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A Study of Victorian Teachers' Beliefs About Student Behaviour and Their Perception of Preparation and Confidence to Engage in Evidence-based Behaviour Support

Russell A. Fox
Monash University

Umesh Sharma
Monash University

Erin S. Leif
Monash University

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Abstract: Positive and proactive approaches to behaviour support have been recognised as one component required to create effective and inclusive school environments (Finkelstein et al., 2019). States and territories within Australia have increasingly adopted school-wide positive behavioural interventions and supports (SWPBIS) as a means to creating effective social and behavioural change (Poed & Whitefield, 2020). However, ensuring staff implement SWPBIS as it is intended has been a challenge, both in Australia and internationally (McIntosh et al., 2016; NSW Ombudsman, 2017). The current study identifies and seeks to address two gaps in the existing literature exploring noted barriers to the successful and sustained implementation of SWPBIS. First, limited exploration of teachers' perceptions of their preparation (pre-service and in-service) and confidence to engage in SWPBIS practices and supports has been undertaken in Australia. Additionally, the degree to which teachers agree with a functional approach to understanding and supporting student behaviour has not been undertaken in an Australian context. The findings from such exploration may be used to inform the development of teacher training programs, and support efforts to successfully and sustainably implement SWPBIS in Australian schools.

School-wide Positive Behavioural Interventions and Supports

School-wide positive behavioural interventions and supports (SWPBIS) is one evidence-based framework designed to provide a continuum of social, emotional and behavioural supports to all students (Kincaid & Horner, 2017). Using a prevention logic derived from prevention science (Sugai et al., 2016) and underpinned by behavioural science (Myers et al., 2020), school staff implement a tiered continuum of supports and interventions to addresses the needs of all learners. The continuum of supports provided to students is underpinned by a functional understanding of behaviour, which seeks to pinpoint the relationship between the behaviour a student is exhibiting and the contexts within which these behaviours occur (Simonsen & Sugai, 2019). This is distinctly different to approaches that place the causes of problem student behaviour within the student themselves. Functional approaches to understanding and supporting student behaviour have been reported to be more effective than non-function-based approaches at reducing problem behaviour and improving students' educational outcomes (Dunlap & Kern, 2018).

Rather than being considered a program or package of interventions, SWPBIS is best conceptualised as a framework that guides school staff to use data to select, adapt and implement evidence-based practices to address the needs of the school community (Kincaid & Horner, 2017). Supports provided at Tier-1 focus on the creation of effective environments that prevent social and behavioural problems from developing or escalating (Simonsen & Sugai, 2019). It is important to note that many of the supports implemented as part of Tier-1 SWPBIS have been identified as evidence-based classroom support practices separate to SWPBIS implementation (e.g., Simonsen et al., 2008). These supports and interventions typically focus on developing agreed school expectations and routines, teaching these explicitly, and delivering reinforcement to students for engaging in behaviour in-line with agreed expectations and routines (Myers et al., 2020). Tier-2 interventions are delivered to small groups of students for whom the Tier-1 interventions were ineffective at addressing their needs (Simonsen & Sugai, 2019). Again, guided by data, Tier-2 interventions ensure that supports are intensified and individualised to better meet student needs (Sterrett et al., 2020). These include the provision of increasingly focused behavioural or social instruction, with opportunities for practice and feedback on specific behavioural skills (Simonsen & Sugai, 2019). Tier-3 supports are provided to students who do not respond to Tier-2 interventions and supports. These interventions are guided by functional behaviour assessments, where student-centred, individualised behaviour support plans are created to establish and reinforce functionally equivalent replacement behaviours for students (Sterrett et al., 2020). Following a comprehensive systematic review and meta-analysis that included outcomes for more than 8,000 schools, Lee and Gage (2020) reported that SWPBIS had a statistically significant effect on academic, behavioural, and organisational outcomes. However, the task of identifying effective practices for use in schools (e.g., SWPBIS) may be less of a challenge than ensuring teachers receive the training and support required to implement these practices (Mitchell et al., 2017).

