Evaluation of the Monique Burr Foundation for Children's

MBF Child Safety Matters® Curriculum

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Abstract

In this study, we evaluated the ability of the *MBF Child Safety Matters*® curriculum to increase the knowledge of children in Kindergarten to 2nd grade who were exposed to it. Participants included nine Florida schools across seven counties, 54 classrooms, and 826 students (at pre-test). Classrooms were randomly assigned to receive the program using the 2-lesson format or 4-lesson format or assigned to the wait-list control group. Knowledge was assessed with a questionnaire administered prior to the curriculum and then approximately 11 weeks later. Children who received the curriculum increased their knowledge for the kind of information included in the program, and this knowledge increased significantly compared to the control group of children who did not receive the program.

Background

School-based child safety programs have been a popular concept, a response to accumulating evidence about the widespread exposure of children to sexual and physical forms of abuse. The logic model behind these programs is grounded in a considerable amount of good social science. The school-based prevention model has proven to be effective in a number of other child and youth problem areas, including drug and alcohol abuse (Faggiano, Vigna-Taglianti, Versino, Zambon, Borraccino, & Lemma, 2008), pregnancy prevention (Fonner, Armstrong, Kennedy, O'Reilly, & Sweat, 2014), bullying (Evans, Fraser, & Cotter, 2014; Tfoti & Farrington, 2011) and mental health promotion (Durlak, Weissberg, Dymnicki, Taylor, & Schellinger, 2011). Universal education establishes norms in a domain where norms are not always clear. It is a topic that parents may find hard to talk about, so many children may not get any other source of instruction or any instruction at all. Typically, these programs include training and education for parents, school officials, and students. There is a big emphasis on disclosure and the programs provide information to schools on how to handle them.

Recognizing the potential of classrooms as a context for identifying and addressing child victimization, several states mandated the inclusion of child abuse prevention in school curricula. There are, however, not enough evidence-based and developmentally-appropriate curricula designed for elementary (K–5) schools.

A recent review of the literature through 2015 included a systematic evaluation of 24 studies that measured the effectiveness of school-based child abuse prevention programs (Walsh et al., 2015; 2018). Most programs were implemented in elementary schools and 16 studies included kindergarten and first grade students. The duration of the programs ranged from a single 45-minute session to eight 20-minute sessions over a number of days. 14 interventions had less than 90 minutes of total content while the others ranged from 90 minutes to 180 minutes of total content. These researchers also examined differences by grade level. They found that older children (grade 4 and above) showed greater increases in knowledge scores after the intervention than did younger children (grades K-3).

In a recent randomized control trial conducted by our team (Bright, Sayedul Huq, Patel, Miller, Finkelhor, under review), we evaluated the Monique Burr Foundation for Children's *Child Safety Matters* Curriculum (CSM). In a sample of nearly 1,200 children in primary (K-5) school, we found that children who received the curriculum increased their knowledge about potentially risky situations, and this knowledge grew significantly and was sustained over a seven-month period, compared to the control group of children who did not receive the program. The purpose of the current study was to conduct a second evaluation of the knowledge and skills acquired by children who received the curriculum with a focus on early childhood. We examined the impact of the curriculum on child knowledge acquisition using a randomized control design and a revised questionnaire. A randomized control design is the gold standard for a scientific assessment of the effectiveness of an intervention because participants (or schools) are randomly assigned a study condition: treatment (implement the curriculum) or control (do not implement the curriculum), minimizing the influence of any other group differences on the outcomes.

Method

Design and Sample

We implemented the *MBF Child Safety Matters* curriculum (CSM) in Kindergarten to 2nd grade classrooms in Florida elementary schools and evaluated its effectiveness in increasing child knowledge of potentially risky situations. Inclusion criteria included: Florida public schools which had never implemented the curriculum or implemented the curriculum within the last 4 years serving grades K–2. Exclusion criteria included: charter and magnet schools and classrooms with primarily special education students. Schools were randomly assigned to one of three study conditions: implement the curriculum in 2 lessons, implement the curriculum in shorter 4-lessons, or implement the curriculum after study data collection (i.e., control group).

