The Medium-Term Effects of the Collective Reflexive Coaching Device Catching Your Breath on ECEC Managers Well-Being During COVID-19 Pandemic

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Abstract

The COVID-19 pandemic has increased the workload of the early childhood education and care (ECEC) managers and decreased their well-being at work (Bigras et al., 2021). Quebec's ECEC managers expressed a need for support in dealing with the challenges encountered during the pandemic (Bigras et al., 2021). A collective reflexive coaching device, called Catching Your Breath, was then developed, implemented, and evaluated (Bigras et al., 2021; Fortin et al., 2022). The present study evaluates its effects, a year later, on work well-being (self-compassion, work-related stress, burnout, depressive symptoms, work engagement) using a quasi-experimental design (pre-post) including a control group (n = 25). The experimental group (n = 22) met monthly (3h) between February and June 2021. Quantitative data were collected from an online questionnaire completed in February 2021, June 2021, and March 2022. ANOVAs repeated measure indicated that almost of control group scores worsened after one year, while the experimental group scores improved. An interaction between the time and the group is significant for the variables well-being at work (F(2,44)=9.465, p < 0.001), and three subscales, self-compassion (F[2,44] = 3.331, p < 0.05), and two subscales, dedication from work engagement scale, emotional exhaustion burn out scale, work-stress related (F[2, 44] = 6.117, p<0.01), and depressive symptoms (F[2, 44] = 3.822, p<0.05. These results suggest that this device has positive effects that were maintained a year later. It seems that supporting ECEC managers, with a device like Catching Your Breath, can mitigate the negative influences of the pandemic on their well-being.

Keywords: ECEC Managers, Longitudinal Study, Pandemic, Well-Being at Work, Collective Reflexive Coaching Device

Introduction

The COVID-19 pandemic increased the workload charge of Early Childhood Education and Care (ECEC) managers (Bigras et al., 2021). The managers had to continually adapt their services to respect the health measures required by public health in Quebec (Bassok et al., 2020; Bassok et al., 2021; Gouvernement du Québec, 2020). For example, they needed to transform their management regarding their establishment, equipment, team, and schedule. They needed to adapt the way children were welcomed in the centers while parents couldn't enter. Thus, disturbing the relations with the parents. Additionally, the cost of compliance to the imposed sanitary measures created a financial burden. This increased their level of stress and decreased their well-being at work (Bigras & Lemay, 2020; Crawford et al., 2021; Schué, 2020; Swigonski et al., 2021). They perceived that the Quebec government was offering low supports towards the management of this health crisis (Bigras et al., 2021). Quebec's ECEC managers expressed a need for support in dealing with the challenges encountered during the pandemic (Bigras et al., 2021).

To respond to this need, a collective reflexive coaching device, called Catching Your Breath, was developed, implemented, and evaluated in winter 2021 (Bigras & Fortin, 2021; Fortin et al., 2022). The collective reflexive coaching device had two components: collective coaching device, and the reflexive practice (Bigras & Fortin, 2021). The collective coaching device is a process that enables professional development through interactions between the person accompanying and the person being accompanied (Guay et al., 2016; Pirard & Barbier, 2012; Savoie-Zajc, 2010). This type of device allows a community of learners to analyze situations in group, like a professional co-development group (Bigras & Fortin, 2021; Payette & Champagne, 2010, cited par Massé et al., 2021). Effective coaching device involves reflective practice, important in complex problem solving, such as the challenges faced by managers during the pandemic (Bigras et al., 2021; Susman-Stillman et al., 2020). Following the group analysis of the situations, each member of the group engages in a structured reflection process (Caron, 2019, cited by Massé et al., 2021). The goal is to identify a situation, discuss about it and understand it with clinical and evidence-based knowledge (Caron, 2019, cited by Massé et al., 2021). Reflexive practice allows distance between the situation and people, to observe one's own professional practice from a critical point of view, to consider the consequences of behaviors, actions, and decisions, which can influence subsequent action planning steps (Gouin et al., 2021; Heffron & Murch, 2010).