Barriers to Sustaining SWPBIS
Training in Behaviour Support

Successful and sustained implementation of SWPBIS in schools relies on the work of all teachers. However, researchers have reported that teachers do not feel sufficiently prepared to engage in effective behaviour support (Myers et al., 2020). For example, in studies of teacher preparation in the U.S., Cooper et al. (2017) found nearly a third of the teachers they sampled had not received any formal training in evidence-based behaviour support practices. Freeman et al. (2014) found that less than 50% of teacher preparation courses included content on evidence-based behaviour support and classroom behaviour management practices. Teachers in Australia have also consistently reported feeling underprepared to engage in behaviour support as a result of their initial teacher education (ITE; Goss et al., 2017; Hepburn, 2019, Hepburn & Beamish, 2020; O'Neill & Stephenson, 2012). While some pre-service teachers were provided with evidence-based behaviour support content (such as applied behaviour analysis and SWPBIS; O'Neill and Stephenson, 2012, 2014), this was consistently presented alongside other less-supported or unproven models of behaviour support (O'Neill & Stephenson, 2014; Poed & Whitefield, 2020). Furthermore, content on evidence-based behaviour support was noted to vary in quantity and relied on pre-service teachers' abilities to discern the distinctions between evidence-based and non-evidence-based practices (O'Neill & Stephenson, 2014). Links between low perceptions of preparation and a lack of confidence or low teacher self-efficacy in managing or supporting student behaviour have also been identified (O'Neill & Stephenson, 2012b).

Taken together, these finding suggest there is a need to better understand whether Australian teachers feel prepared to deliver evidence-based behavioural supports, such as SWPBIS, in their roles (Hepburn & Beamish, 2019).

Teacher Beliefs and Behaviour Support

Sullivan et al. (2014) evaluated teachers' responses to problem behaviour in their classrooms and found that teachers predominately managed low-level behaviour relating to student disengagement. Furthermore, they reported that the approaches undertaken by teachers in their study were unlikely to meet the needs of the students, and may be limited in effectiveness. Based on these findings, the authors concluded that greater focus on developing teachers' understanding of the impact of classroom environments was required. Other authors have identified teacher beliefs and philosophical differences with a functional understanding of behaviour to be a significant barrier to successful and sustained implementation of SWPBIS (Kittelman et al., 2020). The teachers included in a study conducted by Bambara et al. (2012) believed that more punitive and tougher approaches should be used to address the social and behavioural problems of students. Teachers also reported disagreeing with the use of reinforcement to support behaviour change. Some teachers included in the Feuerborn et al. (2016) study suggested that students themselves needed to change, rather than school environments or the behaviours of teachers. Collectively, these findings suggest that teachers may hold beliefs that are incongruent with key underlying assumptions and practices of the SWPBIS framework (e.g., the assumption that student problem behaviour is functional and is related to specific environmental events). At present, little is known about teacher beliefs about 'problematic' student behaviour in Victorian schools currently implementing SWPBIS, and whether their beliefs are in conflict with the underpinning assumptions of SWPBIS. Developing a better understanding of teacher beliefs about student behaviour in a Victorian school context may shed light on the degree to which such beliefs function as a barrier to successful and sustained implementation of SWPBIS.

Study Purpose

The aims of the current study were to provide a preliminary assessment of teacher preparation and confidence to engage in evidence-based behaviour support practices. Specifically, the current study sought to assess Victorian teachers' perceptions of their preparation to deliver core aspects of SWPBIS. A secondary aim of the current study was to assess teacher beliefs about the basis for challenging student behaviour. This was done by answering the following questions:
1. How well prepared and confident do teachers believe they are to implement SWPBIS within Victorian schools?
2. What do Victorian school teachers perceive causes and maintains student problem behaviour?

Method
Ethical Considerations

An application for ethics approval from the Monash University Human Research Ethics Committee (Project 13362) was submitted and approved. Following this, ethics approval was sought and successfully obtained from the Department of Education and Training (DET) and an independent school system, both in Victoria.

