A Structured Conceptualization of Implementation-Sensitive Interventions for School Mental Health

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ABSTRACT

Implementation-sensitive approaches to school mental health have been proposed as being responsive to the needs of the education system. We worked with a group of expert stakeholders to identify a wide range of characteristics of implementation-sensitive approaches. These statements (n = 50) were sorted into concepts by 20 participants. Participants also ranked the importance of each statement. Group concept mapping created a six-concept solution including (1) Justice, Equity, Diversity and Inclusion, (2) Implementation Informed from the Outset, (3) Intervention Characteristics, (4) Evidence, Theory, and Practice-Informed, (5) Authentic Stakeholder Engagement, and (6) Ongoing Learning and Sustainability. We subsequently conducted two focus groups to gather feedback and contextualize the clusters.

Keywords: school mental health, implementation, group concept mapping, evidence-based

RÉSUMÉ

L'approche sensible pour la santé mentale en milieu scolaire a été suggérée comme une réponse adaptée aux besoins du système d'éducation. Nous avons travaillé avec un groupe d'intervenants spécialisés afin d'identifier un large éventail de caractéristiques liées à l'approche sensible. Ces caractéristiques (n = 50) ont été réparties en différents concepts par 20 participants. Ces derniers ont aussi classé chaque concept par ordre d'importance. La modélisation des différents groupes de concepts a permis de dégager

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6 grands concepts : 1) Justice, équité, diversité et inclusion ; 2) Mise en œuvre définie dès le départ ; 3) Caractéristiques de l'intervention ; 4) Preuve, théorie et pratique documentée ; 5) Implication complète des intervenants ; 6) Formation continue et pérenne. Nous avons ensuite organisé deux groupes de discussion pour recueillir les commentaires et mettre les groupes en contexte.

Mots clés : santé mentale en milieu scolaire, mise en œuvre, modélisation groupes de concepts, données probantes

Canadian students experienced high levels of mental health challenges and distress, even prior to the Covid-19 pandemic. Data from the 2014 Ontario Child Health Study (OCHS) found an overall 6-month prevalence rate across mental disorders of approximately 20% among children and youth ages 4 to 16 (Georgiades et al., 2019). These rates have remained stable over time; the 2019 Ontario Student Drug Use and Health Survey (OSDUHS) reported that about one in five students reported significant levels of mental distress (Boak et al., 2020). These rates are consistent with national estimates in Canada (Statistics Canada, 2020) and similar to other jurisdictions globally (Kessler et al., 2007). Although longitudinal data are required to capture the longer-term impacts of the Covid-19 pandemic, early cross-sectional snapshots show that mental health challenges have only been exacerbated (Cost et al., 2021; Cresswell et al., 2021).

A lack of available and accessible mental health services for children and youth has been well documented in the OCHS, going back to the late 1980s (Georgiades et al., 2019; Offord et al., 1987). In the most recent OSDUHS, a significant proportion of youth indicated that they wanted help but did not know how to access it. Collectively, these wide-scale data efforts show that Ontario students experience a high level of unmet mental health needs. Furthermore, there are disparities in terms of who has access to high-quality mental health care, with racialized Canadian students facing significant barriers to accessing high-quality, culturally competent care (Fante-Coleman & Jackson-Best, 2020).

Given the high rates of mental health challenges and low access to services, there is widespread interest in expanding the role of schools in promoting and responding to mental health concerns. Schools may be uniquely positioned to promote student well-being because children and youth spend so much of their time there (Hoover & Bostic, 2021; Weist, 2005). An expanded vision of school mental health recognizes that schools are an excellent venue for interventions ranging from universal mental health promotion initiatives to early intervention, to responding to, and providing referrals for, more serious mental health concerns (Hoover & Bostic, 2021; Weist, 2005). There is also a recognition that everyone in the educational system has a role to play.

Although it has been 15 years since Weist wrote his seminal article about fulfilling the promise of school mental health (Weist, 2005), this systematic upstream vision for school mental health has not been achieved. A Canadian review, scan, and survey conducted by the School-Based Mental Health and Substance Abuse Consortium (Manion et al., 2013; SBMHSAC, 2013) identified six key barriers that impede the development of this robust system of support in schools: (1) organizational/structural barriers, (2) knowledge gaps, (3) program implementation and scalability factors, (4) inequities in service access, cultural relevance, and delivery, (5) problems with stakeholder engagement, and (6) challenges with cross-sectoral system collaboration.