Within each school, we randomly selected two classrooms per Kindergarten, 1st, and 2nd grades to participate in the study. We selected the first two teachers whose last name appeared in the alphabetical list. Our final sample included 9 schools across 7 counties, 54 classrooms and teachers, and 826 students (at pre-test, 725 at post-test).

Procedure

The study was approved by the Institutional Review Board (IRB) at the University of Florida. We also received approval from each county school district, school administrator, and school counselor. Once agreed to participate, each class was randomly assigned a study condition. We sent school counselors opt-out forms for both the curriculum and the research study to send home with children in the selected classrooms. No less than one week after opt-out forms were sent home, researchers collected pre-assessment data from children using an electronic student response system called iClicker. Children whose parents submitted opt-out forms were excused from the classroom during survey and implementation of the curriculum. This opt-out and excusing from classroom procedure is consistent with the current procedure used with the curriculum. During post-assessment, the same iClicker student response system was used to collect data.

Curriculum. The *MBF* CSM curriculum is a classroom-based curriculum designed for K-5 classrooms and typically delivered by school counselors (termed facilitators hereafter). The curriculum creators provided free online training/orientation to facilitators prior to sending a free copy of the *MBF* CSM curriculum. Facilitators were also provided with a Facilitator Manual, printed scripts and accompanying interactive PowerPoint presentations for each lesson, a classroom poster for each participating classroom and a school banner to be hung around their school, both of which include the curriculum's 5 Safety Rules and state "We Follow the Safety Rules." They also received student reinforcement materials to be distributed after lessons are completed, including stickers, a colorable bookmark with the 5 Safety Rules, and two Safe Adult Bookmarks. The curriculum is designed to be presented in two sessions (times ranging from 35-55 minutes each) or in 4 shorter sessions if needed by the teacher (which is consistent with how the current delivery options for the curriculum) within a 4-week period. For the current study, schools were assigned to implement the lessons in two sessions or four sessions within four to eight weeks based on their scheduling needs (school events, mandatory standardized testing, holiday breaks, etc.). Schools assigned to the delayed treatment group were instructed to teach the curriculum after we collected posttest data. The curriculum also includes take-home activities (Parent Information and Activity Sheets) sent home for parents to complete in interaction with their child after each lesson.

During implementation, researchers observed between one to six lessons in each treatment school. Each participating school received a $1,500 USD incentive. Facilitators were provided an additional $500 USD incentive.

Measures

Students. Student knowledge of potentially risky situations was assessed using a researcher-created survey (Table 1). Students in Kindergarten were asked 20-items while students in 1st and 2nd grades were asked 24-items. The survey was designed based on previous curriculum evaluation studies (Tutty, 1995) and the specific foci of this curriculum. The knowledge survey was given both before and after implementation of the curriculum using the iClicker Student Response system. Researchers used a projector to display a PowerPoint presentation containing the questionnaire and provided an iClicker remote to each child. A question was shown on projector screen and read aloud twice. After the question was read, each student selected their response on their iClicker remote before moving on the next question. The assessment asked the following items:

Table 1. Knowledge questionnaire

Items Asked to All Participants	Correct Response
1. People you know can sometimes touch you in ways that feel weird.	Yes/True
2. An adult tells you that they lost their puppy. You should help them find the puppy.	No/False
3. Your aunt wants to give you a hug. It is okay to say, "No, thank you."	Yes/True
4. Strangers can hurt you, BUT people you know can also hurt you.	Yes/True
5. Your Safe Adult can only be your dad or mom.	No/False
6. Your friend says that they know a shortcut to school through the woods. You should follow them.	No/False
7. Someone touches you in a weird way. No matter what, this is not your fault.	Yes/True
8. If you do not feel safe, then it is okay to wait and hope things get better.	No/False
9. You have a right to decide who can touch you.	Yes/True
10. Abuse means someone is hurting you on purpose with words or hurting you somewhere on your body.	Yes/True
11. Boys do not have to worry about someone touching their private parts.	No/False
12. A grown up kisses and hugs you in ways you do not like. You should tell an adult.	Yes/True
13. A baby sitter takes a picture of you in the bath. You should tell an adult.	Yes/True
14. Someone hurts your friend. Your friend says it's a secret. You should tell someone anyway.	Yes/True
15. Someone hurts you. They say that YOU will get in trouble if YOU tell. You should NOT tell.	No/False