Participants and Their Settings

A total of 313 teachers from ten primary and five secondary schools already implementing SWPBIS in Victoria were invited to participate in the current research. These schools were recruited using a purposive sampling approach. This approach was selected to ensure the perspectives of teachers with experience implementing SWPBIS in Victoria were captured. Of these 15 schools, 11 were implementing Tier-1 of SWPBIS with fidelity (as measured by the Tiered Fidelity Inventory). The remaining four schools, while not implementing SWPBIS with fidelity, were in the initial stages of implementation (i.e., implementing for less than two years). In total, 241 teachers voluntarily participated in the current study, resulting in a response rate of 77%. A summary of the demographic characteristics of respondents is detailed in Table 1.

Participants	*n* (N = 241)	*M* or % (SD)
Gender	236	
Female	172	72.9%
I'd rather not say	3	1.3%
Male	61	25.8%
Age	235	38.49 (11.71)
Years of experience	236	12.25 (10.82)
Teaching role	236	
Primary	134	56.8%
Primary specialist	27	11.4%
Special education	2	0.8%
Secondary classroom	73	30.9%
Highest qualification	236	
Bachelor	165	69.9%
Graduate Certificate	26	11%
Master's	45	19.1%

Note. Primary specialists teach subjects such as physical education, art, or music.

Table Error! No text of specified style in document.**: Summary of participant demographic information**

Data Collection Instruments

Data were collected using four sub-scales from the Teachers' Beliefs and Experiences of Behaviour Support (TBEBS) survey. The TBEBS is a plain language, 10-part survey questionnaire examining teacher perception of variables critical to the successful and

sustained implementation of SWPBIS designed for use in Australian schools. The TBEBS assesses teacher perception of their pre-service and in-service preparation for behaviour support, confidence to engage in behaviour support, adequacy of resourcing for effective behaviour support, leadership support, behaviour support team structures and function, behavioural data collection and use, and teacher belief about the basis for behaviour.

Analyses conducted in the current study are based on data collected using the pre-service preparation (six items), in-service preparation for behaviour support (six items), confidence to engage in behaviour support (six items), and beliefs about the basis for student behaviour (five items) sub-scales. The preparation and confidence sub-scale items focussed on the structures and interventions required to implement SWPBIS at all tiers (i.e., Tier-1 whole-class behaviour support practices, Tier-2 individualised behavioural interventions, and Tier-3 functional behavioural assessment). Respondents could select *none (1), minimal (2), adequate (3),* and *extensive (4)* to indicate their perception of preparation (pre- and in-service). They could use *Not confident at all (1), minimally confident (2), sufficiently confident (3)*, and *extremely confident (4)* to indicate their level of confidence to engage in SWPBIS-based behaviour supports. Respondents could select I *strongly disagree (1), I disagree (2), I agree (3)*, and I *strongly agree (4)* to indicate their level of agreement with statements indicating a functional understanding of student behaviour. Alpha coefficients were calculated to determine the reliability of the scales for the current study (see Table 2). These indicated that the sub-scales used were reliable.

Factor	No. of items	n	Sub-scale M	SD	Cronbach's α
Pre-service preparation (e.g., Whole-class behaviour management [e.g., teaching behavioural expectations, reinforcing expected behaviours])	6*	227	11.2	3.47	.86
In-service preparation (As above)	6*	228	14.9	3.81	.88
Confidence (As above)	6**	228	16.1	3.29	.86
Staff philosophical beliefs about behaviour (e.g., Problem behaviour is a form of communication)	5***	225	15.9	2.22	.69

TableError! No text of specified style in document.**: Reliability scores of four TBEBS sub-scales.**

Extant school specific Tier-1 SWPBIS implementation fidelity scores were used in the current study. These data were collected by implementation coaches trained using the Tiered Fidelity Inventory (TFI; Algozzine et al., 2014). The TFI has been found to be a reliable and valid measure of Tier-1 implementation fidelity (McIntosh et al., 2017).