The implementation of *Catching Your Breath* implicates five virtual meetings using ZOOM (one per month) with eight to ten managers (group of general managers and group of assistant managers; Bigras & Fortin, 2021). The meeting structure was as follows: (1) discussion around their personal objectives, (2) presentation of a theoretical capsule about a different theme each time, on which participants would reflect in subgroups, (3) they then shared their thoughts during a plenary period, (4) participants would then experiment a relaxation or meditation strategy, and (5) the participants evaluated the meeting by describing their emotions and cognitive reactions (Bigras & Fortin, 2021). The goal of this is to put in practice their learning and learn some of the tools that could be useful for them. The themes of the five meetings were (1) sharing of the needs and identify a personal SMART objective (Specific, Measurable, Achievable, Relevant, and Time-Bound; Gouvernement du Canada, 2021), (2) human stress theory (Lupien, 2020), (3) self-compassion (Neff, 2003a, b), (4) self-care and compassion fatigue (Brillon, 2020), and (5) relapse prevention strategies (Branch et al., 2010).

To support this study, the job-demands-resources model is used (Bakker & Demerouti, 2014; Dicke et al., 2017; Skaalvik & Skaalvik, 2018). This model indicates that job demands are explained by the effort and the physical and psychological cost (Bakker & Demerouti, 2014; Dicke et al., 2017; Skaalvik & Skaalvik, 2018). When the job demands are too high, they are associated with a decreased of the health, burn out and negative affects. For the ECEC managers, the job demands are explained by the work overload with the health measures, the frequents changes and adaptation in the establishment, and the perception of poor support from the government (Bigras et al., 2022). On the other hand, resources are important to reach professional objectives, promoting growth and learning (Bakker & Demerouti, 2014; Dicke et al., 2017; Skaalvik & Skaalvik, 2018). The resources are associated with an increase of work engagement and satisfaction at work. Available resources can mitigate the negative consequences of job demands on well-being and engagement at work. For the ECEC managers, the COVID-19 pandemic decreased the resources to reach their professional objectives related to their function, a lack of staff, dealing with an unbalanced budget, a quality of services affected, and unsatisfied parents. All that contributed to the decrease of ECEC managers' well-being (Bigras et al., 2022).

Objectives

The aim of this study is to evaluate the effect of *Catching Your Breath* device, one year later in March 2022, on work well-being, and particularly on self-compassion, work-related stress, burnout, depressive symptoms, and work engagement.

Method

This study is a descriptive, longitudinal, and quasi-experimental with an experimental group and a control group. The experimental group was recruited within the *Regroupement des CPE de la Montérégie*, where 22 assistant directors or general managers responded at all three times of data collection. Initially, 39 participants responded at the first two times of data collection. So, there was an attrition of 17 participants for the third data collection. All managers in the experimental group participated to the *Catching Your Breath* device once a month during five months between February and June 2021. The control group was recruited by email from the ECEC list available on the Family Ministry website. They were paired with the experimental group according to the type of management and the administrative region to which it belongs. So, 25 assistant directors or general managers responded at all three times of data collection. Initially, 43 participants for the third date collection. The quantitative data was collected with one hundred forty-three questions in (1) February, (2) June 2021 and (3) March 2022. All participants were informed about the project, the ethical considerations and signed a consent form via the online questionnaire.

Table 1 shows participants characteristics within each group. In both groups, participants were all women. About half of the participant of both groups were general managers and the other half were assistant directors. Half of the experimental group and 20% of the control group had between 11 and 20 years of experience. About half of the experimental group and 60% of the control group were aged between 50 and 59 years old. The majority in both groups had a university degree. On average, four persons were part of their management team for the experimental group, and three for the control group. About 41% of the experimental group had an ECEC that also included the family childcare coordinating office, and 36% for the control group. Most of the participants were manager of three or more installations in the

experimental group, and about two thirds of the control group participants. In the experimental group 45.5% receives a disadvantaged client grant and 40% for the control group. Regarding chronic health problems, they were present in 41% of the participants in the experimental group, whereas in 16% of the participants in the control group. Also, 22.7% of managers in the experimental group were living with a family member who has chronic health problems or being older than 70 years old, while 20% of managers in the control group had dependent children at home. Most of the participants works in the administrative region of Monteregie in Quebec.