16. Your friend calls another kid names as a joke. It's OK to laugh.	No/False
17. You see someone being bullied or hurt. You should help them.	Yes/True
18. A kid online asks for your name and where you go to school. It is okay to tell them.	No/False
19. An adult hurt you a long time ago. It's too late to tell an adult about it now.	No/False
20. If someone hurts you, it's okay to tell your friend instead of an adult.	No/False
Items asked to children in 1st and 2nd grade only:	
1. Someone you don't know knocks on the door. It's okay to answer the door by yourself if your parents are home.	No/False
2. You made someone mad. It is NOT your fault if they hurt or bully you.	Yes/True
3. A friend's dad touches your private body parts. He says it's a game. You should tell someone.	Yes/True
4. You get lost and can't find your family. An adult wants to help you. You should go with them to look for your family.	No/False

Results

Implementation

There were approximately 11 weeks between pre-test and post-test for control (M = 76.33 days, SD = 21.34 days), 2-lesson (M = 81.94 days, SD = 4.47 days), and 4-lesson (M = 77.00 days, SD = 17.54 days) groups with no statistically significant difference between them, $p>.05$. Classrooms in the 2-lesson group averaged 9.61 days between the first and second (last) lesson (SD = 3.43 days, range = 6 to 14 days). Classrooms in the 4-lesson group averaged 5.50 days (SD= 3.37 days) from first to second lesson, 10.94 days (SD = 8.79 days) from second to third lesson, and 5.33 days (SD = 4.86 days) from third to fourth lesson. Thus, classrooms in the 2-lesson group completed all material in approximately 10 days whereas classrooms in the 4-lesson group completed all material in approximately 21 days.

The sample size of the study at the pretest was N= 826 (n = 295 Control, n = 280 2-lesson Treatment, and n = 251 4-lesson Treatment). Attrition during the study was 4%; the sample size at post-test was N = 795 (n = 266 Control, n = 260 2-lesson Treatment, and n = 259 4-lesson Treatment). The number of participants was approximately equal across grades K–2 with the pretest (posttest) sample sizes ranging from 264 to 282 (256 to 273).

Child knowledge

The assessment which was used as a pretest and posttest consisted of 20 items across all grade levels with 4 additional items in grades 1-2. The descriptive statistics for the assessment for all groups combined show substantial growth from pretest to posttest and reasonable reliability in Table 1.

Table 2: Descriptive Statistics for Assessment					
Assessment	Pretest (% Correct)		Posttest (% Correct)		Reliability
	Mean	SD	Mean	SD	
20 item test	60.49	14.61	66.39	16.80	.67
24 item test	64.38	13.53	71.30	14.25	.65

Item Growth

To understand which content had the most learning, the change in the treatment groups by item are presented in Table 3. Examining all grades together, the three items with the greatest increase (i.e., growth in learning) were also significantly higher than the control group. These items included: *An adult tells you that they lost their puppy. You should help them find the puppy*. (correct answer = no); *A kid online asks for your name and where you go to school. It is okay to tell them*. (correct answer = no); *If you do not feel safe, then it is okay to wait and hope things get better*. (correct answer = no).

For some items, a vast majority of children answered correctly at pre-test (e.g., 75% or more) indicating that the item may have been too easy and thus demonstrated limited growth: *Your friend says that they know a shortcut to school through the woods. You should follow them.* (correct answer = no)*.; Someone you don't know knocks on the door. It's okay to answer the door by yourself if your parents are home* (correct answer = no)*.; A friend's dad touches your private body parts. He says it's a game. You should tell someone.* (correct answer = yes)*.; You see someone being bullied or hurt. You should help them.* (correct answer = yes).

Some items demonstrated a decrease in percent of children who answered correctly: *Someone touches you in a weird way*. (correct answer = yes). *No matter what, this is not your fault. You have a right to decide who can touch you*. (correct answer = yes). *People you know can sometimes touch you in ways that feel weird*. (correct answer = yes).