Data Analyses

The first purpose of this study was to understand participant perceptions of their pre-service and in-service training, and the confidence they derived from these experiences. To answer this research question, descriptive statistics (including means, medians, and standard deviations) were calculated. Secondary analyses using independent samples t-tests were undertaken to assess any differences between participants based on teaching setting (i.e., primary or secondary), school fidelity status (implementing with fidelity or not), highest qualification, as well as teacher gender. In order to conduct independent samples t-tests, the highest qualification variable was dichotomised into two groups, teachers holding a post-

graduate degree or higher degrees and those qualified with a bachelor's degree. Cohen's d was calculated to assess the magnitude of differences between means identified as statistically significant.

The second purpose of the study was to identify the factors that participants believed caused and maintained problematic student behaviour. To answer this research question, participant responses to belief items were analysed using descriptive statistics. Independent samples t-tests were conducted to assess differences in teacher belief about the basis for student problem behaviour by school fidelity status, as well as demographic characteristics (i.e., school setting, highest qualification, and gender).

Results
Preparation to Engage in Behaviour Support

The mean for respondents' perception of their pre-service preparation was 1.86 (*Md* = 1.83, *SD* = 0.58) for the sub-scale, indicating teachers felt they had received minimal pre-service training in behaviour support practices used as part of the SWPBIS framework. Independent samples t-tests were conducted to assess differences in responses of teachers to pre-service preparation based on their current school setting (i.e., primary or secondary). A statistically significant difference was found in perceptions of preparation between teachers in secondary (*M* = 2.13, SD = .595) and primary settings (*M* = 1.75, *SD* = .533), *t* (121) = -4.51, *p* = < .001, (two-tailed). With secondary teachers reporting better pre-service preparation. A medium magnitude of difference was observed between these means (mean difference = -.37, *CI:* -0.53 to -0.22, *d* = .66). In addition, statistically significant differences in perception of pre-service preparation scores between male (*M* = 2.01, SD = 0.58) and female teachers (*M* = 1.81, *SD* = .57), *t* (110.6) = -2.27, *p* = .025, (two-tailed) were observed, with male teachers reporting better levels of pre-service preparation. The magnitude of the differences in the means (mean difference = -0.19, 95% *CI:* -0.36 to -0.025) was small (d = 0.34).

The in-service preparation sub-scale mean was *M* = 2.49 (*Md* = 2.50, *SD* = 0.64), while the mean confidence to engage in behaviour support was *M* = 2.69 (*Md* = 2.66, *SD* = 0.55). These data suggested that teachers perceived their in-service training as better preparing them to implement SWPBIS, compared to their pre-service training. No statistically significant differences were found relating to in-service teacher preparation, nor for confidence to engage in SWPBIS-based behavioural interventions and supports.

As can be seen in Table 3, respondents indicated that on average they were less prepared (both pre-service and in-service) to engage in SWPBIS practices related to individualised assessment and intervention as well as reporting they were less confident to engage in these same SWPBIS behaviour support practices.

Item	Pre-service preparation			In-service preparation			Confidence		
	M	Md	SD	M	Md	SD	M	Md	SD
Whole-class behaviour management (e.g., teaching behavioural expectations, reinforcing expected behaviours)	2.36	2.0	0.729	2.96	3.0	0.741	3.14	3.0	0.565
Population specific behavioural interventions (e.g., ADHD, trauma informed care, or ASD specific interventions)	1.87	2.0	0.727	2.60	3.0	0.788	2.75	3.0	0.640
Individual behavioural teaching strategies (e.g., check-in, check-out, social skill instruction)	1.92	2.0	0.809	2.64	3.0	0.798	2.88	3.0	0.695
Principles of Applied Behaviour Analysis (e.g., reinforcement)	2.10	2.0	0.831	2.61	3.0	0.792	2.81	3.0	0.680
Functional behaviour assessment (FBA; FBA is a systematic method of assessing the purpose that a behaviour serves for an individual)	1.48	1.0	0.724	2.02	2.0	0.845	2.26	2.0	0.842
Behavioural data collection (e.g., ABC data, frequency data etc.)	1.47	1.0	0.712	2.15	2.0	0.847	2.29	2.0	0.836

Note. ADHD = attention deficit hyperactivity disorder; ASD = Autism spectrum disorder; FBA = functional behaviour assessment; ABC data = antecedent behaviour consequence data.