For us to actualize the compelling vision of school mental health, these obstacles must be systematically addressed. Implementation science bridges the gap from evidence to practice by providing direction about intentional strategies to tackle some of these challenges (Short et al., 2022). Researchers have identified the importance of looking beyond the intervention itself to addressing factors such as interactive assistance, adaptation for local contexts, developing stakeholder relationships, high quality training, providing ongoing support for implementers, and engaging students and families (Lyon et al., 2019). Furthermore, there is recognition that implementation strategies need to be further tailored to ensure fit with the school context (Cook et al., 2019).

In Ontario, School Mental Health Ontario (SMH-ON) was developed as an intermediary organization to use implementation science to enhance the quality, consistency, scalability, and sustainability of school mental health practices across the province (Short et al., 2022). It began as a pilot with 15 school boards during the 2011–2012 academic year, then scaled up to include all 72 boards by 2014–2015. From the outset, SMH-ON recognized that there were significant barriers to implementing overly rigid evidence-based approaches, many of which were not developed explicitly for school contexts. Even those developed for the school setting might not be suitable for the Ontario context, with its broad geography, large scale, diverse student population, and instructional systems. In developing a comprehensive and province-wide approach, SMH-ON addressed three high-level pillars: (1) infrastructure (system conditions with dedicated roles and structures within the host environment); (2) intervention (evidence-informed, culturally responsive practices across the full continuum of mental health promotion, early identification, prevention, and early intervention services), and (3) implementation (effective processes, engagement, training/coaching, feedback loops, and monitoring; see Short et al., 2022). As one component of the approach, SMH-ON searches for and co-develops mental health programming that is, by design, both evidence-based, and implementation-sensitive.

The concept of evidence-based, implementation-sensitive approaches arose as a practice term within SMH-ON to describe approaches that fall at the intersection of having a foundation of evidence, but also being flexible and responsive to different contexts, and feasible to implement (Weist et al., 2017). The idea of evidence-based, implementation-sensitive approaches was conceptualized to reflect an understanding that schools are complex and ever-changing systems, and that a level of practicality is required (i.e., what level of program integrity is "good enough" to produce the intended student outcomes; Owens et al., 2014. Over time, evidence-based, implementation-sensitive interventions have become a cornerstone of the SMH-ON approach; however, to date, this concept has not been explicitly explored and articulated. Thus, while there may be a general consensus among SMH-ON practitioners about what constitutes evidence-based, implementation-sensitive approaches, lack of clarity concerning the concept limits the awareness and impact of the approach beyond Ontario.

The purpose of this study was to use group concept mapping (GCM) to capture characteristics of evidence-based, implementation-sensitive approaches to school mental health. This approach allowed us to leverage the collective expertise of researchers, practitioners, and program developers who work in school-based mental health with a focus on implementation considerations. GCM is a mixed-methods, stakeholder-driven approach which integrates qualitative data collected from key stakeholder groups and quantitative analytical techniques. This structured, multi-step process results in a series of interrelated concept maps,

which provide a visual representation of the group's ideas, and the conceptual interrelationships of a particular topic (Trochim 1989a, 1989b; Trochim & Kane, 2005; Trochim & McLinden, 2017).

METHOD

Participants

Participants in this study were experts and practitioners in the field of school mental health. The initial idea generation phase was undertaken at a research summit with 19 people, who included researchers and practitioners who were engaged with SMH-ON on different research projects. Thus, it was a sample of convenience in that the group had been brought together for a summit, and they were considered experts based on their selection by SMH-ON to lead program development and evaluation initiatives. Most participants were in Ontario, except for two who participated from other jurisdictions through Zoom. For the sorting and rating activity, the initial group of research attendees were invited, and an additional 19 senior personnel from SMH-ON (i.e., implementation coaches and team leads) were added to the recruitment email. Participants could choose to consent to any combination of the sorting, rating, and focus group activities; 24 participants consented to participate in the study (63% consent rate), and 22 completed both the sorting and rating activities (58% completion rate). Two incomplete sorts were removed from the data set (i.e., not all items were sorted, rendering the results unusable), resulting in a final sample of 20 participants. This exceeds the recommended minimum number of participants required to generate interpretable concept maps (Kane & Trochim, 2007). Finally, 15 individuals (i.e., 68% of those involved in the sorting and rating stage) participated in one of two focus groups.

Participant demographics are presented in Table 1. Participants in the present study were predominantly White (70%) and female (85%). With respect to education and experience, 95% of participants held advanced degrees (i.e., master's degree or PhD), and most (75%) have been working in the field for 10–20+ years. Participants were given a $20 gift card for completion of the sorting/rating activity and/or focus group).

