

Investigating the health and wellness of childcare workers in Southern Alberta, Canada

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Abstract

High-quality early education is beneficial for young children. It is no surprise that demand for childcare has increased. Childcare educators play a vital role in early childhood development, yet they face many physical and psychological challenges to their health through their work. The purpose of this study was to investigate the health and wellness of childcare workers in Southern Alberta, Canada. Workplace Health and Risks Surveys were delivered to licensed childcare centres in Southern Alberta. A simple linear regression suggested that four survey responses were significant predictors of health status: health control, planned actions, employee well-being, and stress effects employee. The regression suggested that health status of childcare workers could be improved by training them to set and achieve goals related to their health and by educating employers to create a positive work environment and minimize stress. Our future research will survey rural and urban daycare centers and include an ergonomic analysis. These results will be used to deliver a group education program with the goal of improving the health of childcare workers and the quality of early childhood education.

Keywords

Childcare, Health Status, Stress, Well-being, Early childhood education, Health control

Introduction

High-quality early education of young children produces benefits, which include greater achievement at school and improved social adjustment (Barnett 1995; Beach and Bertrand 2004). More parents and guardians are seeking high quality childcare centers (Albanese 2007; Bright and Calabro 1999); in Canada, the proportion of young children attending any type of childcare organization increased by 12% between 1994/1995 and 2002/2003 (Bushnik 2006). Experienced and engaging childcare workers are critically important given their educational value and the industry demand. For childcare educators to provide high-quality education they need to be healthy. The health status, health behaviours, and health education of childcare workers have been shown to contribute to the quality of early childhood education (Calder 1994; Gratz and Claffey 1996).

Worker health and wellness is challenged, however, as there are a number of health concerns amongst childcare educators. Severe infections can be easily transmitted from children to childcare workers (National Institute for Childcare Health Consultants 2013). Musculoskeletal injuries are common, caused by frequent lifting and carrying of children, sitting in child-sized chairs or on the floor, and kneeling on the floor (Gratz and Claffey 1996). Educating young children is also a stressful job (Corr, Davis, LaMontagne, Waters, Steele 2014). Common sources of stress include excessive responsibility for children, poor benefits and unpaid overtime, addressing the needs of children in different age groups, and dealing with parents behaving in an antagonistic way (Whitebook and Ginsburg 1983; Lorang 2013; Slack-Smith, Read, Darby, Stanley 2006). Parents, however, are rarely aware of the impact of caring for their children on the health of childcare workers (Baldwin, Gaines, Wold, Williams, Leary 2007). Childcare is also financially and socially under-appreciated, despite the importance and the physical and psychological demands of the job (England, Budig, Folbre 2002; Hale-Jinks, Knopf, Knopf 2006; Nelson 1999). In Alberta (Canada), the average hourly pay rate in 2009, including government top-up, was \$13.17 for child development assistants, \$16.91 for child development workers, and \$21.81 for child development supervisors, while the average salary of childcare workers in Canada was far below the average income (Service Canada 2013).

Childcare workers play an important role in early childhood education and they face many physical and psychological challenges to their health through their work. The purpose of this pilot study was to investigate the health and wellness of childcare educators in Southern Alberta; specifically, to establish whether health and safety risks existed amongst this group, whether any risks that did exist were recognized equitably and effectively by childcare workers, co-workers, and operators, and whether there were intentional physical or psychosocial controls on those risks.

Method

Health Canada questionnaires [Workplace Health and Risks Survey (Health Canada 2008)] were delivered to 15 licensed childcare centers in Southern Alberta, Canada from May 2013 to July 2014. The survey gathered self-report responses on perceptions of health and wellness, perceived control of health status, and participation in positive and negative health-related behaviours. One hundred and ten surveys were returned to the research team. Participants received gift cards as reimbursement for their time.

The responses for every survey question were correlated, and the Bonferroni correction was used to control the familywise error rate. We were interested in the responses that might predict the health status of childcare workers. Therefore, the correlations with health status were used to guide a simple linear regression on health status.

Results

Demographics

99.1% of the childcare workers who participated in the study were female, reflecting the strong sex bias amongst childcare professionals. More than 70% of the participants were between 20 and 39 years old and had at least a college diploma (Table 1). Around 25% of participants had worked for their current employer for less than one year, 50% for one to four years, and 25% for at least five years. This suggests a mediocre retention rate in the childcare industry.

In Alberta, there are three levels of childcare staff certification that depend on the amount of training or experience and informal learning: child development assistant (two courses in child development), child development worker (one-year early learning and childcare certificate), and child development supervisor (two-year early learning and childcare certificate; Alberta Human Services 2015). There were approximately as many child development assistants as child development supervisors (40%; Table 1).