Table Error! No text of specified style in document.**: Summary of Responses to Items Relating to Preparation and Confidence to Engage in Behaviour Support**

Belief About the Basis of Behaviour

The mean belief about the basis of behaviour sub-scale score indicated relatively strong agreement with a functional understanding of behaviour ($M = 3.13$, $Md = 3.0$, $SD = 0.46$). Means for each item in the belief sub-scale can be seen in Table 4.

Item	n	M	Md	SD
Problem behaviour can arise because of skill deficits	226	3.36	3.0	0.661
All problem behaviours can be improved	226	3.38	3.0	0.623
Problem behaviour is a form of communication	226	3.33	3.0	0.646
All problem behaviours are learned	226	2.56	2.0	0.765
Problem behaviour has a purpose for the individual	225	3.22	3.0	0.644

Note. Higher scores represent greater agreement with a functional understanding of behaviour, lower scores represent a greater agreement with attributional understandings of student behaviour.

Table Error! No text of specified style in document.**: Summary of Responses to Items Relating to Teacher Agreement with a Functional Understanding of Behaviour**

Independent samples t-tests were conducted to assess for differences in teacher belief about the basis for behaviour based on school SWPBIS implementation fidelity status. Statistically significant differences were found between teachers working in schools implementing SWPBIS with fidelity ($M = 3.21$, $SD = .40$) and teachers working in schools

not implementing with fidelity (M = 3.01, SD = .52), t (150.1) = -3.002, p = .002, (two-tailed). Teachers in schools implementing Tier-1 with fidelity reported higher degrees of agreement with statements reflecting a functional understanding of behaviour. These differences were moderate in terms of effect size (mean difference = -0.20, % CI: -0.32 to -0.07; d = .42). No other statistically significant differences were found when conducting independent samples t-tests comparing means based on highest qualification, teacher gender, and school setting (i.e., primary or secondary).

Discussion

The aims of the current study were twofold: to provide a preliminary assessment of the perception of Victorian teachers pre-service and in-service preparation and confidence to engage in SWPBIS supports and practices, and to identify teacher beliefs about the basis for student behaviour. Teachers reported that they were not well prepared to engage in evidence-based behaviour support as a result of their pre-service teacher training. These same teachers reported being better prepared for implementing behaviour support practices as a result of their in-service training and, on the whole, sufficiently confident to engage in behaviour support. Teachers working in schools currently implementing Tier-1 SWPBIS with fidelity had significantly higher levels of agreement with statements reflecting a functional understanding of behaviour.

Teacher Preparation and Belief in Schools Implementing SWPBIS

Teachers across all settings reported feeling underprepared to deliver evidence-based SWPBIS supports and practices as a result of their pre-service preparation. While these findings are not novel (Goss et al., 2017; Hepburn & Beamish, 2020; O'Neill & Stephenson, 2012a), the degree to which participants expressed a lack of preparation was concerning. In particular, there was a significant number of participants in the current study that reported no pre-service preparation in behaviour support, most notably in the principles of applied behaviour analysis, functional behaviour assessment, and behavioural data collection and analysis. It is possible that the teachers in the current study were provided with some pre-service preparation in SWPBIS-based behavioural interventions and supports, but that these were not explicit enough for teachers to discern. In their study, O'Neill and Stephenson (2014) found that mixed-model approaches to behaviour support were typically provided to Australian pre-service primary school teachers, with evidence-based behavioural supports and interventions commonly taught alongside classroom management practices and philosophies with less evidence in support of their effectiveness. Greater explicit focus on preparing pre-service teachers with the necessary knowledge and skills to effectively deliver a continuum of evidence-based behaviour supports and interventions – such as those included in the SWPBIS framework – may enable teachers to create inclusive, supportive, and productive classroom environments for all of their students (Finkelstein et al., 2019; Mitchell et al., 2017).

