Introduction

According to several previous studies, high fidelity of SWPBS Tier 1 implementation predicted low levels of students’ problem behaviors (Flannery et al., 2014) and sustained implementation (McIntosh et al., 2016). Although SWPBS with high fidelity was implemented in schools, individual teachers were less likely to experience sufficient praise-to-reprimand ratios (Reinke, Herrn, and Stormont, 2013). Fidelity measures, such as the Tiered Fidelity Inventory (TFI), confute implementation and intervention fidelity, which may imply the cause of this discrepancy (Filter et al., 2022). Implementation fidelity is the fidelity with which implementation components, such as developing and organizing resources, planning and delivering training, reviewing data, and providing performance-based feedback to implementers, are used for changing adult behavior (Filter et al., 2022). Meanwhile, intervention fidelity is the fidelity of practice elements (PEs), which are specific tasks that frontline implementers are expected to complete, such as teaching students new behaviors and providing them feedback (Filter et al., 2022). According to the study by Childs et al. (2015), among the ten subscales of the benchmark of quality, the classroom was negatively and significantly correlated with office discipline referrals and out-of-school suspensions. This result indicated that teachers’ participation in core PEs in their classroom is essential for SWPBS Tier 1 implementation to be successful.

The Purposes of the Current Studies:

Study 1: Develop a checklist to assess participation of teachers in core PEs of the SWPBS Tier 1 implementation.

Study 2: Examine the relationship between the result of the self-reported checklist result and direct observations of the teachers’ behavior in their classrooms

Study 1

Participants:
Elementary and middle school teachers (N = 142) from three regions in Japan participated in this study. All teachers had the opportunity to attend a lecture about SWPBS although it had not been implemented when the current study was conducted.

Procedures:
Three experts developed items for the checklist based on TFI Tier 1, the self-assessment survey (SAS) Classroom System, and the checklist used in Bethune (2017). These experts have 2 years of experience of assisting schools with SWPBS Tier 1 implementation through training and coaching. A supervisor of teachers in the prefectural departments of education who also had experience with SWPBS Tier 1 implementation reviewed and edited the text. Physical copies of the checklist were distributed to teachers early in the school year. The teachers evaluated and answered the current status of each item using a 3-point scale, with 0 indicating “not in place,” 1 “partially in place,” and 2 “in place.”

Results:
The foundation of the SWPBS Tier 1 implementation was viewed as consisting of four core practices (Hornor et al., 2015). In addition, we developed a model with five domains of PEs (Table 1) based on the five critical features of classroom management (Simons, 2010). The following model fit information was obtained through Confirmatory factor analysis (CFA): χ²(160) = 222.71, p < 0.01; RMSEA = 0.02; CFI = 0.93; GFI = 0.87; RMR = 0.06. Each factor's factor loadings were 0.43, 0.70, 0.75, and 0.92 respectively.

Study 2

Participants:
Six teachers (3 women and 3 men) participated in this study. All teachers were from the same elementary school, which did not implement SWPBS and voluntarily agreed to participate in response to the recruitment for this study.

Teachers who scored higher than average in the acknowledgment domain scores were placed in the “high” group (N = 2), whereas those who scored lower than the average were placed in the “low” group (N = 4).

Procedures:
Each teacher’s behavior-specific praise (BSP), general praise (GP), and reprimand were directly observed and counted as frequencies. In addition, a 15-min interval time sampling was used to monitor the students’ engagement. Two to three sessions per teacher or a classroom were observed. Each session lasted for 45 min.

As the number of participants was considerably small, no statistical analysis was conducted for this study.

Results:
Two observers observed 33% of the sessions. IOAs were listed as follows: BSP (74.6%), GP (80%), reprimand (75.6%), and engagement (88.8%). Teachers in the high group had higher BSP, GP, and ratio of positive-to-negative interactions compared to teachers in the low group (Figs. 1 and 2). No difference was observed in students’ engagement between the high and the low groups (Fig. 3). The high group outperformed the low group in all five domains of the checklist, and the mean Study 1 data scores were similar for the high and the low groups, except for data-based decision making (Fig. 4). Among the five domains, the gap between the high and low groups was the biggest in the domain of acknowledgment.

Discussion

The CFA result showed an acceptable fit to the five-domain model of the PE checklist for the SWPBS Tier 1 implementation. Based on direct observation, the teachers who scored higher on the acknowledgment domain of the checklist showed higher BSP and GP and fewer reprimand. This correspondence between the self-reported score on the checklist and observed behavior demonstrates the validity of the checklist.

The mean scores of the checklist suggested that there were several domains of PEs that teachers have already conducted, regardless of SWPBS implementation. When we provide teacher training for SWPBS Tier 1 implementation, it might be appropriate to prioritize acknowledgment.

Table 1. Means, standard deviations, and results of CFA

<table>
<thead>
<tr>
<th>Factor</th>
<th>Items</th>
<th>M</th>
<th>SD</th>
<th>Factor loadings</th>
<th>Communality</th>
</tr>
</thead>
<tbody>
<tr>
<td>Factor 1</td>
<td>Clearly define appropriate behaviors aligned with school-wide positive behavioral interventions and supports (PBIS)</td>
<td></td>
<td></td>
<td>0.63</td>
<td>0.50</td>
</tr>
<tr>
<td>Factor 2</td>
<td>Establish clear expectations for student behavior and procedures for dealing with students' problem behavior</td>
<td></td>
<td></td>
<td>0.60</td>
<td>0.43</td>
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<tr>
<td>Factor 3</td>
<td>Screen students in need of assistance based on the records of students' behavior and inappropriate behavior</td>
<td></td>
<td></td>
<td>0.67</td>
<td>0.47</td>
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<tr>
<td>Factor 4</td>
<td>Prevent inappropriate behaviors</td>
<td></td>
<td></td>
<td>0.70</td>
<td>0.40</td>
</tr>
<tr>
<td>Factor 5</td>
<td>Responsibility for students to perform and practice alternative appropriate behavior</td>
<td></td>
<td></td>
<td>0.68</td>
<td>0.41</td>
</tr>
</tbody>
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