

The Use of Music and Movement Activities in Lessening Children's Problem Behaviors

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Abstract

The main purpose of this action research was to investigate if using music and movement activities would lessen the problem behaviors displayed by eleven (11) preschool students ages 4-5 years old in a private preschool in the Philippines. Problem behaviors are behaviors that are considered as disruptive or can cause harm to other children or may be a hindrance to their learning. The students were exposed to researcher-adapted music and movement activities for five (5) weeks based on observed target problem behaviors. Quantitative data were collected through the use of a researcher-made checklist and qualitative data through observations. Paired t-test results determined that there was a significant difference in the decrease of children's problem behaviors during free play when music and movement activities were implemented. This also has been confirmed by the observations with the children which also showed the improvement in their behaviors during free play – specifically for destroying, grabbing and not knowing when to share toys and materials. The data also showed the effectiveness of the intervention in lessening the problem behaviors in other learning periods aside from free play, validating the role of using music and movement activities in lessening children's problem behaviors.

Keywords: Music and Movement Activities, Problem behaviors, Children

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Movement is an absolute necessity for a toddler, and music stimulates the best kinds of movement (Campbell, 2010). Teachers who work with young children educate the whole child, which includes not only the thinking and feeling aspects of the child, but also the moving child (Pica, 2006). Through music, children take an inner experience and move it into a shared creative experience. Group music-making releases energy which can be channeled in creative, productive directions. Children learn about themselves and others by playing music together and by listening to each other – tapping into hidden courage that can be played out by singing together or discovering the inner resources to listen quietly (Bosco, 2002).

In preschools, because children transition from activity to activity numerous times in a day, there are many opportunities for problem behavior to occur (Ostrosky, Jung, & Hemmeter, 2002) and there are periods when students' behavior can be disruptive (Burden, 2005). With the given setting seen in a private preschool in an urban area in the Philippines, the researchers have observed that the students tend to display problem behaviors all throughout the day in the different learning periods of the school. The students from different levels rotate through the various learning areas in their scheduled routine. Due to open space of the school, especially when children are left to do free play, students tend to display problem behaviors which can disrupt the other classes in the different areas.

To solve this, carefully managing students should involve both time management and behavioral management (Stainback & Stainback, 1996). Children acquire knowledge and skills through play and if it is meaningful and short, then the longer it stays with them (Pica, 2000). Specifically, this action research investigated the influence of integrating of music and movement activities in lessening the display of problem behaviors among children.

Literature Review

Characteristics of Four to Five Year Old Children inside the Classroom

Some children start going to school at the age of four. This is a crucial transition for children because they are now going to meet new unknown people. Four to five years old children tends to show problem behavior in order to express their anger or frustration.

Three years old children have more temper tantrum problems than that of four to five years old. However at this age they still show tantrum problems and losing self- control (Seefeldt & Wasik, 2006).

Based on the National Resource Center for Family-Centered Practice and Permanency Planning (2009), children's social and emotional aspects during this age are mostly focused on their independence. During this level, they should have been able to develop the value of taking turns and playing cooperatively when they are with their peers. As an individual, they learn more about themselves, ethnic and gender identities. They slowly develop some independence and self-reliance. They also start to express their feelings like sharing sympathy, thoughts and actions; and can tell them differently from one another. It can also be seen that they have lesser tantrums compared to their younger years.

Problem Behaviors

Problem behaviors are behaviors that are considered as disruptive or can cause harm to other children or may be a hindrance to their learning. Problem behaviors are behaviors that is socially defined as a problem, as a source of concern, or as undesirable. It is a behavior that usually elicits some form of social control response (Jessor, Donovan, & Costa, 1994).