Interestingly, teachers in secondary schools indicated higher perception of pre-service preparation than primary school teachers. This result is contrary to other reported findings, in which secondary teachers more often reported greater preparation in their subject areas, rather in classroom behaviour management (Flannery et al., 2013). Given that secondary school teachers made up less than one-third of all participants in the current study, it is possible that these effects may be less evident with a larger sample. In addition, male teachers

rated themselves to be significantly better prepared as a result of their pre-service preparation. The effect size of this difference was small and was not observed when comparing in-service preparation and confidence to engage in behaviour support. Other examples of increased male perception of critical factors relating to behaviour management have been observed. For example, Main and Hammond (2008) found male pre-service teachers had higher self-efficacy beliefs in behaviour management before engaging in practicum, with no significant differences observed following their practicum experiences. While self-efficacy is a different construct to perception of preparations, Main and Hammond, (2008) suggested that female teachers may require more 'evidence' to form efficacy beliefs. The same may be true for perceptions of preparation, with male teachers potentially more generous in their self-reflection on pre-service preparation. However, this requires further exploration.

Overall, teachers reported being more adequately prepared to implement behaviour supports and practices included in the SWPBIS framework as a result of their in-service training experiences. In addition, respondents reported relatively high levels of confidence to engage in behaviour support. The Victorian teachers that participated in the current study were purposively selected due to their experience working in schools currently implementing SWPBIS. Therefore, it is likely that their participation in formal SWPBIS implementation efforts has positively impacted these findings. In particular, SWPBIS researchers and implementers have emphasised the need for methods of teacher professional development that extend beyond one-off training sessions (Mitchell et al., 2017). Professional learning should focus not only on skill and knowledge acquisition, but developing the fluency with which staff can use new skills in their relevant contexts, and adapt their learning and apply it to new and novel situations (Freeman et al., 2017). The need for ongoing coaching to supplement and support skill development is well documented within SWPBIS (Myers et al., 2020). Furthermore, SWPBIS implementation efforts are typically supported by well-developed comprehensive implementation supports (i.e., *Implementation Blueprint and Self-assessment* and *Training and professional development blueprint for positive behavioral interventions and supports;* Center on Positive Behavioral Interventions and Supports, 2017; Lewis et al., 2016). Anecdotally, it appears as though implementation efforts undertaken in both the independent and DET schools have been informed by these approaches and resources. However, further research is required to understand what teacher professional learning experiences entail (i.e., quantity and modalities of their professional learning experiences), to better understand the factors that have contributed to improved perception of preparation.

Teacher Beliefs

The majority of teachers in the current study showed considerable agreement with statements that reflect a functional understanding of student behaviour. This is a particularly positive finding given the concerning perception of pre-service preparation of participants, especially related to the lack of preparation in FBA, principles of ABA, and behavioural data collection and use. One explanation for staff agreement with statements reflective of a functional understanding of behaviour may be found in successful experiences of in-service preparation and then implementing the SWPBIS framework. While the emphasis on effective coaching to develop staff fluency and ability to generalise and adapt their knowledge and skill is described above, Mitchell et al. (2017) emphasise how effective practice of a new skill can lead to changes in teacher belief. This is supported by the results of the current study, with staff working in schools currently implementing Tier-1 with fidelity (Mitchell et al., 2017) reporting significantly higher agreement with statements reflecting a functional

understanding of behaviour. It is possible that a combination of effective professional learning and successful experiences implementing SWPBIS have led to a meaningful change in teacher belief about the basis for student behaviour for these Victorian teachers.