Procedure

Standard group concept mapping procedures include six steps: preparation, generation, structuring, representation, interpretation, and utilization (Kane & Trochim, 2007; Trochim, 1989b). Steps 1 through 5 of this approach are described below; step 6 of the process is utilization of results, which we address in the discussion. All procedures were approved by Western University's Non-Medical Research Ethics Board.

Step 1: Preparation. In the first step of group concept mapping, a focus prompt is generated to elicit responses from participants during brainstorming activities. The focus prompt for the present study was, "What factors contribute to successful evidence-based, implementation-sensitive approaches to school mental health?"

Step 2: Generation. During the generation step, participants brainstorm ideas in response to the prompt specified by the researchers. For this project, ideas were generated as part of an activity at a research summit, wherein the first author moderated a group discussion about evidence-based, implementation-sensitive approaches to school mental health. We did not give a specific definition of *evidence-based,*

Table 1

Participant Demographics

	N	%
Age (years)		
Under 25	0	0
25–29	0	0
30–39	6	30
40–49	6	30
50–59	7	35
60+	1	5
Gender		
Female	17	85
Male	3	15
Ethnicity		
Indigenous	1	5
Black	1	5
Asian	2	10
Hispanic	3	15
White	14	70
Other (mixed ethnicity)	1	5
Highest degree completed		
High school diploma	0	0
College certificate	0	0
Bachelor's degree	1	5
Master's degree	6	30
Doctorate	13	65
Years working in field		
Less than 1	0	0
1–5	5	25
6–10	0	0
10–15	5	25
15–20	1	5
20+	9	45

implementation-sensitive because the purpose was to develop the conceptual framework and we did not want to bias participants; however, we had an opening presentation that explored some possible facets of implementation-sensitive practice, including why there was even interest in the concept (for example, some of the challenges with focusing on evidence alone in the absence of attention to context).

Following this presentation and large group discussion, participants were given the opportunity to generate as many ideas as possible in response to the focus prompt. Individual statements were written on sticky notes and collected at the end of the activity. Each response was entered into an Excel spreadsheet (n = 182) and the list of statements was reviewed and then coded by the first and second authors for uniqueness, clarity, and relevancy. Responses were edited for simplicity and coherence, and ideas that were unclear, redundant, or did not directly answer the prompt were removed, resulting in a final list of 50 unique statements.

Step 3: Structuring. In the third step, participants individually participated in sorting and rating activities using the generated statements, through an online survey platform, Qualtrics. First, participants sorted the statements into thematically similar groups. Participants were instructed to sort all statements, into as many or as few groups as appropriate, with no statement being placed in more than one group. Once all statements were sorted, they were invited to assign a name to each group which reflected the overarching concept or theme of the grouped statements. Following the sorting activity, participants were asked to rate each statement based on its importance in contributing to evidence-based, implementation-sensitive approaches in school mental health on a scale from 1 (not at all important) to 5 (very important). Participants spent an average of 58 minutes completing the sorting and rating activities and sorted statements into 4 through 12 groups (M = 8.5, SD = 2.11).

Step 4: Representation. For the representation step, data were analyzed using groupwisdom™ concept-mapping software. First, the software applies a multidimensional scaling procedure to create a two-dimensional data point map, wherein a spatial coordinate is assigned to each individual statement generated by participants. The distance between data points reflects how frequently statements were sorted together, such that statements closer to each other on the map were sorted together more frequently by participants. A bridging index value between 0 and 1 is generated for each statement on the map to represent how often each statement was sorted with items in close proximity (i.e., lower bridging index) and further away on the map (i.e., higher bridging index). Finally, a stress index is calculated to assess the fit of the multidimensional scaling solution to the data. The lower the stress index value, the better the map is considered to fit the data. The map produced in the present study had a stress value of 0.298 after 13 iterations, which is below the acceptable upper range value of 0.39 (Rosas & Kane, 2012), suggesting an adequate fit with the data.

Next, hierarchical cluster analysis is used to organize statements into clusters (based on bridging values), which represent key concepts identified by participants, and the relationships among these concepts. Smaller clusters indicate that the statements within that cluster were sorted together more frequently by participants. As with individual statements, clusters that are spatially closer together on the map signify greater conceptual similarity compared to clusters that are farther apart on the map.

Within clusters, an average importance rating is generated based on the mean of the individual ratings of the items contained within. Pairwise t-tests are available through groupwisdom™ to compare clusters; to minimize the likelihood of type 1 error, we compared the most and least important clusters (i.e., Justice,

Equity, Diversity and Inclusion, and, Ongoing Learning & Sustainability, respectively), to each other and to a cluster of middle importance (i.e., Intervention Characteristics), rather than comparing all possible combinations. These analyses were intended to provide a sense of whether there was diversity in importance ratings rather than to pinpoint exact differences among clusters.