Table 3. Percent of treatment only (both conditions) students answering items correctly as well as change in scores after curriculum exposure

	Total			Kindergarten			First Grade			Second Grade		
	pre-	post-	△	pre-	post-	△	pre-	post-	△	pre-	post-	△
An adult tells you that they lost their puppy. You should help them find the puppy.	24%	50%	**27%***	18%	30%	**13%***	23%	55%	**32%***	30%	67%	**38%***
A kid online asks for your name and where you go to school. It is okay to tell them.	61%	78%	**17%***	35%	57%	**22%***	57%	85%	**28%***	91%	94%	3%
If you do not feel safe, then it is okay to wait and hope things get better.	30%	45%	**15%***	24%	41%	**17%***	28%	36%	7%	37%	59%	**22%***
You get lost and can't find your family. An adult wants to help you. You should go with them to look for your family.	43%	58%	15%	*NA*	*NA*	*NA*	29%	47%	**18%***	56%	68%	12%
A baby sitter takes a picture of you in the bath. You should tell an adult.	71%	82%	11%	65%	70%	5%	68%	83%	**15%***	79%	93%	14%
Someone hurts your friend. Your friend says it's a secret. You should tell someone anyway.	70%	81%	10%	71%	71%	0%	64%	80%	16%	77%	92%	15%
Someone hurts you. They say that YOU will get in trouble if YOU tell. You should NOT tell.	59%	69%	10%	44%	57%	13%	61%	72%	10%	72%	80%	8%
If someone hurts you, it's okay to tell your friend instead of an adult.	65%	75%	10%	43%	59%	16%	67%	82%	15%	85%	86%	2%
Your friend says that they know a shortcut to school through the woods. You should follow them.	75%	85%	10%	49%	70%	20%	81%	92%	10%	95%	96%	**1%***
Abuse means someone is hurting you on purpose with words or hurting you somewhere on your body.	67%	76%	**9%***	60%	57%	-3%	62%	81%	**19%***	78%	90%	12%
Your Safe Adult can only be your dad or mom.	32%	40%	9%	12%	20%	7%	26%	41%	16%	57%	61%	4%
An adult hurt you a long time ago. It's too late to tell an adult about it now.	38%	46%	**8%***	37%	42%	6%	35%	39%	**4%***	42%	58%	**15%***
Strangers can hurt you, BUT people you know can also hurt you.	59%	67%	**7%***	53%	51%	-2%	56%	68%	12%	69%	82%	**13%***
Boys do not have to worry about someone touching their private parts.	69%	74%	6%	53%	65%	12%	75%	77%	2%	79%	82%	3%
Your aunt wants to give you a hug. It is okay to say, "No, thank you."	71%	76%	5%	75%	65%	**-10%***	63%	77%	**14%***	75%	87%	**12%***
Your friend calls another kid names as a joke. It's OK to laugh.	68%	73%	5%	50%	60%	10%	74%	72%	-3%	81%	88%	7%
Someone you don't know knocks on the door. It's okay to answer the door by yourself if your parents are home.	77%	82%	5%	*NA*	*NA*	*NA*	71%	79%	**9%***	84%	84%	1%
You made someone mad. It is NOT your fault if they hurt or bully you.	45%	49%	4%	*NA*	*NA*	*NA*	47%	42%	-5%	43%	56%	13%
A grown up kisses and hugs you in ways you do not like. You should tell an adult.	64%	68%	4%	68%	65%	-4%	57%	60%	3%	66%	79%	13%
A friend's dad touches your private body parts. He says it's a game. You should tell someone.	78%	81%	3%	*NA*	*NA*	*NA*	64%	70%	6%	92%	92%	0%
You see someone being bullied or hurt. You should help them.	90%	92%	2%	88%	88%	-1%	88%	91%	3%	95%	98%	3%
Someone touches you in a weird way. No matter what, this is not your fault.	66%	63%	-2%	62%	54%	-8%	64%	66%	2%	70%	71%	0%
You have a right to decide who can touch you.	62%	60%	-3%	64%	59%	-5%	59%	50%	-9%	64%	69%	4%
People you know can sometimes touch you in ways that feel weird.	71%	67%	-4%	74%	69%	-5%	66%	60%	-6%	74%	71%	-3%

Note. NA items not asked of Kindergarten students. *Indicates change scores differ significantly from control group.