Table 1
Participant demographics

Age range (N = 108)	Number	Percent
Under 20 years old	2	1.9%
20-29 years old	51	47.2%
30-39 years old	25	23.1%
40-49	14	13.0%
50-59	11	10.2%
60 years and older	5	4.6%
Education (N = 110)		
High school	27	24.6%
College diploma	68	61.8%
University (Bachelor's degree and higher)	15	13.6%
Length of work for current employer (N = 109)		
Less than 1 year	28	25.7%
1-4 years	53	48.6%
5-9 years	11	10.1%
10-14 years	5	4.6%
15 or more years	12	11.0%
Childcare staff certification level (N = 102)		
Child development assistant	40	39.2%
Child development worker	19	18.6%
Child development supervisor	43	42.2%

Health status

91.3% of the participants described their health as good, very good, or excellent and 51.5% said their health was at least very good (Table 2, health status). The number of participants that agreed or strongly agreed that they were in control of their health was 87.3% (Table 2, health control). More than 70% of the childcare workers agreed or strongly agreed that their employer has a sincere interest in their well-being and that their employer knows that stress at work can have a negative effect on their health (Table 2, employer: employee well-being and stress effects employee). Participants were asked whether they

planned to take any of the following five actions to improve or maintain their health in the next year: eat better, be more physically active, learn to cope better with worry, nerves, or stress, try to monitor blood pressure, and get more or better sleep. 54.5% of participants planned to take none of these actions or up to two actions and 45.5% planned to take three to five actions (Table 2, planned actions).

Table 2

Subset of the questionnaire responses. The cells are the number of response with the percentage in brackets.

	Poor	Fair	Good	Very good	Excellent	
In your opinion, would you say your health is... (<i>Health status</i>)	0 (0%)	9 (8.7%)	41 (39.8%)	38 (36.9%)	15 (14.6%)	
	Strongly disagree	Disagree	Not sure	Agree	Strongly agree	
I am in control of my own health (<i>Health control</i>)	0 (0%)	5 (4.5%)	9 (8.2%)	54 (49.1%)	42 (38.2%)	
My employer has a sincere interest in the well-being of its employees (<i>Employer: employee well-being</i>)	5 (4.6%)	6 (5.5%)	16 (14.7%)	50 (45.9%)	32 (29.3%)	
My employer knows that stress at work can have bad effects on employee's health (<i>Employer: stress effects employee</i>)	3 (2.8%)	4 (3.8%)	23 (21.7%)	53 (50.0%)	23 (21.7%)	
	0-2 actions are planned		3-5 actions are planned			
What, if anything, would you like to do in the next year to improve or maintain your health? (<i>Planned actions</i>)	60 (54.5%)		50 (45.5%)			
	Never	Once a week	2-3 times a week	4 times a week	5-6 times a week	Everyday
In a typical week, how often do you spend at least 60 minutes a day (in periods of at least 10 minutes each) in light leisure (not at work) physical activity?	9 (8.3%)	16 (14.7%)	31 (28.4%)	11 (10.1%)	11 (10.1%)	31 (28.4%)
How often do you spend 30 minutes a day in moderate physical activity?	7 (6.6%)	18 (16.8%)	43 (40.2%)	12 (11.2%)	12 (11.2%)	15 (14.0%)
How often do you spend 20 minutes a day in vigorous physical activity?	14 (12.7%)	31 (28.2%)	38 (34.5%)	10 (9.1%)	8 (7.3%)	9 (8.2%)

Participants reported how many times in a typical week they exercised (outside of work) lightly for at least 60 minutes, moderately for at least 30 minutes, or vigorously for at least 20 minutes (Table 2). 51.4% of the childcare workers reported engaging in light physical activity 2-3 times per week or less and 48.6% reported engaging at least 4 times per week. In terms of moderate physical activity, 63.6% of the participants exercised in this way 2-3 times per week or less and 36.4% exercised at least 4 times per week. There was the largest difference in vigorous physical activity, with 75.5% of childcare workers being active in this way 2-3 times per week or less and 24.5% being active at least four times per week.

Eight questions identified the eating habits of participants. They were asked whether they plan to follow current nutritional guidelines, to eat more vegetables and fruit, to limit foods and beverages high in calories, fat, or sugar, to cut back on junk foods, to drink more water, to skip fewer breakfasts, to learn more about healthy eating, or to choose smaller portion sizes. 80.6% of childcare workers identified four of these eight actions or less and 19.4% identified five or more actions.