Step 5: Interpretation. During the interpretation step, researchers engage in an iterative process of reviewing potential cluster solutions to determine the solution that makes most sense conceptually, in terms of the number of times clusters are broken into smaller units of meaning. A solution is based on conceptual fit (i.e., at what point does breaking a cluster into two smaller clusters not improve the overall interpretability of the solution) rather than relying on specific numerical indices. The first and second author examined solutions ranging from four to fifteen clusters and determined that a six-cluster solution provided the best conceptual fit for the data. Working labels were assigned to each cluster following review of the statements within, and the label suggestions generated by the groupwisdom™ software based on the group names assigned by participants during the sorting exercise.

Inspired by the work of Moreno and colleagues (2013), we conducted two online focus groups (60 minutes each) to help interpret and contextualize the findings. Participants were provided with a list of statements, and the final cluster solution prior to the focus group. During the focus groups, the first and second author led participants through a series of questions pertaining to the individual clusters and the overall map. Participants were asked to provide feedback on the cluster labels and input on individual clusters, ideas that were potentially missing, and the importance or operationalization of the items that were present. Participants were also asked for their views about how the concepts related to each other. Focus groups were audio recorded and transcribed using Trint transcription software and were subsequently reviewed for content. Focus group responses were sorted into those pertaining to a specific cluster versus those related to the overall map and ideas. Within each cluster we identified main themes and noted whether there was general consensus or not. In most cases the discussion quickly centred on one or two points and some clusters had little to no discussion. We present both major points of agreement and any differences of opinion in our results.

RESULTS

The final six-cluster model depicted in Figure 1 includes the following concepts related to implementation-sensitive approaches in school mental health: justice, equity, diversity, and inclusion; implementation-informed from the outset; intervention characteristics; evidence, theory, and practice informed; authentic stakeholder engagement; ongoing learning and sustainability. Table 2 provides a description of each cluster and the statements they contain, as well as cluster and statement-level bridging and importance values. Below, we discuss each cluster separately, including the importance ratings and the focus group feedback. We then turn to focus group feedback on the overall map and how the concepts relate to each other.

Figure 1

Concepts Identified in Group Concept Mapping Process with Additional Focus Group Interpretation