Implications and Future Directions

The findings of the current study provide additional weight to existing calls for a greater emphasis on preparing pre-service teachers to effectively deliver evidence-based behaviour support practices in their future classrooms (Goss et al., 2017; Hepburn & Beamish, 2019, 2020; Poed & Whitefield, 2020). However, changing or adding to an already crowded initial teacher education (ITE) curriculum is challenging due to time and cost. To address this challenge, we recommend university educators working within ITE courses position academic instruction and behaviour support as complementary (rather than siloed) activities. According to McIntosh and Goodman (2016), there is a demonstrated strong relationship between academic skills and the development of disruptive and problematic behaviour in the classroom. In other words, persistent disruptive or problematic behaviours are likely to interfere with academic participation and learning, and academic tasks that are too difficult or non-preferred by students are likely to set the occasion for disruptive and problematic behaviours of concern. Thus, interventions that target academic skills and behavioural needs in isolation of one another are not likely to be as effective as combined interventions that target both academic skills and behavioural needs simultaneously. ITE courses should help pre-service teachers understand the ways in which effective instruction functions as a critical first step in behaviour support (Cooper & Scott, 2017) and to develop an understanding of the interconnected nature of academic learning and engagement, social and emotional behaviour, and wellbeing (McIntosh & Goodman, 2016). Given the considerable expense of in-service coaching efforts to improve behaviour supports in schools (Pas et al., 2020), providing pre-service teachers with these foundational skills and knowledge during their ITE is critical. A program of pre-service education that integrates the teaching of positive and prosocial behaviour and academic skills together may also address the challenges of an already crowded teacher preparation curriculum (McGraw, 2018).

We also recommend that ITE courses develop pre-service teachers' abilities to "think functionally" about student behaviour. We define functional thinking as an active and iterative problem-solving process that teachers can engage in to assess the dynamic interaction between student behaviour and aspects of the environment. For example, using the process of 'functional thinking,' teachers may be able to identify aspects of the classroom environment that need to be changed (such as noise levels, seating arrangement, or the location of materials), accommodations or modifications to the curriculum to help the student participate (such as breaking a new skill down into smaller teachable components), or new skills to explicitly teach the student (such as asking for help with a task). While the development of skills to engage in behavioural data collection and more detailed assessments of student behaviour (i.e., FBA) undertaken using these collected data are optimal, this may be beyond the scope of already crowded pre-service teacher training programs (McGraw, 2018). But providing pre-service educators with the skills to "think functionally" may be an important starting point to assist teachers to develop and implement strategies to support students based on an understanding of *why* the behaviour is occurring (i.e., assessing the impact of the classroom environment or seeking to understand what the student may be trying to communicate) rather than based on what the behaviour looks like (Dunlap & Kern, 2018). Research consistently shows that interventions and supports developed based on an understanding of behavioural function (i.e., *why* the behaviour is occurring) are more

effective in the long term, more likely to focus on the teaching of new skills, and less likely to incorporate exclusionary or punitive disciplinary practices (Hanley, 2012; Hurl et al., 2016). Focusing on the knowledge and skill to engage in function-based problem-solving in a classroom will support early career teachers to understand and meet the needs of their students, which aligns with the *Australian Professional Standards for Teachers* (Australian Institute for Teaching and School Leadership, 2018).

In addition, research suggests that educator practices are most effective when implemented within a school-wide system of support for teachers and students (Simonsen et al., 2021). Thus, ITE courses should go beyond simply teaching pre-service teachers about specific behaviour support practices. Rather, ITE courses could introduce preservice teachers to frameworks that adopt a whole school approach to implementation of behaviour support practices that are aligned to state-wide or school-wide initiatives for improving student outcomes (such as Victoria's Framework for Improving Student Outcomes; Department of Education and Training, 2022). Frameworks such as SWPBIS or, more recently, Multi-Tiered Systems of Support (MTSS), use a continuum of evidence-informed strategies to prevent, teach and respond to the social, emotional, and behavioural needs of all students within a school community. The benefits of tiered frameworks are that they apply to all students (not just those students with high support needs), apply to all domains of outcomes (achievement, engagement, and wellbeing), and provide an overarching service delivery operating framework, rather than specifying actual interventions that teachers should implement. Integrating approaches to supporting students under one multi-tiered system of support may allow for the sharing of knowledge, resources, and expertise. This may make implementation easier, more efficient, and more cost-effective within schools. In addition, it may protect against the abandonment of evidence-based practices in one area (for example, in the area of behaviour support) due to multiple competing priorities within a school. In addition, implementing such practices within a single, unified framework may reduce stress for educators and school personnel and prevent stakeholders from viewing the implementation of programs and practices to improve student academic achievement, behaviour, and wellbeing as separate initiatives.