There are various reasons why children misbehave in the classroom, such as to gain attention, to exercising power, to revenge and lastly to displaying inadequacy (Dreikurs, 1993). Four to five years old children tends to show problem behavior in order to express their anger or frustration. Transitioning from one activity to another that requires students to just wait for more than 15 minutes or longer results to loss of interests (Seefeldt & Wasik, 2006). Problem behaviors are more likely to occur when children spend too much time waiting with nothing to do and when there are no clear instructions (Hemmeter, Ostrosky, Artman, & Kinder, 2008). Moreover, children may also display revenge if the child does not feel loved for some reason and seeks revenge for attention, they feel important when they hurt others or hurt the feelings of others. All these kinds of why inappropriate behavior exists have something to do with the child's developmental characteristics and their attention span inside the classroom.

Improving Transitions

Transitions are periods of time when teachers direct students to end one task or activity and begin another. It is when children change from one activity to another, wherein they may also move from one location to another (Sandberg, Hansen, & Puckett, 2013). This includes activities such as arriving at the classroom, checking attendance, moving to different learning centers, cleaning up, and preparing for snack/lunch time. One of the goals of transition is to be able to finish the activity smoothly before transferring to another center (Pica, 2000).

Decreasing problem behavior during transitions begins with a schedule that is designed to minimize transition time, avoid idle waiting time, and maximize the time spent for engaging in developmentally appropriate activities (Hemmeter et al., 2008). There is a need for prompts, reminders, and guides to achieve smooth, independent, and efficient transitions (Ostrosky et al., 2002). When transitions between activities are clearly, efficiently, and effectively implemented to minimize idle time, opportunities for challenging behavior are greatly decreased (Powell, Fixsen, Dunlap, Smith, & Fox, 2007). A well-planned transition can bring out more learning opportunities for children and it teaches them how to handle group situations where in they can decide for themselves whether or not to join or otherwise.

Good transitions also include planning engaging activities for individual or small groups of children to do while they wait for further instructions or for the next activity (Hemmeter et al., 2008). Smooth transitions between activities require clear and developmentally appropriate instructions for children to follow. Songs, fingerplays, language-based movement activities, verbal directions, reminders of expectations, and physical prompting are used to prepare and guide children for smooth transitions (Drang, 2011).

Music and Movement Activities

Music and movement cannot be defined as one, but they naturally go together and each works hand in hand to support children's learning experience. Music for children is sources of safety, happiness, comfort and sense of being from songs and sounds that they experience. As children mature, their definition of music also changes and can be expressed indirectly or through their behaviors (Campbell, 2010). How people express what they feel

is not limited to verbal expression, but also how they make use of their body reflects their musical experience. Therefore, music and movement provides children opportunities to freely express what they feel verbally or through body movements whenever they hear a rhythm or a beat of a song.

Songs movements and musical games are good sources of neurological exercises that can improve their cognitive skills. A study done by Goodway and Rudisill (1996, as cited in Pica, 2013) suggests that children who participate in programs that involve motor skills, have higher perceptions of mental capabilities. Physical movement plays a critical role in the creation of nerve-cell networks essential to learning (Pica, 2000). Movement is also a form of exercise for children. Exercise puts the brain into balance naturally by controlling moods and how to handle stress. Exercise enhances cognition which leads to the improvement of memory, attention, multitasking, learning and decision-making (Blaydes & Mitchell, 2010). Children acquire knowledge through play and the greater the impression it makes, then the longer it stays with them. Children's capability to follow given directions is also trained by giving them instructions that are simple to complex (Pica, 2000).

Music is also vital to the development of children because it enhances their speech skill and social development. Further, music activities improve attention span, memory and expand vocabulary. Carl Off, a music educator, believes that music, movement and speech are interrelated (Pica, 2000). It also applies to children that music is not limited to the auditory sense. Through activities that involve music, it boosts up children's social-emotional skills (Morehouse, 2013). It helps give children a sense of belongingness because it is a social activity.

Music and Movement and Children's Problem Behavior

Releasing children's energy into more productive behavior is one possible response to problem behaviors. This is where music and movement activities can come into play. There has been evidence that music and movement helps in the decrease of problem behavior as well as an increase in the child's academic engagement (Sandberg et al., 2013). A help of song or a physical movement that indicates a time for transition can lessen the child's confusion from activity to another inside the classroom (Seefeldt & Wasik, 2006).