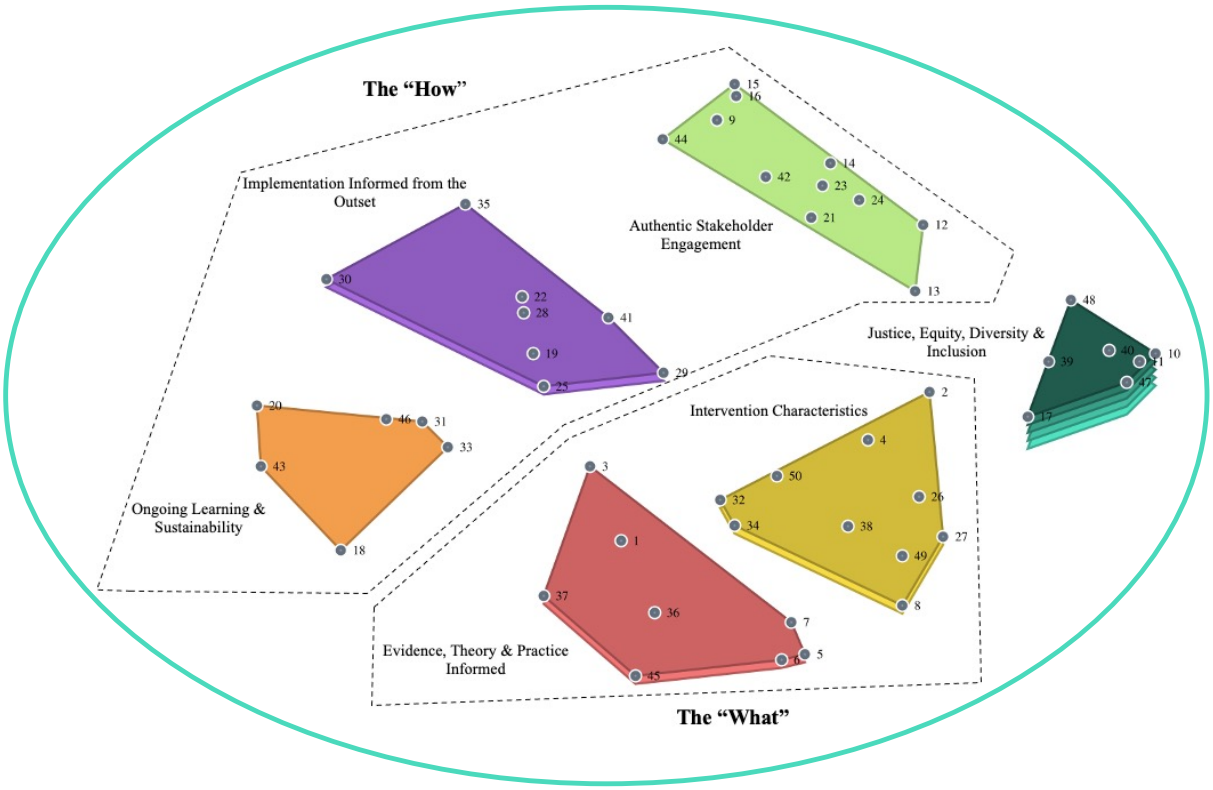

Table 2

Statements in Each Cluster, Bridging Indices, and Importance Ratings

Cluster/Statement		Bridging Index[1]	Importance* *M (SD)*
	Justice, Equity, Diversity & Inclusion	**0.36**	**4.56 (0.18)**
11	Consideration of diversity and equity	0.17	4.80
10	Culturally sensitive	0.18	4.75
40	Consider outcomes for diverse populations	0.44	4.70
17	Ensure approach is accessible	0.39	4.45
39	Adaptable to needs of those it is designed to serve	0.50	4.45
48	Responsive to differences	0.55	4.45
47	Integrate intersectional lens	0.27	4.30
	Implementation-Informed from the Outset	**0.53**	**4.12 (0.37)**
19	Adequate support throughout implementation	0.38	4.58
29	Ensure adequate resources	0.32	4.50
41	Identify possible barriers to successful implementation	0.36	4.35
22	Build in sustainability from the start	0.50	4.25
28	Administrative support for implementation beyond initial training	0.37	4.25
30	Conscious of resource implications (i.e., not the Cadillac model)	0.91	3.90
25	Anticipate how initiative might evolve over time	0.41	3.65
35	Co-facilitated training and implementation support (with members of the community to be supported by implementation)	0.98	3.50
	Intervention Characteristics	**0.34**	**4.10 (0.37)**
4	Feasible to implement	0.33	4.55
49	Core intervention components clearly identified	0.33	4.55
8	Targets appropriate risk and protective factors	0.59	4.40
34	High quality training that meets the intensity of the intervention	0.28	4.35
50	Clear training guidelines	0.25	4.15
38	Clear definitions and protocols for all practices	0.27	4.10
27	Clear eligibility criteria	0.37	3.95
2	Interactive programming	0.40	3.90
26	Clear sequencing- Tier 1 vs. Tier 2	0.33	3.50
32	Polished, professional, hands-on materials	0.27	3.50
	Evidence, Theory, & Practice Informed	**0.52**	**4.06 (0.32)**
6	Informed by empirical evidence	0.29	4.45
7	Informed by practical experience	0.42	4.40

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1. The individual item bridging indices represent the bridging value in relation to the entire point map. The bolded values present the mean bridging indexes for all the items within a particular cluster.

* Clusters and statements are listed by importance rating.

Table 2, continued

Statements in Each Cluster, Bridging Indices, and Importance Ratings

Cluster/Statement		Bridging Index[1]	Importance* *M (SD)*
36	Describe clear and measurable outcomes	0.71	4.25
5	Based on strong theory	0.28	4.21
1	Flexibility of program	0.69	4.00
45	Clear evidence about mechanisms of change	0.61	3.90
37	Explicit about fidelity expectations	0.76	3.85
3	Low or no cost to implementers	0.38	3.40
	Authentic Stakeholder Engagement	**0.31**	**3.95 (0.39)**
13	Ensure need exists and is being met	0.61	4.50
12	Co-design with input from others	0.43	4.30
9	Liked by students	0.41	4.15
21	Identify clear roles for different stakeholders	0.30	4.15
23	Seek leader endorsement	0.20	4.10
44	Youth and parent voice included in the iterative process as the intervention is developed and refined	0.47	4.10
14	Engage stakeholders and users at all levels	0.23	4.05
16	Assess whether stakeholders want the program	0.11	3.85
42	Community-driven outcomes	0.47	3.70
15	Assess whether stakeholders are excited about the program	0.00	3.50
24	Seek union endorsement	0.23	3.05
	Ongoing Learning & Sustainability	**0.69**	**3.92 (0.39)**
43	Ongoing, iterative evaluation, adaptation, and development	0.81	4.20
18	Integrate continuous quality improvement	0.83	4.15
33	Teachable to other implementers	0.52	4.00
46	Provide booster training	0.48	3.75
20	Provide ongoing access to data	1.00	3.70
31	Mechanisms for sharing among practitioners	0.50	3.70

1. The individual item bridging indices represent the bridging value in relation to the entire point map. The bolded values present the mean bridging indexes for all the items within a particular cluster.

