

# Comparison of Physical Activity and Outdoor Play Environments of Family Childcare Homes and Centers in Nebraska



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Physical Activity and Health Promotion Lab

## Abstract

**Purpose:** Since 2010, Nebraska state and local partners have collaborated to offer the Nutrition and Physical Activity Self-Assessment for Childcare (Go NAP SACC) to family childcare homes (FCCH) and childcare centers (CCC) across the state. However, FCCHs and CCCs have unique characteristics that may impact the type of physical activity environment they offer to the children they serve. For example, CCCs usually have bigger facilities and more staff compared to FCCHs. To date, no research has examined differences that may exist in the physical activity environments between FCCHs and CCCs in Nebraska. Identifying these differences is critical to understanding how to best support each setting to achieve best practices. Therefore, the purpose of this study was to assess and compare differences in the physical activity environment of FCCHs and CCCs in Nebraska.

**Methods:** FCCHs (n =201) and CCCs (n =102) participated in the Go NAP SACC pre-evaluation during 2014-2016. This study examined the results from 2 of the 5 Go NAP SACC self-assessments: Infant and Child Physical Activity and Outdoor Play and Learning. Answers were coded as 1 = barely met, 2 = met, 3 = exceeded, and 4 = far exceeded childcare standards based on Go NAP SACC recommended best practices. Multivariate analysis were conducted to evaluate differences.

**Results:** The result indicated that FCCHs and CCCs both performed significantly better than their counterparts on several items. FCCHs reported higher ratings in respect to the following items: 1) the amount of time providing for children's indoor and outdoor physical activity (p<.01); 2) offering tummy time to non-crawling infants (.028); 3) the amount of adult-led physical activity provided to children each day (p<.01); 4) the time limit that children were asked to remain seated (p=.044); 5) covering a variety of physical activity topics during professional development (p=.003); and 6) the amount of shade provided outdoors (p=.012). CCCs reported higher ratings in: 1) provision of outdoor play (p=.015); 2) the amount of time providing for outdoor play each day (p=.032); 3) the use of the outdoors for a variety of activities (free play, structured learning; p=.03), 4) the number of play areas in outdoor play spaces (sand box, swings; p=.036), and having a written policy on outdoor play with a variety of topics (p=.005). Both providers FCCHs and CCCs scored relatively lower on education and professional development and policy dimensions across physical activity and outdoor play practices.

**Conclusions:** Interestingly, FCCHs showed significantly higher achievement of childcare standards in relation to infant and child physical activity in general whereas CCCs reported higher scores in regards to outdoor play and learning. Future research should examine if there are ways FCCHs and CCCs can learn from each other in order to continue to improve quality in these areas.

## Purpose

Given that approximately 62% of children under the age of 6 receive some form of non-parental regular childcare, childcare settings have the potential to have a significant impact on children's health behaviors (United States Census Bureau, 2013). Physical activity is an important health behavior in early childhood as it positively contributes to numerous developmental milestones (physical, social, and psychological) (Timmons et al., 2012; Ward, 2010). Unfortunately, up to one half of children may not be obtaining enough physical activity in childcare (Pate et al., 2015). Efforts are needed to better implement policies and practices targeting increases in physical activity in childcare settings.

An important consideration when developing policies and practices is to understand the type of childcare setting – which are primarily either family childcare homes (FCCHs) or childcare centers (CCCs). CCCs typically consist of multiple classrooms separated by age, while FCCHs are typically a smaller group of children of differing ages within one area. CCCs usually have bigger facilities and more staff to implement physical activity. 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 physical activity policies compared to centers.

## Purpose Cont'd

Since 2010, Nebraska state and local partners have collaborated to offer the Nutrition and Physical Activity Self-Assessment for Childcare (Go NAP SACC) to family childcare homes (FCCH) and childcare centers (CCC) across the state. To date, no research has examined differences that may exist in the physical activity environments between FCCHs and CCCs in Nebraska. Identifying these differences is critical to understanding how to best support each setting to achieve best practices. Therefore, the purpose of this study was to assess and compare differences in the physical activity environment of FCCHs and CCCs in Nebraska.