Testing the Effect of the Treatment Condition by Grade Level. An analysis of covariance was conducted with the 20 items taken by all students pre and post. There were 723 students completing all 20 items on both occasions. The ANCOVA model was based on the percent correct post as the dependent variable and the pre as a covariate. The grouping variables in the model were treatment condition and grade as well as the interaction. The pretest was an effective covariate (F=229.09, df=1,712, p=.000). The main effects of treatment condition (F=19.58, df=2,712, p=.000) and grade (F=52.78, df=2,712, p=.000) were significant. The interaction of treatment condition by grade was non-significant (F=.28, df=4,712, p=.892).

The effect of grade showed that students did significantly better with each higher grade level. Adjusted means for grade showed that the second grade scored highest (M=72.529, SE=.84) with first grade about 5 percent lower (M=67.59, SE=.80) and kindergarten about 8 percent below first grade (M=59.79, SE=.82). All groups were significantly different.

The effect of treatment condition showed the 4 Lesson group scoring at 70% (M=69.68, SE=.80). The 2 Lesson group scored at 2.4% less (M=67.31, SE=.77) with the control group scoring lowest at 63% (M=62.92, SE=.76). All group differences were significant.

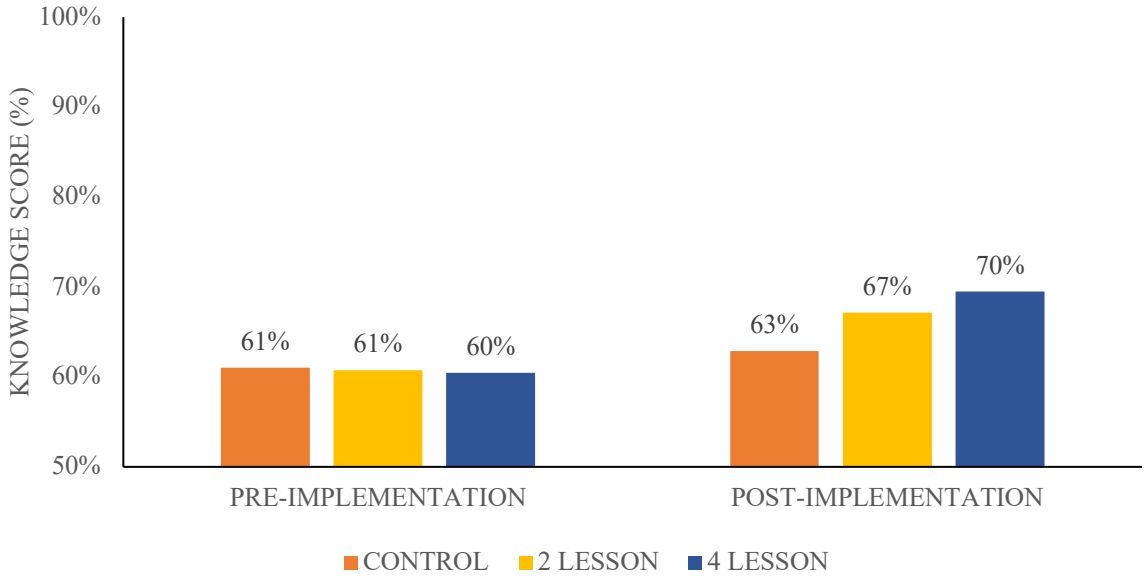

Figure 3. Using a 20-item knowledge assessment, children in the 4-lesson group had significantly higher scores at post-test than did children in the 2-lesson group. Children in both treatment groups scored higher than did children in the control group. Children in higher grades scored higher than children in lower grades. The interaction of condition by grade was non-significant.