	E	xperimental grou	ւթ		Control group	
	M(SD)	Categorical	Range	M(SD)	Categorical	Range
		variables (%)			variables (%)	Runge
Sex	-	-	1-2	-	-	1-2
Women	-	100	-	-	100	-
Men	-	0	-	-	0	-
Type of manager	-	-	1-2	-	-	1-2
General	-	50	-	-	56	-
Assistant	-	50	-	-	44	-
Years of experience	-	-	1-5	-	-	1-5
Less than 1 year to 3 years	-	18.2	-	-	24	-
4 to 10 years	-	4.5	-	-	12	-
11 to 20 years	-	50	-	-	32	-
21 to 30 years	-	18.2	-	-	20	-
31 years and over	-	9.1	-	-	12	-
Age	-	-	1-5	-	-	1-5
20 at 29 years old	-	0	-	-	4	-
30 at 39 years old	-	18.2	-	-	4	-
40 at 49 years old	-	13.6	-	-	20	-
50 at 59 years old	-	54.5	-	-	60	-
60 and more years old	-	13.6	-	-	12	-
University degree	-	-	1-2	-	-	1-2
University degree	-	100	-	-	84	-
No university degree	-	0	-	-	0	-
Members of the management team	4(1)	-	-	-	3(2)	-
Organization type	-	-	1-2	-	- (-)	1-2
ECEC and family child care	-	40.9	-	-	36	
coordinating office		10.9			50	-
ECEC only	-	59.1	_	-	64	_
Facility size	-	-	1-3	-	-	1-3
1 installation	-	91	-	-	32	-
2 installations	-	40.9	_	-	32	_
3 installations and more	_	50	_	_	36	_
Disadvantaged client grant	_	-	1-2	_	-	1-2
Ves	_	45.5	-	_	40	-
No	-	54.5	_	-	60	_
Chronic health problem	_	-	1-2	_	-	1_2
Ves	_	40.9	1-2		16	1-2
No		50 1			84	-
Family member with abronia	-	37.1	1 2	-	04	-
health problems/over 70	-	-	1-2	-	-	1-2
		22.7			20	
No	-	773	-	-	20	-
Dependent children at home	-	11.5	1.2	-	00	1.2
	-	- 50 1	1-2	-	-	1-2
I CS	-	37.1	-	-	40	-
110	-	40.9	-	-	00	-

Table 1: Participant's characteristics.

Administrative regions	-	-	1-3	-	-	1-3
Capitale-Nationale	-	4.5	-	-	8	-
Montreal	-	13.6	-	-	12	-
Monteregie	-	81.8	-	-	80	-

Note. M = mean; SD = standard deviation.

Well-being at work was measured by the 25 items of Dagenais-Desmarais & Savoie's (2012) Workplace Well-being index with a 6-point Likert scale (0 = disagree to 5 = strongly agree). The five dimensions of this scale are (1) interpersonal fit at work, (2) thriving at work, (3) feeling of competence at work, (4) perceived recognition at work, and (5) desire for involvement at work.

Self-compassion was measured by the 26 items of the scale created by Neff (2003a) with a 5point Likert scale (1 = almost never to 5 = almost always). It includes six dimensions which are (1) self-kindness, (2) self-judgment, (3) common humanity, (4) isolation, (5) mindfulness, and (6) over-identification. 13 items of this scale (items from subdimensions of selfjudgment, isolation, and over-identification) were recoded in reverse.

Work engagement was measured by the 9 items of the *Utrech Work Engagement Scale* (UWES) by Schaufeli & Bakker (2003) with a 7-point Likert scale (0 = never to 6 = always/every day). There are three dimensions called vigor, dedication, and absorption.

Burnout was measured by the 22 items of the Burnout Inventory of Maslach and colleagues (1996) with a 4-point Likert scale (1 = strongly agree to 4 = strongly disagree). There are three dimensions which are emotional exhaustion, depensionalization, and personal accomplishment.

Perceived stress was measured by the 14 items of the scale of Cohen and colleagues (1983) with a 5-points Likert scale (0 = never to 4 = very often). Seven items of this scale were recoded in reverse.

