

## INTRODUCTION

Limited research exists about factors that influence the sustainability of universal mental health promotion programs after the controlled and supported environment of a research study ends. This sustainability study explores the factors associated with sustained implementation of MindUP™, a mindfulness-informed social and emotional learning (SEL) curriculum in schools following a quasi-experimental longitudinal evaluation. The purpose of this study is to find associations between the sustained use of MindUP™ in LDCSB primary grade classrooms and internal – external factors of educators and the schools.

Between 2016-2021, 279 educators of LDCSB in Southwestern Ontario were trained in MindUP™ through a quasi-experimental multi-year implementation research study of MindUP™ in Kindergarten to Grade 3 classrooms. We found significant impacts on students' social, emotional, and adaptive behaviour skills and positive affects on educators, as compared to educators and students who did not receive the training/ program (Crooks et al., 2020; Kim et al., 2021). Trained educators included support staff/ administrators trained for district-wide capacity building and educators trained to implement the program as part of the study. A Steering Committee provided many resources intended to support and sustain the implementation of MindUP™.

Sustainability study findings can contribute to the identification critical stages and the associated strategies that could promote sustainability of program implementation.

## LITERATURE REVIEW

- MindUP™ is a mindfulness-informed SEL program shown to promote cognitive and SEL skills such as self-awareness, self-management, and perspective taking for children who receive the program (Schonert-Reichl, 2015).
- In an evaluation of MindUP™ in LDCSB, a school district in Southwestern Ontario, we found evidence of positive effects including improved child behavioural problems (Crooks et al., 2020) and reducing educator burnout and stress (Kim et al., 2020).
- The implementation of evidence-based prevention programs, such as MindUP™, needs to be sustained over time to produce the intended benefits for children (Han & Weiss, 2005). There is limited literature on the factors that promote sustained implementation of evidence-based programs in schools (Arnold et al., 2021).
- Sustainability of evidence-based mental health programs by teachers is defined as the continued use of the curriculum components at a level that is sufficient to sustain the outcomes (Han & Weiss, 2005).

Check out our website for more from the MindUP for Young Children implementation research project:



- Training slides and presentations
- Research publications and snapshots
- Reports and findings
- Videos

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## RESEARCH OBJECTIVE

Throughout the 6-years of our university-school district partnership, we planned for sustained program implementation in LDCSB schools through multiple support strategies. After significant investment in training, supports, and resources, the school board indicated an interest in exploring the extend to which the program was being used among the trained educators after the completion of the intervention research. This is a descriptive study exploring factors associated with sustaining MindUP™ in elementary classrooms of a Catholic School District in Southwestern Ontario following outcomes evaluation research. We studied this in a descriptive way through a naturalistic design, given that implementation occurred over several years and educators received different training and supports.

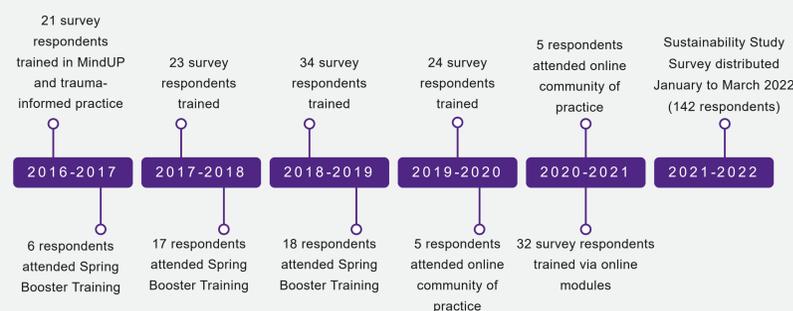
### Research questions:

- To what extent is the MindUP™ program curriculum sustained by educators after the evaluation?
- What are the factors associated with sustained implementation of the program?

## METHODS

### PROTOCOL

Timeline of the MindUP™ implementation and sustainability study



### Participants

Primary educators (Kindergarten to Grade 3) and school district staff from schools in a Catholic School District in Southwestern Ontario, Canada.

Table 1: Descriptive Statistics Summary of Survey Participant Characteristics

Variable	Mean or Percentage	Std. Dev.	Min	Max
Years teaching/ in education	17.1 years	8.7	1.5	46
Age				
25-34 years	14.1%			
35-44 years	39.4%			
45-54 years	28.9%			
55 years +	14.8%			
Gender				
Male	6.3%			
Female	92.3%			
Current Role				
ECE	16.2%			
Teacher	72.5%			
Other	9.9%			
Training				
In person	77.5%			
Online	22.5%			
Education				
Diploma	12.7%			
Bachelor	63.4%			
Graduate	14.8%			
MindUP professional development				
Yes	37.3%	e.g. Booster sessions, Master trainer, Online community of practice, etc.		
No	62.7%			
Number of participants	142			

**Sustainable Implementation Support Strategies:** Trained implementors received a resource package of curriculum-aligned storybooks, chime, Hoberman Sphere breathing ball, and mindfulness activities cards. MindUP™ lesson extensions of District-specific and Catholic-relevant activities, parent handouts, and resources provided on the community of practice (CoP) sharing site.