## Results

Table 1. Mean Scores to Infant and Child Physical Activity Items

	FCCH n=201	CCC n=102	p-Value
<b>Time provided</b>			
The amount of time I provide for children's indoor and outdoor physical activity each day is	3.25	2.52	<.01**
I offer tummy time to non-crawling infants	3.04	2.78	.028*
The amount of adult-led physical activity my program provides to children each day is	2.94	2.22	<.01**
Outside of nap and meal times, the longest that children are asked to remain seated at any one time is <sup>r</sup>	3.53	3.31	.044*
Outside of nap and meal times, the longest that infants spend in seats, swings, or ExcerSaucers at any one time is <sup>r</sup>	2.48	2.57	.359
<b>Indoor play environment</b>			
My program has the following types portable play equipment available and in good condition for children to use indoors	3.42	3.44	.877
I offer portable play equipment to children during indoor free play time	3.27	3.21	.525
I offer developmentally appropriate portable play equipment to infants during tummy time and other indoor activities	3.70	3.56	.079
My program's collection of posters, books, and other learning materials that promote physical activity includes (amount of variety)	2.43	2.33	.330
<b>Daily practices</b>			
To manage challenging behaviors, I may take away time for physical activity or remove children from physically active playtime for longer than 5 minutes <sup>r</sup>	3.43	3.57	.070
I take the following role during children's physically active playtime:	3.42	3.41	.976
I supervise and verbally encourage physical activity	6.6%	3.3%	
I supervise, verbally encourage, and sometimes join in to increase children's physical activity	41.3%	24.6%	
I supervise, verbally encourage, and often join in to increase children's physical activity	43.9%	27.9%	
During tummy time and other activities, I interact with infants to help them build motor skills	3.45	3.40	.543
I use physical activity during daily routines, transitions, and planned activities	3.11	3.15	.655
<b>Education and professional development</b>			
I lead planned lessons for children focused on building gross motor skills	3.39	3.51	.230
I talk with children informally about the importance of physical activity	3.03	2.92	.290
I complete professional development on children's physical activity	2.77	2.73	.644
I have covered the following number of topics as part of this professional development	3.39	2.90	.003**
I offer families information on children's physical activity	2.38	2.33	.650
The information I offer families on children's physical activity covers the following number of topics	2.61	2.54	.603
<b>Policy</b>			
My program's written policy on physical activity includes the following number of topics	2.28	2.46	.148

Scores reported on a 4-point Likert scale, with 1 being barely met physical activity standard and 4 being far exceeded childcare standard. The actual answer options differed depending on question. \* indicates p<.05; \*\* indicates p<.01

Table 2. Mean Scores to Infant and Child Outdoor Play and Learning Items

	FCCH	CCC	p-Value
<b>Outdoor playtime</b>			
I provide time for outdoor play	3.04	3.29	.015*
The amount of time I provide for outdoor play each day is	3.11	3.37	.032*
Less than 30 minutes	12.1%	5.72%	
30-44 minutes	31.5%	18.5%	
45-59 minutes	21.8%	31.86%	
60 minutes or more	34.6%	43.92%	
I use the outdoors for the following number of activity types (free play, structured learning opportunities, seasonal outdoor activities, walking trip or field trips)	3.29	3.66	0.03*
<b>Outdoor play environment</b>			
The amount of my program's outdoor play space, that is shaded by structure or trees is	3.31	3.02	.012*
No shade	4.75%	14.30%	
Less than ¼ or more than ¾ is shaded	16.7%	30.50%	
¼ to ½ is shaded	44.36%	41.70%	
½ to ¾ is shaded	34.19%	13.50%	
The open area that I use for outdoor games and group activities is	3.81	3.75	.631
Large enough for some children to run around safely	9.1%	19.20%	
Large enough for most children to run around safely	21.4%	18.70%	
Large enough for all children to run around safely	69.5%	62.10%	
My program's outdoor play space includes (number of play areas)	3.02	3.17	.036*
Please describe the garden in your outdoor play space	1.91	1.73	.751
I have no garden for herbs, fruits, or vegetables	60.2%	66.8%	
It grows only herbs	3.1%	1.0%	
It grows some fruits and/or vegetables for children to taste	22.0%	24.8%	
It grows enough fruits and/or vegetables to provide children meals or snacks during 1 or more seasons	14.7%	7.4%	
My program has the following portable play equipment available and in good condition, for children to use outdoors (number of types)	3.51	3.39	.532
I offer children portable play equipment during outdoor active playtime	3.58	3.53	.863
The amount of portable play equipment available to children during outdoor active playtime is	3.70	3.46	.411
<b>Education and professional development</b>			
I complete professional development on outdoor play and learning	2.45	2.60	.344
I have covered the following number of topics as part of this professional development	2.95	2.72	.615
I offer families information on outdoor play and learning	2.16	2.27	.832
The information I offer families on outdoor play and learning covers the following number of topics	2.43	2.30	.637
<b>Policy</b>			
My program's written policy on outdoor play and learning includes the following number of topics	2.14	2.78	.005**

## Conclusion

The purpose of this study was to assess and compare differences in the physical activity environment of FCCHs and CCCs in Nebraska. FCCHs scored higher than CCCs on six items; while CCCs scored higher than FCCHs on 4 items. Interestingly, FCCHs showed significantly higher achievement of childcare standards in relation to infant and child physical activity in general whereas CCCs reported higher scores in regards to outdoor play and learning. Future research should examine if there are ways FCCHs and CCCs can learn from each other in order to continue to improve quality in these areas.

Given the significant differences based on childcare context, these results underscore the need to deliver targeted interventions that promote children's physical activity. Further, our findings provide evidence that it is critical to understand baseline differences in childcare contexts in order to assist state leaders and early childhood stakeholders identify strategies and/or resources to best support childcare institutions of various sizes. Future research should also examine differences based on geographic location (i.e., urban vs. rural).

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