portable play equipment ($F(1,311) = 5.67, P = .0022$; $F(1,311) = 12.61, P = .0016$); amount of outdoor portable play equipment for each child ($F(1,311) = 14.53, P = .0020$); supervising, verbal encouragement and participation in children's PA ($F(1,311) = 10.62, P = .0025$); using PA

during daily routines, transitions, and planned activities ($F(1,311) = 9.88, P = .0010$); and offering families information on children's PA ($F(1,311) = 4.53, P = .0019$).

DISCUSSION

This study found that CCCs compared with FCCHs and urban compared with rural facilities tended to fare better in policies and practices that promote children's PA. When comparing urban facilities, CCCs reported significantly higher best practices for PA than FCCHs on 4 items including completing professional development on outdoor play. Urban FCCHs scored higher than urban CCCs on 2 items including supervising, encouraging, and participating in PA. Previous research both confirms and conflicts our findings, as Kim and colleagues²¹ found that FCCH providers were more likely to receive training, be involved with health activities (eg, teaching children about PA), and believe they had greater influence on children's health behaviors compared with CCC. Importantly, involvement of staff in physical activities and verbal encouragement has been associated with meeting best practice standards for availability of outdoor playtime and offers other potential benefits including opportunities to work on fundamental movement skills, educational active curriculum, and inclusion of children who are not typically active, as well as increased engagement in PA by children.⁴⁹ Thus, these behaviors should be addressed in urban CCCs. Potentially due to the increased number of staff at CCCs, providers may not feel as inclined to participate with children; however, further investigation is needed to determine why a difference exists as well as how to improve it.

Within the rural setting, we also found that rural CCCs had significantly higher scores in 3 areas while FCCHs had higher scores in 2 areas. Two such areas in which CCCs scored higher were offering portable indoor play equipment and offering families information on children's PA. Research in rural CCCs has suggested to improve and sustain PA there is a need to continue to provide financial resources for the purchase of equipment or workshops as well as training on how to support parental outreach on PA topics.^{30,34} Due to potential geographic isolation in rural communities and lack of resources available, unique partnerships with schools, colleges/universities, health departments, churches, hospitals, or physician's offices may be needed to support the provision of resources and professional development for both rural CCCs and FCCHs.³⁰ This is especially important, as staff education and training as well as offering portable play equipment can greatly influence the activity levels of children.^{14,15} Specifically, continuing

TABLE 4. Significant Effects for Physical Activity and Outdoor Play in Urban and Rural CCCs

	<i>df, df Error</i>	<i>F</i>	<i>P</i>	<i>Location</i>	<i>Means</i>
CCCs					
<i>Infant and child physical activity</i>					
Time provided					
Amount of daily adult-led physical activity provided	1, 200	5.49	.0018 ^a	Urban Rural	2.92 2.50
Indoor play environment ^b					
Daily practices					
Removal of children from active playtime for longer than 5 min	1, 200	13.97	.0015 ^a	Urban Rural	3.59 3.13
Using physical activity during daily routines, transitions, and planned activities	1, 200	10.15	.0010 ^a	Urban Rural	3.27 2.85
Education and professional development					
Leading planned lessons for children focused on building gross motor skills	1, 200	12.24	.0016 ^a	Urban Rural	3.56 3.12
Policy ^b					
Having a written policy on physical activity including a variety of topics	1, 200	4.26	.0021 ^a	Urban Rural	2.57 2.21
<i>Outdoor play and learning</i>					
Outdoor playtime ^b					
Outdoor play environment					
Providing ample shade in the outdoor play space	1, 200	10.69	.0010 ^a	Urban Rural	3.26 2.89
Providing a variety of portable play equipment in good condition	1, 200	12.77	.0013 ^a	Urban Rural	3.58 3.10
Education and professional development					
Offering families information on outdoor play and learning	1, 200	4.14	.0024 ^a	Urban Rural	2.42 2.13
FCCHs					
<i>Infant and child physical activity</i>					
Time provided					
Amount of daily adult-led physical activity	1, 311	5.67	.0014 ^a	Urban Rural	2.98 2.52
Indoor play environment					
Availability of indoor portable play equipment in good condition	1, 311	12.19	.0022 ^a	Urban Rural	3.56 3.22
Daily practices					
Supervising, verbally encouraging, and participating in children's physical activity	1, 311	10.62	.0025 ^a	Urban Rural	3.47 3.15
Using physical activity during daily routines, transitions, and planned activities	1, 311	9.88	.0010 ^a	Urban Rural	3.25 2.82

(continues)

TABLE 4. Significant Effects for Physical Activity and Outdoor Play in Urban and Rural CCCs (Continued)

	<i>df, df Error</i>	<i>F</i>	<i>P</i>	<i>Location</i>	<i>Means</i>
Education and professional development					
Offering families information on children's physical activity	1, 311	4.53	.0019 ^a	Urban Rural	2.63 2.21
Policy ^b					
Outdoor play and learning					
Outdoor playtime ^b					
Outdoor play environment					
Providing a variety of portable play equipment in good condition	1, 311	12.61	.0016 ^a	Urban Rural	3.55 3.13
Offering enough portable play equipment so that it is available for each child	1, 311	14.53	.0020 ^a	Urban Rural	3.65 3.33
Education and professional development ^b					

^aSignificant difference ($P < 0.003$); Sidak–Bonferroni correction was applied.