The results for the 24-item test showed parallel results with the covariate and both treatment and age grouping variables being significant with a nonsignificant interaction. The adjusted treatment group means ranged from the highest being the 4 Lesson group (M=74.65), the 2 Lesson group scoring lower (M=72.36) and the control group scoring the lowest (M=68.05) with all means being significantly different. Again, grade 2 (M=74.23) scored significantly higher than grade 1 (M=69.15).

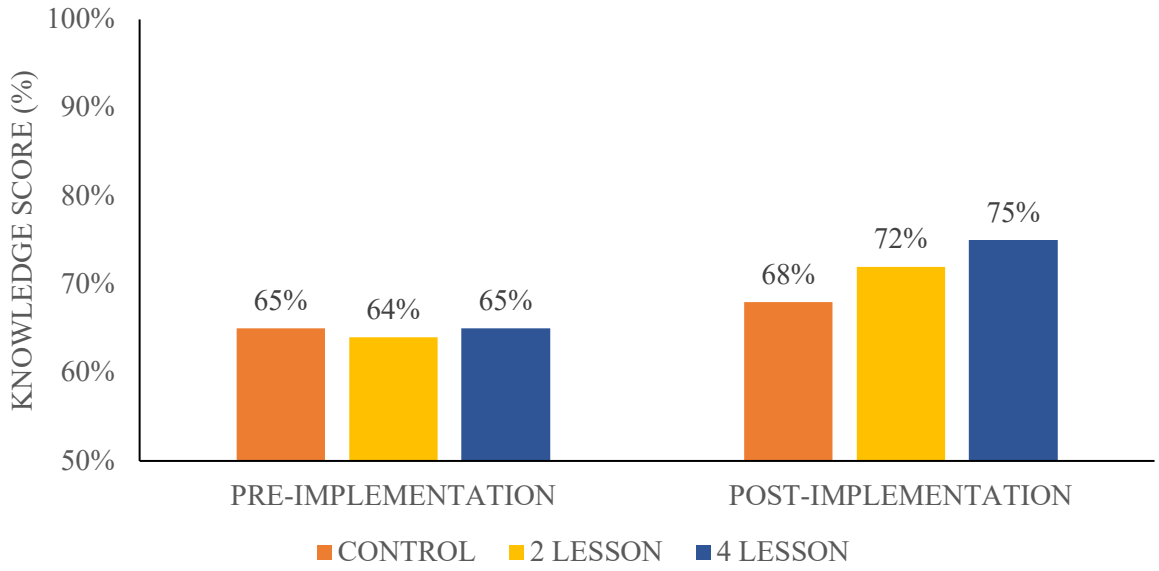

Figure 4. Using a 24-item knowledge assessment, children in the 4-lesson group had significantly higher scores at post-test than did children in the 2-lesson group. Children in both treatment groups scored higher than did children in the control group. Children in second grade scored higher than children in first grade. The interaction of condition by grade was non-significant.

Discussion/Summary

The findings from this evaluation show that the children in both groups who received the *MBF Child Safety Matters*® curriculum, increased their knowledge for the information included in the program. This increase in knowledge was significantly larger compared to the control (delayed treatment) group of children, who did not receive the program. This difference and the random assignment strongly suggest that the greater increase in knowledge in the MBF groups was due to the program and not to just getting older or other unrelated factors.

The findings also show greater knowledge acquisition in the 4-lesson MBF group, compared to the 2-lesson group. This is likely because there were more opportunities to reinforce the key learning elements and be reminded of messages. It is consistent with many findings from educational research that more repeated exposures lead to improved learning. It suggests that where possible schools should be encouraged to implement the 4-lesson model.

The findings also show no interaction between grade and treatment condition. This means that students at all grade levels K-2 benefitted from the MBF program. Thus, it can be said that the *MBF Child Safety Matters* curriculum increased general knowledge of potentially risky and unsafe situation for children of all grades K-2. This is encouraging because of some concerns that younger children may have a harder time learning the concepts.

Adding to the positive findings in the previous evaluation, this evaluation with a revised and more detailed assessment instrument contributes substantially to the evidence that the MBF program achieves its objective to impart potentially helpful information to even young elementary school age children. It remains to be seen whether this increased knowledge translates in actual behaviors and actual reductions in risk. This should be the goal of additional evaluations.

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