Depressive symptoms were measured by the 10 items of the Center for epidemiologic studies-depression scale (CESD) of Radloff (1977) with a 4-point Likert scale (0 = never to 3 = frequently). Two items of this scale were recoded in reverse.

Results

Table 2 shows ANOVAs repeated measure indicated that the main effect for the time is significant for the score of thriving at work F(2,44)=3.720, p=0.028, feeling of competency at work F(2,44)=4.504, p=0.014, and desire for involvement at work in well-being at work F(2,44)=5.571, p=0.005. These results explain different scores significant through the time without concern for the group they belong to.

An interaction between the time and the group for well-being at work F(2,44)=9.465, p < 0.001, interpersonal fit at work F(2,44)=10.948, p < 0.001, thriving at work F(2,44)=9.796, p < 0.001, and perceived recognition at work in well-being at work scale F(2,44)=6.4, p = 0.003 was observed. These results are explained by the fact that the control group scores worsened after one year, while the experimental group scores improved.

-	Experimental Control group		Main	Main effect			
	gro	oup			Time	Group	Time*
							Group
	M	ES	M	ES	F	F	F
Well-being at work - Global Score							
February 2021- Pre-test	4.14	0.44	4.4	0.44	2.392	0.014	9.465***
June 2021- Post-test	4.26	0.40	4.36	0.45			
March 2022 – Post-test	4.32	0.49	4.01	0.77			
Interpersonal fit at work							
February 2021- Pre-test	4.34	0.48	4.63	0.44	1.058	0.00	10.948**
June 2021- Post-test	4.4	0.56	4.54	0.5			*
March 2022 – Post-test	4.59	0.58	4.16	0.82			
Thriving at work							
February 2021- Pre-test	4.08	0.64	4.3	0.64	3.720*	0.245	9.796***
June 2021- Post-test	4.24	0.58	4.3	0.55			
March 2022 – Post-test	4.3	0.58	3.76	0.58			
Feeling of competency at work							
February 2021- Pre-test	4.06	0.51	4.36	0.53	4.504*	1.705	2.704
June 2021- Post-test	4.28	0.52	4.51	0.40			
March 2022 – Post-test	4.26	0.53	4.28	0.68			
Perceived recognition at work							
February 2021- Pre-test	3.74	0.65	4.04	0.54	1.428	0.014	6.4*
June 2021- Post-test	3.99	0.72	4.05	0.6			
March 2022 – Post-test	4.07	0.69	3.64	1.09			
Desire for involvement at work							
February 2021- Pre-test	4.48	0.43	4.66	0.36	5.571**	0.058	2.314
June 2021- Post-test	4.36	0.61	4.44	0.46			
March 2022 – Post-test	4.38	0.61	4.22	0.73			

Table 2: Repeated measures ANOVAs of well-being at work scale and subscales.

Note. M = mean; ES = standard error.

*** p = 0.0001, ** p>0.01, * p>0.05.

Table 3 presents ANOVAs repeated measure indicated that the main effect for the group is significant for self-compassion F(2,44)=7.450, p=0.009, self-judgment F(2,44)=8.920, p=0.005, isolation F(2,44)=5.542, p=0.023, mindfulness F(2,44)=5.067, p=0.029, and overidentification in self-compassion scale F(2,44)=6.865, p=0.012. These results are explained by the sum of the fluctuations in each group regardless of the data collection period.

An interaction between the time and the group for self-compassion F(2,44)=3.331, p=0.04, self-kindness F(2,44)=4.377, p=0.015, and mindfulness in self-compassion scale F(2,44)=5.512, p=0.006 was observed. These results are explained by the fact that the control group scores worsened after one year, while the experimental group scores improved.