It is encouraging that the results of in-service preparation and confidence to engage in SWPBIS-based behavioural supports and practices were higher than ratings of pre-service preparation, along with a majority agreement with statements reflective of a functional understanding of behaviour. School leaders and those responsible for implementation of SWPBIS are encouraged to focus on developing fluency of teachers' skill use in their classrooms (Freeman et al., 2017). In future, professional learning activities relating to behaviour support could be used as opportunities to emphasise a functional approach to understanding and influencing student behaviour, with practical links to behavioural principles made where possible. This will be further supported by coaches and SWPBIS leaders who pay close attention to data that indicates whether teacher implementation of SWPBIS practices are leading to improved student outcomes and whether these practices are sustained (Simonsen et al., 2019). Relatedly, building expertise in coaching and implementation support at the local level (i.e., within schools and regions) is likely to help sustain implementation in the longer term (Horner et al., 2014). Poed and Whitefield (2020) highlight that coaching structures to support SWPBIS implementation have been developed across each state of Australia. This has occurred in all education sectors (e.g., independent, Catholic, and public schools). Rather than learning through trial and error in each system, consolidating the learning from the independent, Catholic, and public education systems may be one productive pathway to improve the ability of Australian SWPBIS coaches to support teachers in their schools. Echoing the call made by Poed and Whitefield (2020), we suggest that implementation and coaching efforts across systems may be enhanced through

engagement with the peak body for SWPBIS in Australia, the Association for Positive Behaviour Supports Australia (APBSA).

Limitations and Future Directions

Respondents in the present study were all recruited from schools currently implementing SWPBIS. While this purposive sampling approach was necessary to understand the views of this particular cohort, it does limit the ability to generalise findings across all settings. Addressing this by expanding samples to include teachers in schools not implementing SWPBIS will allow researchers in future to assess the relationships between SWPBIS implementation and teacher perception of their in-service preparation and confidence to engage in behaviour support, as well as beliefs about the basis for student behaviour more directly. Further to this, the sample of secondary school teachers in the current study represented approximately a third of the total sample. In future, comparisons between primary and secondary school teachers will be strengthened with both larger sample sizes and with a greater percentage of secondary school teachers.

In addition, the purposive sampling approach recruited teachers from a single region within DET as well as a single independent school system. This may further limit the generalisability of the findings, as the respondents may not represent the broader population. To provide additional weight to the current preliminary findings, researchers should seek to undertake research broadly across the state of Victoria to understand the beliefs and experiences of Victorian teachers in different regions, to inform implementation efforts.

Finally, the current survey research allows for correlational analysis. To understand the relationships between teacher training, beliefs, and implementation of SWPBIS, researchers may benefit from engaging in in-depth qualitative research utilising methods such as interviews and focus groups.

Conclusions

The findings in the current study provide reasons for both concern and cautious optimism. It is a matter of concern that teachers reported very low perceptions of pre-service preparation in behavioural supports and practices critical to the SWPBIS framework. However, these same teachers reported more positive experiences of preparation during their teaching service, and sufficient confidence to engage in SWPBIS-based behavioural support. Effective implementation of SWPBIS at Tier-1 was also linked with greater agreement with a functional understanding of student behaviour. Pre-service teacher education that focuses on building teachers' abilities to think functionally about student behaviour, while equipping them to proactively meet the needs all students by delivering a continuum of evidence-based supports, has the potential to support the creation of effective inclusive classrooms.

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