* Clusters and statements are listed by importance rating.

Justice, Equity, Diversity, and Inclusion

This concept contained seven statements and was viewed as the most important component of implementation-sensitive approaches to school mental health ($M = 4.56$, $SD = 0.18$, bridging value = 0.36). This cluster contained the three statements with the highest importance ratings: "Consideration of diversity and equity" ($M = 4.80$, bridging value = 0.17), "Culturally sensitive" ($M = 4.75$, bridging value = 0.18), and "Consider outcomes for diverse populations" ($M = 4.70$, bridging value = 0.44). Indeed, importance ratings for this cluster were significantly higher ($M = 4.56$, $SD = 0.18$) than ratings for the cluster (i.e., Ongoing Learning & Sustainability) with the lowest importance ratings ($M = 3.92$, $SD = 0.21$), $t(11) = 5.91$, $p < 0.001$, and the cluster (i.e., Intervention Characteristics) with middling importance ratings ($M = 4.10$, $SD = 0.37$), $t(15) = 3.46$, $p < 0.005$.

During focus groups, participants overwhelmingly agreed that consideration of justice, equity, diversity, and inclusion (JEDI) is an essential component of implementation-sensitive approaches to school mental health. Several participants highlighted the lack of specificity in statements within this cluster. One participant noted that:

> What struck me was the lack of specificity compared to some of the other items and clusters, where it's really drilling down about what that looks like… I think I was expecting to see the "how" or the "for whom" as well as being culturally sensitive and responsive to differences. How do we operationalize that? What does that actually look like?

Some participants posited that the generality of the statements within this cluster contributed to their grouping separately from other clusters; however, it was widely agreed that this concept should be integrated throughout each of the other identified concepts. As one participant stated, "this is not something separate that we need to think about after the fact; it needs to be embedded within."

Implementation-Informed from the Outset

This concept had the second highest importance ratings ($M = 4.12$, $SD = 0.37$, bridging value = 0.53), and was composed of eight statements that highlighted the need to "build in" effective implementation strategies from the start (i.e., ensuring adequate resources, identifying possible implementation barriers, planning for adequate support throughout the implementation cycle). During focus groups, participants emphasized this concept as a way to "set the stage" for successful implementation, with one participant commenting "… these are the things you want to think about strategically when you're coming up with an implementation plan, rather than something that's delivered on an ongoing or as-needed basis."

Intervention Characteristics

This cluster contained 10 statements that identified intervention-level considerations ($M = 4.10$, $SD = 0.37$, bridging value = 0.34), including ensuring that interventions target appropriate risk and protective factors, provide clarity regarding core intervention components and clinical usage protocols (i.e., stated eligibility criteria, clear guidelines for training and ongoing support), and are feasible to implement in a given setting. Several focus group participants noted that this cluster was close in proximity to the Evidence, Theory and Practice-Informed cluster, which many agreed "go hand in hand" and are "inextricably linked." Specifically,

interventions that include practice-informed highlights were seen to be aligned with an implementation-sensitive approach.

Of note, statements addressing training (i.e., clear training guidelines, high quality training that meets the intensity of the intervention) were included in this cluster, however there was some disagreement among focus group participants regarding conceptual fit. For example, one participant noted that "I like the idea that the intervention is also the training because I think when it gets separated it can be easy to think that it's optional." Another participant in the same focus group countered that "I worry about it not being separate a little bit because it doesn't reinforce the importance of training and ongoing implementation support together…because sometimes people just train and hope."

Evidence, Theory, and Practice-Informed

The eight statements within this cluster addressed the need to balance both empirical and practice-based evidence ($M = 4.04$, $SD = 0.32$, bridging value = 0.52). Items highlighted the importance of utilizing evidence-based approaches with a strong theoretical basis, clear evidence about mechanisms of change, and measurable outcomes, while also recognizing practical implications such as program cost and flexibility for implementation. Focus group participants identified an important omission from the statements included in this cluster: acknowledgement of cultural ways of knowing. One participant asserted that:

> There are mental health interventions or ways of practicing that aren't necessarily rigorously supported through evidence, such as Indigenous ways of wellness, that need to be incorporated and considered, but haven't yet perhaps been rigorously examined and reviewed and repeated, but somehow [they] do have an impact. And so, we are often limited in our scientific approach to not using these things.