	Experimental		Contro	Control group		effect	Interaction	
	gr	oup			Time	Group	Time*	
					_	_	Group	
	М	ES	М	ES	F	F	F	
Self-compassion – Global Score								
February 2021- Pre-test	3.12	0.43	3.72	0.58	0.282	7.450**	3.331*	
June 2021- Post-test	3.28	0.58	3.63	0.61				
March 2022 - Post-test	3.28	0.43	3.55	0.72				
Self-kindness								
February 2021- Pre-test	3.06	0.65	3.73	0.84	0.290	2.826	4.377*	
June 2021- Post-test	3.32	0.8	3.52	0.8				
March 2022 - Post-test	3.38	0.8	3.55	0.85				
Self-judgment								
February 2021- Pre-test	2.99	0.55	3.55	0.63	1.079	8.920**	0.259	
June 2021- Post-test	3.15	0.69	3.59	0.64				
March 2022 - Post-test	3.02	0.63	3.46	0.81				
Common humanity								
February 2021- Pre-test	2.98	0.63	3.31	0.64	1.763	1.241	2.222	
June 2021- Post-test	3.26	0.61	3.21	0.68				
March 2022 - Post-test	3.19	0.69	3.46	0.80				
Isolation								
February 2021- Pre-test	3.45	0.82	4.05	0.63	0.067	5.542*	1.618	
June 2021- Post-test	3.53	0.82	3.99	0.68				
March 2022 - Post-test	3.62	0.66	3.83	0.84				
Mindfulness								
February 2021- Pre-test	3.27	0.65	3.98	0.71	0.457	5.067*	5.512**	
June 2021- Post-test	3.44	0.59	3.78	0.72				
March 2022 - Post-test	3.48	0.63	3.62	0.81				
Overidentification								
February 2021- Pre-test	3.03	0.8	3.69	0.71	1.315	6.865**	0.855	
June 2021- Post-test	3.11	0.82	3.65	0.8				
March 2022 – Post-test	3.03	0.81	3.41	0.88				

Table 3: Repeated measures ANOVAs of self-compassion scale and subscales.

Note. M = mean; ES = standard error.

*** p = 0.0001, ** p>0.01, * p>0.05.

Table 4 reveals ANOVAs repeated measure indicated that the main effect for the time is significant for the score of work engagement F(2,44)=6.114, p=0.003, vigor F(2,44)=7.455, p=0.001, and absorption from work engagement scale F(2,44)=3.581, p=0.032. These results explain different scores significant through the time without concern for the group they belong to.

An interaction between the time and the group for dedication from work engagement scale F(2,44)=5.125, p=0.008 was observed. These results are explained by the fact that the control group scores worsened after one year, while the experimental group scores improved.

	Experi	imental	Control group		Main	effect	Interaction
	gro	oup			Time	Group	Time*
							Group
	M	ES	M	ES	F	F	F
Work engagement –							
Global score							
February 2021- Pre-test	4.83	0.53	5.08	0.7	6.114**	0.074	2.584
June 2021- Post-test	4.81	0.52	4.87	0.61			
March 2022 – Post-test	4.73	0.73	4.57	0.93			
Vigor							
February 2021- Pre-test	4.85	0.58	5.01	0.72	7.455**	0.003	2.276
June 2021- Post-test	4.77	0.60	4.76	0.72			
March 2022 – Post-test	4.67	0.87	4.47	1.01			
Dedication							
February 2021- Pre-test	4.79	0.67	5.16	0.78	2.636	0.032	5.125**
June 2021- Post-test	4.91	0.6	4.99	0.78			
March 2022 – Post-test	4.91	0.8	4.57	1.27			
Absorption							
February 2021- Pre-test	4.88	0.66	4.99	0.75	3.581*	0.260	0.038
June 2021- Post-test	4.74	0.73	4.85	0.70			
March 2022 - Post-test	4.62	0.81	4.68	0.81			

Table 4: Repeated measures ANOVAs of work engagement scale and subscales.

Note. M = mean; ES = standard error.

*** p = 0.0001, ** p>0.01, * p>0.05.

Table 5 exposes ANOVAs repeated measure indicated that the main effect for the time is significant for the score of emotional exhaustion in burnout scale F(2,44)=3.260, p=0.043. These results explain different scores significant through the time without concern for the group they belong to.

An interaction between the time and the group for emotional exhaustion from burn out scale F(2,44)=3.995, p=0.022 was observed. These results are explained by the fact that the control group scores worsened after one year, while the experimental group scores improved.