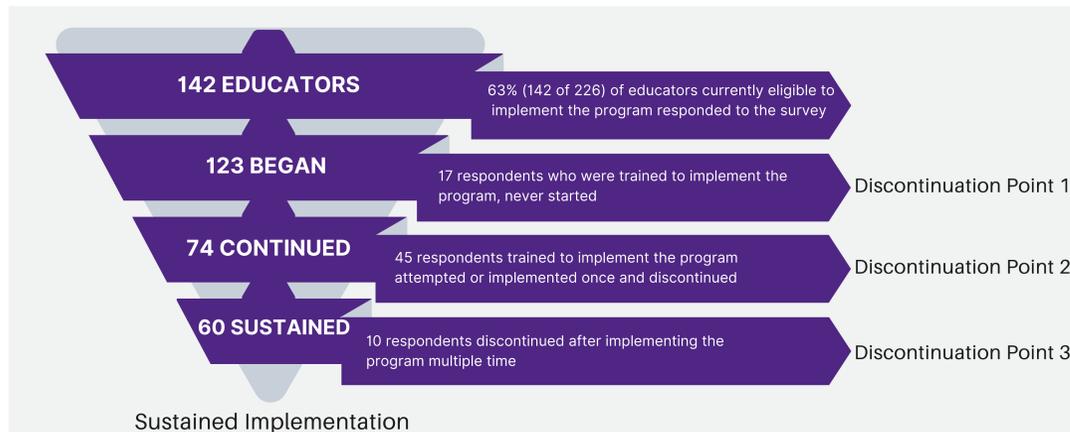
**Survey:** In January 2022, every LDCSB educator trained in MindUP™ was invited to participate in an online survey. Survey respondents (n=142) indicated their implementation or discontinuation of the program. Respondents self-identified factors that they attribute to their sustained implementation or barriers that lead to discontinuation.

**Data Analysis:** Dropoff analysis to determine points of discontinuation. Descriptive statistics for respondent characteristics, chi square tests/ ANOVA were utilized to examine the statistical independence between variables.

## FINDINGS

Figure 1: Dropoff analysis chart identifying the extent of MindUP curriculum implementation sustained after the research study.

Discontinuation of the MindUP™ program implementation based on self-reported survey respondents during the data collection time period of January to March 2022 (10 respondents did not answer this question). Eligibility for ongoing implementation was based on school district level data of educators currently teaching in classrooms (i.e., not retired, on maternity leave, left the district, etc.). Three discontinuation points were identified, and 60 educators indicated they were currently implementing MindUP and intended to continue with the program in the future (sustainers).



## FINDINGS

Table 2. Individual characteristics associated with implementation and sustainment.

	Sustained n (%)	Non start/ Discontinued n (%)	Chi square test of independence $\chi^2$ (DOF, N) P
<b>Training</b>			
In person	48 (34)	60 (42)	0.89 (1, 142)
Online	12 (8)	22 (15)	0.35
<b>PD in MindUP</b>			
Yes	28 (20)	19 (13)	8.63 (1, 142)
No	32 (23)	63 (44)	0.003**

Note. \*p<0.05, \*\*p<0.01

Table 3. Board level implementation support strategy associated with sustained implementation.

	Sustained n (%)	Discontinued n (%)	Chi square test of independence $\chi^2$ (DOF, N) p
<b>Use of resource package</b>			
Yes	56 (46)	20 (16)	49.4 (1, 123)
no	4 (3)	43 (35)	0.000***

Note. \*p<0.05, \*\*p<0.01, \*\*\*p<0.001

Table 4. Comparison of average teaching/ education experience between sustainment groups.

Years teaching/ in education	Sustained		Non start/ Discontinued		ANOVA Single Factor	
	Mean	Var	Mean	Var	F (1, 136)	p
	17.5	93.1	16.7	63.5	0.23	0.62

## SUMMARY AND CONCLUSIONS

- The majority of educators trained in MindUP™ who remain eligible to implement, discontinued use of the program, while 42% (n=60) sustained program implementation.
- Sustained implementation is statistically independent from **training format** (i.e. no difference in sustainment between respondents trained in person or online) and **years experience in education** (i.e. no significant difference in in average years of teaching experience between sustainment groups).
- Participating in MindUP™ **professional development** (booster training sessions, master trainer, and online CoP sessions) and **use of the provided resources** (storybooks, sphere, chime, lesson extensions, parent handouts, etc.) are significantly associated with sustainment of the program.
- Recommendations are to provide high quality ongoing training/ professional development and various program resources to support sustainable implementation of evidence based practices.
- Identification of the critical points of discontinuation phases can inform processes to promote more successful implementation, program effectiveness and ultimately sustainability of such initiatives.
- Factors identified as associated with sustained implementation of evidence-based mental health promotion programs can impact multi-sector partnership plans for implementation in schools.

## REFERENCES

- Arnold, K.T., Porter, K.M.P., Frattaroli, S., Durham, R.E., Clary, L.K., & Mendelson, T. (2021). Multilevel Barriers and Facilitators to Sustainability of a Universal Trauma-Informed School-Based Mental Health Intervention Following an Efficacy Trial: A Qualitative Study. *School Mental Health, 13*, 174-185.
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