Teachers who work with young children educate the whole child, which includes not

only the thinking and feeling aspects of the child, but also the moving child. Incorporating music with body movements to their curriculum allows them to create a better learning experience. Music-making releases energy which can be channelled in creative, productive directions and prevents occurrence of problem behaviors (Pica, 2006).

Movement is also a form of exercise for children. Exercise puts the brain into balance naturally by controlling moods and how to handle stress (Blaydes & Mitchell, 2010). Exercise enhances cognition which leads to the improvement of memory, attention, multitasking, learning and decision-making. Children acquire knowledge through play and the greater the impression it makes, then the longer it stays with them (Pica, 2000). Children's capability to follow given directions is also trained by giving them instructions that are simple to complex (Pica, 2000).

Research Framework

This action research is anchored on the role of music and movement activities in lessening problem behaviors among children. Based on Figure 1, the music and movement activities represent the independent variable while the problem behaviors represent the dependent variable. The children's problem behaviors are those behaviors that caused disruptions in class or those that affected another child's behavior or attitude.

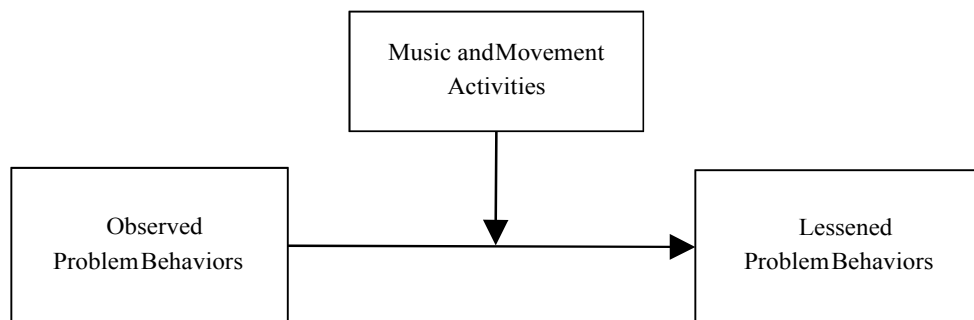


Figure 1. Research Paradigm for the Use of Music and Movement Activities in Lessening Children's Problem Behaviors

Four to five years old children have limited attention span and have a difficulty on activities that requires them to sit down for a long time (Seefeldt & Wasik, 2006). It is

expected that at this age children are filled with and energy and needs to be active. This can be released through the different movements the body can make. Music and movement activities can be a tool that can authenticate a child's learning environment and can help broaden their later knowledge, skills and attitudes. In this action research, the music and movement activities were aimed to lessen the observed problem behaviors of children.

The objective of this action research was to investigate the use of music and movement activities in lessening children's problem behaviors. Specifically, this research addressed the following questions:

1. What are the problem behaviors displayed by the children?
2. How did the use of music and movement activities lessened children's problem behaviors?
3. Is there a significant difference in the children's problem behaviors during free play and other learning periods with the use of music and movement activities?

Methods

This action research utilized a mixed method single group pretest-posttest design. Quantitative data were collected through a researcher-made checklist by observing the children during their whole class session. This was supported by qualitative data of the children's behaviors gathered through anecdotal records.

The research locale was at a private preschool in an urban area in the Philippines. The school is a house converted to a school. As such, the school has open space and the students from different levels rotate through the various learning areas in their scheduled routine. The kindergarten class handled by the researchers composed of eleven (11) students aged four to five years old served as the participants for the study. Parental consent was secured for the participants.

Data collection spanned for eight (8) weeks. The first week served as an initial observation period to determine the typical problem behaviors exhibited by the children during various learning periods. Interaction with the children and interview with the teachers were also conducted. The seven (7) most occurring problem behaviors informed the teacher- made checklists that served as the primary instruments for the action research.

The checklist was then implemented for the second week to serve as the pretest data for children's problem behaviors.