	1			5			
	Experi	mental	Control	l group	Main e	Interaction	
	gro	oup			Time	Group	Time*
							Group
	M	ES	M	ES	F	F	F
Emotional exhaustion							
February 2021- Pre-test	2.08	1.07	1.75	1.02	3.260*	0.096	3.995*
June 2021- Post-test	1.95	0.95	1.97	1.2			
March 2022 – Post-test	2.01	1.27	2.6	1.58			
Depersonalization							
February 2021- Pre-test	1.15	0.70	0.89	0.77	1.839	0.012	2.126
June 2021- Post-test	1.08	0.75	1.00	0.88			
March 2022 – Post-test	1.11	0.93	1.38	1.08			
Accomplishment at work							
February 2021- Pre-test	1.34	0.63	1.1	0.9	0.362	0.618	1.046
June 2021- Post-test	1.23	0.55	1.26	0.71			
March 2022 – Post-test	1.41	0.991	1.2	0.77			
	1						

Table 5: Repeated measures ANOVAs of burnout subscales.

Note. M = mean; ES = standard error.

*** p = 0.0001, ** p>0.01, * p>0.05.

Table 6 shows ANOVAs repeated measure indicated that an interaction between the time and the group for work stress related F(2,44)=6.117, p=0.003, and depressive symptoms

F(2,44)=3.822, p=0.026 was observed. These results are explained by the fact that the control group scores worsened after one year, while the experimental group scores improved.

	uepressive symptoms scale.								
	Experimental		Contro	ol group	Main	Main effect			
	gro	oup			Time	Group	Time*		
							Group		
	M	ES	M	ES	F	F	F		
Work-stress related									
February 2021- Pre-test	1.8	0.51	1.43	0.53	0.565	0.615	6.117 **		
June 2021- Post-test	1.64	0.49	1.52	0.55					
March 2022 - Post-test	1.57	0.57	1.75	0.64					
Depressive symptoms									
February 2021- Pre-test	0.75	0.4	0.6	0.4	0.508	0.278	3.822*		
June 2021- Post-test	0.61	0.33	0.68	0.55					
March 2022 – Post-test	0.59	0.38	0.85	0.65					

Table 6: Repeated measures ANOVAs of work-stress related scale and depressive symptoms scale.

Note. M = mean; ES = standard error.

*** p = 0.0001, ** p>0.01, * p>0.05.

Conclusions

Using the theoretical model of job demands and resources (Bakker & Demerouti, 2014; Dicke et al., 2017; Skaalvik & Skaalvik, 2018) to interpret those results, it is possible that the pandemic-related work overload has affected all components of managers' tasks. In fact, there has been a cumulative effect on manager's tasks with managing public health imposed sanitary measures, pandemic fatigue and the effects of the 5th wave building up, increasing staffing shortages, unbalanced budget and quality of services being affected, including instability and groups closing due to COVID cases (Bigras et al., 2022). Although there are many resources available for managers to achieve their personal goals, such as positive relationships at work, quality relationships with colleagues, and positive climate (Bigras et al., 2022). These could be affected by pandemic fatigue and the cumulative effect of the imposed sanitary measures, for the managers of the control group who did not receive the support offered by Catching Your Breath device. This would explain the results, where the control group had worsening scores compared to the experimental group, who had access to more support with the collective reflexive coaching device to develop the tools to increase the resources to achieve their goal. These results suggest that this device had positive effects that were maintained a year later. Furthermore, participants in the control group continued to experience a decreased in their well-being. It seems that supporting ECEC managers, with a device like Catching Your Breath, can mitigate the negative influences of the pandemic on their well-being. This could help to rebalance the job demands with the resources.

There are some limitations in this study. It is possible that only participants for whom the device worked well answered the third measures. It is also possible that participants from the control group were the one who needed the most support that answered the call for participants. Finally, the themes addressed in the device, such as well-being at work and self-compassion, could also explain why these variables and subscales increased over time for the experimental group.

In conclusion, the pandemic influenced ECEC manager's workload (Bigras et al., 2021). There is a crying need to offer them support to overcome this crisis resulting from COVID-19

pandemic (Bigras et al., 2021), with an additional lack of staff. A device like *Catching Your Breath* could be a great way to support the well-being at work of all ECEC managers.

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