Thus, while there was agreement regarding the importance of considering different types of knowledge (e.g., scientific, theoretical, and practice), there was a wish for those types of knowledge to be considered even more broadly.

Authentic Stakeholder Engagement

This cluster contained the largest number of statements ($n = 11$) and had the lowest bridging index of all clusters, suggesting items were often sorted together ($M = 3.95$, $SD = 0.39$, bridging value = 0.31). Statements in this cluster reflected engagement of multiple stakeholders (i.e., communities, youth, parents, leadership) at each stage of the implementation process. As one focus group participant explained:

> It's really about checking in with the people who are going to be participating at all stages of development...you're seeking that input. So, no matter what part of the process you are at, whether it's setting the environment with the leadership that's going to endorse it, whether it's getting feedback on co-design to begin with or whether or not it's meeting the needs after you've delivered it…it kind of talks about the whole continuous process and getting input throughout.

Participants in both focus groups emphasized the importance of authenticity when engaging stakeholders at all levels, asserting that gathered feedback must be used in a meaningful way, rather than a perfunctory attempt to fulfill a "check-box."

Ongoing Learning and Sustainability

The final and smallest cluster contained six statements, and had the lowest importance rating, but highest bridging value, suggesting that statements were sorted together less frequently ($M = 3.92$, $SD = 0.39$, bridging value = 0.69). Importance ratings for this cluster were significantly lower ($M = 3.92$, $SD = 0.21$) than the cluster with the highest importance ratings ($M = 4.56$, $SD = 0.18$), $t(11) = 5.91$, $p < 0.001$, however were not significantly lower than the cluster with midpoint importance ratings (i.e., Intervention Characteristics; $M = 4.10$, $SD = 0.37$), $t(14) = 1.24$, $p > 0.05$ (ns). Items in this cluster reflected the need for mechanisms that support sustainability, including ongoing program evaluation and adaptation, and opportunities for capacity building and knowledge sharing among school-based practitioners. As one participant noted, "To me, [this cluster] speaks to sustainment and whether the program will be sustained after implementers leave… it's the strategic how to set it up in a way where it can take on a life of its own effectively."

Through discussion of iterative program evaluation and quality improvement, participants also identified "de-implementation" as an idea missing from this cluster. Specifically, one participant from the first focus group described how programs "evolve, and the need for interventions may change based on the global climate…I know I've used programs that have outgrown their usefulness, both with the source, and partners." Many participants agreed with this sentiment, supporting the need for continued quality improvement measures past the initial implementation phase, and de-implementation of programs that no longer meet initial goals.

Feedback on the Overall Map

Overall, focus group participants felt that the concept map presented an appropriate overview of implementation-sensitive approaches in school mental health. An emergent theme from both focus groups was the need for implementation-sensitive considerations to be considered from the outset. As one participant highlighted:

> I think historically what has happened is when we would develop an intervention, we would pay a lot of attention to theory and practice. But those interventions would fail in school contexts because we didn't pay attention to the implementation-sensitive practices. So, I think it's exciting to move the literature towards the direction that if you want to do school-based mental health, we need to think about these approaches from the get-go.

There was preliminary consensus that the clusters represent both the *what* and the *how* of evidence-based, implementation-sensitive approaches, all of which are built on a foundation of justice, equity, diversity, and inclusion. Indeed, as one participant articulated, implementation sensitive approaches represent an "iterative circle that rests on the bedrock of JEDI [justice, equity, diversity, and inclusion] considerations, because that is the foundation for everything." To illustrate this, in Figure 1 we used dotted lines to show these larger categories of *what* and *how* and added the importance ratings of the clusters (shown by the layers; more layers reflect greater importance), all within the overarching importance of the JEDI cluster.

DISCUSSION

The goal of this paper was to develop a clearer conceptualization of a practice-based concept; namely, what factors contribute to evidence-based, implementation-sensitive approaches to school mental health. Through a multi-step process with expert practitioners and researchers we were able to identify six key concepts. The clusters, and even many of the individual items, align well with our current understanding of implementation in schools. That is, the final six-cluster model includes concepts that school practitioners intuitively know can make the difference between effective and unsuccessful uptake of any school-based initiative; attention to justice, equity, diversity, and inclusion; implementation-informed from the outset; intervention characteristics; evidence, theory, and practice-informed elements; authentic stakeholder engagement; and ongoing learning and sustainability. The group concept mapping exercise helped to make these elements explicit, which is a step towards better operationalization of the evidence-based, implementation-sensitive approach.