The majority of the participants did not use medication or prescription drugs to relieve depression (94.4%), to calm down (90.8%), or to help sleep (78.9%). Medication or prescription drug use was more common to reduce pain; 51.9% of participants did not use them at all but 48.1% used them once a month or more often. Smoking and drinking alcoholic beverages was uncommon for the participants. 98.1% and 91.7% of the childcare workers smoked neither cigars nor cigarettes and 81.1% did not drink alcoholic beverages.

Reported tasks perceived as heavy for the neck, shoulders, arms and knee regions include: 1) Lifting and carrying children (lifting out of chairs, strollers, sleeping spaces and off the floor); 2) Retrieving and returning toys, books, materials from/to storage areas; 3) Sweeping and/or scrubbing the floors and other surfaces; 4) Sitting on the floor and/or child-sized furniture; and 5) Administrative-individual (writing daily reports on children, completing regulatory paperwork).

Correlations

The pattern of correlations between a subset of survey responses is depicted in Figure 1. We were interested in the relationships between health status (In your opinion, would you say your health is...) and the other questions, so we focused on questions that significantly correlated with health status. The questions that significantly correlated with health status were:

- I am in control of my own health (health control)
- In the last year, how many days in total were you away from work because you were sick? (sick days)
- I have an influence over the things that happen to me at work (influence at work)
- What, if anything, would you like to do in the next year to improve or maintain your health? (planned actions)
- On the whole, I like my job (job satisfaction),
- My employer has a sincere interest in the well-being of its employees (employer: employee well-being)

These six questions were significantly correlated with health status and had many significant correlations with each other (Table 3).

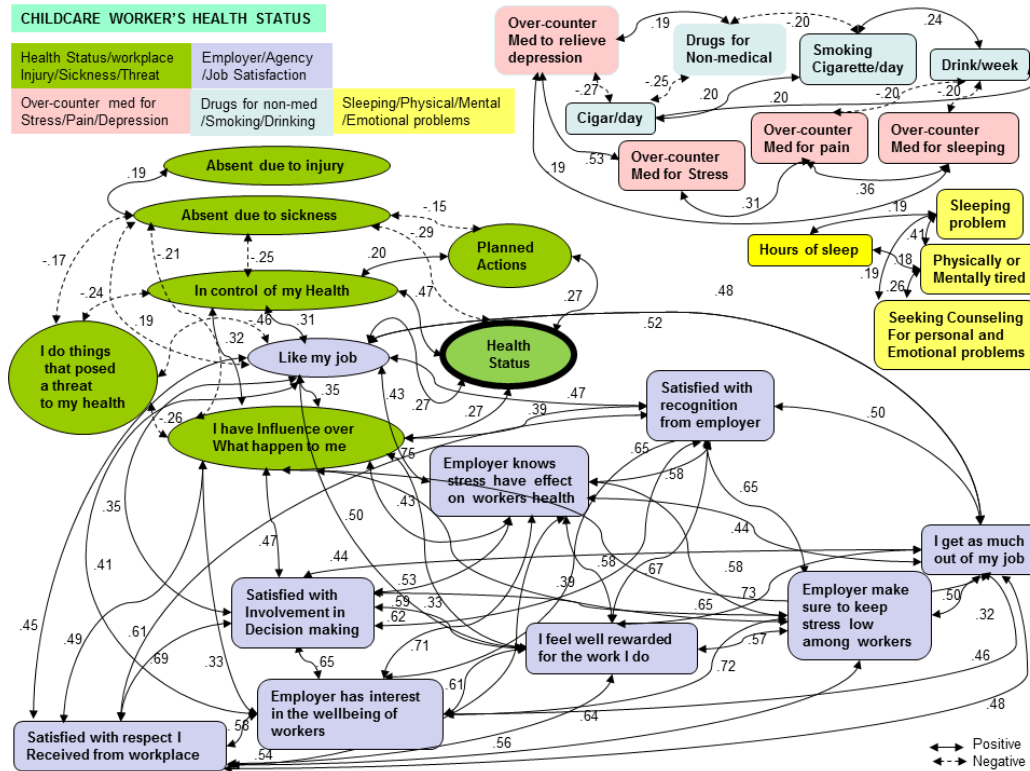


Figure 1 Subset of the correlations between the responses to all survey questions.

Table 3
Correlations and intercorrelations of the survey responses that correlated with health status. The values in each cell are the correlation coefficient (r) followed by the p-value.