^bIndicates no significant differences were found in this section.

development of relationships between rural health departments or extension offices and providers could be an ideal avenue of support for helping providers identify specific resources they may need.³⁴

Previous research comparing FCCHs and CCCs found that CCCs were more likely to report offering a variety of fixed and portable play equipment.²³ Our study adds to these findings showing that both urban and rural CCCs were more likely to offer portable play equipment during indoor playtime. Interestingly, other research has found no difference in the indoor PA levels between facility types.⁵⁰ As this was based on the director's self-report, additional research is needed to examine the influence of portable play equipment on children's objectively measured PA.

It was also found, when comparing urban and rural FCCHs as well as urban and rural CCCs, urban facilities scored higher on all significantly different items (8 and 7, respectively). Interestingly, approximately half of the items on which urban facilities scored higher appeared to be able to be addressed by training opportunities (eg, adult-led PA), while the other half required funding or resources (eg, indoor/outdoor equipment). Given that other research has also found that rural CCCs offered limited structured PA; lacked parental outreach and staff training; and lacked resources needed to best support PA, as mentioned earlier efforts specifically targeting rural providers are needed.³⁰ Future work could explore how to allow rural counterparts (ie, CCC and FCCH) to collaborate and learn from one another through professional devel-

opment opportunities.⁴⁹ Additionally as other research has noted a positive relationship between providers' own self-efficacy for PA and the provision of PA in childcare, additional efforts may be needed to improve providers' self-efficacy for PA to improve their use of environmental supports.^{21,39,51}

To encourage more providers to meet best practices for PA, the Centers for Disease Control and Prevention and others have recommended that PA quality metrics be included within statewide systems.^{52–54} Consistent with this recommendation, Nebraska recently launched its first quality rating improvement system called Step Up to Quality, a 5-step system to assist childcare programs in offering high-quality childcare. Programs interested in achieving step 2 or higher must complete the online Go NAP SACC orientation video and pre-self-assessment. Programs interested in achieving step 3 and higher have the option to complete additional Go NAP SACC elements (eg, attend trainings, complete action plans, and post-self-assessment) to earn points toward a higher step rating. While other research has not found differences in PA best practices based on quality ratings,⁵⁵ this is worth future research. Additionally, as there are currently no PA standards related to licensing in Nebraska, working with licensing and regulation is another recommended strategy for improving PA in childcare settings.^{51,52}

There were several limitations to this study that warrant consideration. The primary limitation of this study is the self-report nature of the survey. This study may be subject to social desirability bias; thus, providers may have overreported their

PA policies and practices. However, previous studies assessing reliability and validity of this instrument have found the tool to be accurate for use in childcare.³⁸ Since this was a convenience sample, selection bias may also be a concern and results may not be representative of all CCCs and FCCHs in the state and providers who are more likely to meet standards may have been more likely to participate. Further, we did not collect information on amount of time working at an early childhood facility, gender, age, race/ethnicity, participation in other professional development, or participation in the state's quality rating improvement system. Additional research is needed utilizing a more representative sample. For CCCs, reports were typically completed by site directors and they may not be involved in the actual implementation of the practices within the assessment. Also, Nebraska's unique geography may not allow for generalizability to other states. Finally, as definitions of rural and urban can vary, findings may differ when utilizing different definitions.⁵⁶ Strengths of this article include the large sample size as well as ability to compare childcare organization type (CCC vs FCCH) and geographic location (urban vs rural). Despite limitations, this study fills an important gap in the literature regarding the need for the provision of unique supports for childcare based on type of setting and geographic location.

CONCLUSION

Even though Go NAP SACC has shown to successfully improve PA policies and practices and that these changes can be maintained, additional efforts are needed to ensure the program is well suited for the local population.^{57,58} As noted in previous research, the relationship between urban-rural status and health behaviors is complex.⁵⁹ Rural settings in particular may be in need of unique and creative approaches to improve health outcomes.⁵⁶ Our findings provide evidence that it is critical to understand baseline differences in childcare structures to assist providers, state leaders, and early childhood stakeholders identify strategies and/or resources to best support childcare institutions of various sizes and in geographic locations. Specific attention and resources should be allotted for rural providers, especially those in FCCHs. While differences in mean scores may appear minimal, these minor changes could make important strides for helping providers meet best practices and better promote PA.

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