In some cases, the way that areas were conceptualized represents how the field is evolving. Findings are consistent with implementation frameworks that posit the importance of context and goodness of fit for selected interventions (e.g., Forman et al., 2013; Owens et al., 2014). They also stretch this thinking in some ways. For example, previous implementation models often relegated partners to distal parts of the model and might have referred to only aspects of community (e.g., Domitrovich et al., 2008). Conversely, our participants identified the importance of engaging a wide range of stakeholders and ensuring that the engagement was both authentic and sustained over time. This expanded importance of stakeholders, with good understanding of the system context, is reflected in more current approaches to implementation, as identified in the SISTER compilation of implementation strategies adapted for the school setting (Cook et al., 2019), although this is a more recent advance in school mental health.

Similarly, the importance of intervention characteristics is something that has been recognized for a long time but has evolved as a concept. In our map, the *what* included both intervention characteristics and the importance of being evidence-, theory-, and practice-informed. Some of the intervention characteristics included by participants reflect factors that are widely recognized as important in the literature (e.g., interactive programming, see Taylor et al., 2017). However, the current conceptualization moves away from a laser focus on standardization and fidelity (Domitrovich et al., 2008) to include feasibility, and the importance of incorporating other types of expertise, recognizing that there is a tension to be managed between fidelity and cultural relevancy, for example (Castro et al., 2004).

What emerged distinctly in this paper, was the overarching emphasis on justice, equity, diversity, and inclusion. This focus may in part reflect the sampling used in this paper. The participants were all connected to an organization that has recently developed a new strategic plan that centres diversity and equity. Historically, these issues were most often considered at the intervention level with a focus on culturally adapted interventions (e.g., Cramer & Castro-Olivo, 2016; Graves et al., 2017). However, there is a growing awareness of the need to centre equity and inclusion in professional development for those implementing programs and through a critical analysis of the skills being taught (Jagers et al., 2019) and also in our implementation considerations (Gaias et al., 2021).

Limitations

The limitations of this article related to the constraints of group concept mapping and potential sample bias. Group concept mapping provides a useful tool for reducing items into visual clusters, but participants cannot sort items that were not included at the outset. In this study, for example, focus group participants noted that the statements in the justice, equity, diversity, and inclusion cluster lacked specificity, and more actionable statements would have provided a more compelling depiction of the cluster. Similarly, Indigenous ways of knowing were identified as important in the focus group but did not emerge from the initial item generation activity, so were not evident in the map. Furthermore, concepts are represented spatially in a two-dimensional plane, which prevents identification of more overarching concepts (such as the importance of justice, equity, diversity, and inclusion in this study). For both of these GCM-related limitations, the additional focus group data provided important context. With respect to sample, all the GCM statements were generated by attendees at a research summit that focused on evidence-based, implementation-sensitive school mental health. Furthermore, the majority of those involved with the statement generation and sorting are part of SMH-ON (or close partners), so likely have a somewhat shared understanding of the concept. This sampling is consistent with the purposes of the paper (i.e., to explore the characteristics of the concept as it has emerged in the SMH-ON context) but including participants from different contexts would likely have introduced additional considerations. Finally, there were pre-existing relationships among some of the focus group participants (including positions of authority such as work or academic supervisor); we emphasized that we were interested in all perspectives and not attempting to reaching consensus, but it is conceivable that some participants may have felt uncomfortable offering contradictory views.

Overall, this study helped to better articulate the notion of evidence-based, implementation-sensitive approaches to school mental health. Our results emphasized the importance of justice, equity, diversity, and inclusion as a foundation for the work and considering implementation from the outset. Recognizing that the concept of implementation-sensitive has been an evolving one, SMH-ON has most recently begun to refer to culturally responsive, evidence-informed, and implementation-sensitive practices, to reflect these core components. Furthermore, evidence-based, implementation-sensitive approaches were conceptualized to include elements of both *what* and *how*. A strength of the approach we took to Group Concept Mapping was the inclusion of two focus groups to discuss and contextualize the findings. We adapted the procedure described by Moreno and colleagues (2013) and extended their approach to facilitate a broader interpretation of the clusters and concepts and how they play out in school mental health. While the addition of focus groups helped to better interpret and contextualize the findings, it also identified areas where there was not complete consensus. The focus groups also identified important areas (such as Indigenous ways of knowing) to be included in future conceptualization of evidence-based, implementation-sensitive approaches to school mental health. Thus, while this article provides a foundation for further investigation of the concept of evidence-based, implementation-sensitive, more research is needed to see if it is a concept that resonates with a broader audience and contributes to a growing professional consensus about the intersection of empirical evidence and practical feasibility of school mental health approaches in Canada.

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