	Health status	Health control	Sick days	Influence at work	Planned actions	Job satisfaction	Employer: employee well-being
Health status	1.000	.471	-.288	.273	.271	.267	.206
Health control		1.000	-.248	.318	.196	.306	.132
Sick days			1.000	-.210	-.152	-.184	-.078
Influence at work				1.000	.008	.352	.326
Planned actions					1.000	.186	.125
Job satisfaction						1.000	.408
Employer: employee well-being							1.000

Regression

A simple linear regression was used to determine which questions predicted health status. The regression suggested that the responses to four questions significantly predicted the health status of health care workers (Table 4). There was one question that was not identified in the correlations: my employer knows that stress at work can have bad effects on employees' health (employer: stress effects employee). It had a correlation coefficient of .080 with health status and a p-value of .362. Although this question did not have a significant correlation with health status, it did significantly contribute to the regression.

Table 4

Regression results: the responses to four survey questions were significant predictors of the health status of childcare workers

Independent variable	Regression coefficient (β)	Standardized regression coefficient (β)	p-value
Health control	.532	.504	.000
Planned actions	.390	.231	.005
Employer: employee well-being	.300	.366	.008
Employer: stress effects employee	-.302	-.328	.017
Constant	.705		.102

Note: R = .635, adjusted R² = .377

Discussion

The majority of childcare workers in this study were female and between the ages of 20 and 39 years old. Other research has also shown that the average age of childcare workers is around 30 years old (Barford and Whelton 2010; Carson, Baumgartner, Matthews, Tsouloupas 2010; Chesters and Baxter 2011; de Schipper, Riksen-Walraven, Geurts 2007; Meagher 2007;). Almost all of the participants described their health status as good (39.8%), very good (36.9%), or excellent (14.6%), also consistent with previous research (Baldwin, Gaines, Wold, Williams, Leary 2007).

The regression analysis suggested that four survey responses predicted health status: being in control of your health, planned actions to improve or maintain your health, employer's interest in the well-being of employees, and employer's knowledge of stress effects on employees' health. It is interesting that most of the childcare workers reported that they were in control of their health, as this contrasted with the results of other questions that assessed their health. For example, less than 25% of participants regularly engaged in vigorous physical activity. Most participants reported durations of physical activity that would not meet the Canadian physical activity guideline of 150 minutes of moderate- to vigorous-intensity aerobic physical activity per week (Canadian Society for Exercise Physiology 2014).

Furthermore, most of the childcare workers reported poor eating habits. More than 80% of participants did not have substantial plans to improve how, when, what, or how much they eat. The Canadian Community Health Survey (2004) showed that the eating habits amongst Canadians are characterized by low consumption of fruits and vegetables, excess fat consumption, frequent eating at fast food restaurants, and a misbalanced diet. Childcare workers are likely to have the same spectrum of nutrition issues. In fact, Baldwin

et al. (2007) found that 23.3% and 26.8% of childcare workers were overweight or obese. About half of the participants also did not have substantial plans to improve or maintain their health. The insufficient amount of physical activity, poor diet, and a lack of plans to change all suggest that the childcare providers did not have as much control of their health as reported. The influence that childcare workers have on their health could be improved with a training program that is tailored to their profession. The regression suggested that the more daycare workers planned to improve or maintain their health, the better their health status. The training program should, therefore, also teach daycare providers how to set and achieve goals related to their health and wellness.

The regression also indicated that the more the employer was concerned about the well-being of and the stress on their employees', the better the health status of the childcare workers. If employers focus on creating a positive work environment, then this could improve the health status of childcare professionals. A training program for the employers could be designed with this goal in mind. Stress on childcare workers has a detrimental effect on the quality of early childhood education (Calder 1994; Gratz and Claffey 1996). Workers experiencing stress had less positive attitudes while interacting with children (Groeneveld, Vermeer, van Ijzendoorn, Linting 2012), spent less time engaging in activities with the children (Hamre and Pianta 2004), and were less sensitive (Rusby, Jones, Crowley, Smolkowski 2013). Even the general mood of childcare providers, especially positivity and optimism, is a strong predictor of the quality of childcare (de Schipper, Riken-Walraven, Geurts, Derkensen 2008). Thus, reducing stress of childcare workers might improve both their health and the quality of early childhood education.

Future research

Our research on the health and wellness of childcare educators will be expanded with four initiatives. First, the survey sample will be increased to include rural and urban daycare workers in Southern Alberta. This will provide insight into the unique challenges faced by daycare providers in urban and rural settings. Second, an ergonomic analysis of daycare workers will identify factors that contribute to work-related musculoskeletal injuries. Third, the results from the previous initiatives will be used to prepare, deliver, and assess a "push" structured group education, exercise, and nutrition program to improve workplace health amongst a sample of rural and urban childcare workers. Fourth, and finally, an educational program will be designed and disseminated to childcare professionals across Alberta.

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