Instructional plans of the music and movement activities were also designed based on the identified problem behaviors. The eight (8) action songs used were in the tune of familiar nursery rhymes with lyrics adapted to address the problem behaviors (e.g. "*No more shouting*" song in the tune of "*Heads, shoulders, knees and toes*"; "*I know how to share*" song in the tune of "*Twinkle, twinkle little star*"). The songs involve repetitive actions that portray the positive behavior being promoted. The instructional plans and songs were validated by three (3) early childhood education teachers.

The music and movement activities were implemented for five (5) weeks during the Free Play period which last for 20 minutes. These activities served as a replacement for the typical free play period. The intervention begins with action songs about a positive behavior. The researchers first demonstrate the song and demonstrate the actions to the students and explain the message of the song. Afterwards, the researchers replay the action song and perform it together with the students until they are familiar with the actions and lyrics. After the action song was introduced, the researcher explained the rules for the game-based activities that followed. These teacher guided collaborative activities involved simulation of the positive behavior (e.g. to promote "no shouting" behavior, a "pass the message whispering activity" was done; to promote "packing toys" behavior, a cooperative game of packing toys with one child blindfolded and the others serving as guide was conducted). After the game, the researchers asked the insights of the children and how they feel about the action song and game-based activities. The intervention was then removed during the final week to determine the occurrence of problem behaviors without the intervention.

For the quantitative data, frequency counts of the problem behaviors exhibited during free play and other learning periods before and after the intervention were tallied. Percentage decrease was computed to quantify the changes. Paired t-test was also conducted to determine significant differences in the children's problem behaviors before and after the intervention. For the qualitative data, common changes in the children's behavior were described.

Results

Children's Problem Behaviors before the Intervention

Table 1 the frequency of problem behaviors the children exhibited during free play. Upon observing the children prior the intervention, most of the problem behaviors stemmed from the use of toys during free play period. The children tend to grab the toys even when still in use of their classmates. Moreover, the children did not know how to share their toys and say borrow whenever they wanted to play with these toys. They can be too active because of excitement over the toys resulting to hurting other classmates when playing with these toys. A related problem to this is packing the toys away. The researchers have observed that even though some children spent most time playing with the toys, they seldom helped in packing away whenever he needed to or is already done using it. Some would also simply throw the toys in the container instead of putting them inside properly. On the other hand, there are children who would not help in packing away because they did not use any of the toys laying around so they just waited until the others finishes.

Table 1. *Frequency of Problem Behaviors during Free Play*

Problem behaviors	Before music and Movement Activities intervention	After intervention	% less
Noisiness/ Being Loud	33	21	36%
Destroying toys/materials	12	5	58%
Cries for no good reason	2	2	0%
Intentionally hurting of classmates	9	7	22.2%
Grabbing of materials/toys when it is still in use	32	16	50%
Doesn't know how to share toys	22	11	50%
Doesn't help in packing away	22	14	36%
Total	132	76	42%

The children's problem behaviors were also due to their temperament. Some of the children are sensitive that whenever they do not get it their way, they don't use their words to express what they are feeling and just tend to cry. Some children rarely complies with the teacher's rules and are always seen standing up and running in the halls of the school.

During free play, the children also have a tendency to be really active especially when with the boys, and this result to them being distracted. They would often follow whatever their classmates are doing. For example, if one classmate would shout, the others tend to copy, which ended up with them not being able to follow the instruction of the teacher. Moreover, since they are too active, they end up running and shouting during Free Play, which caused disruption of the other classes.

Changes in Problem Behaviors during Free Play

Table 1 also shows the impact of movement and movement activities on children's problem behaviors during free play period. We can see that problem behaviors lessened by 42% overall from 132 occurrence prior the intervention to only 76 after intervention. Specifically, the music and movement activities had the biggest influence on problem behaviors of destroying toys/materials (58% less), grabbing of materials/toys when it is still in use (50% less) and doesn't know how to share toys (50% less). We can infer from this that music and movement activities works best for dealing with problem behaviors in relation to toys/materials. It was observed in that after the intervention, the children were more careful and very aware on how to properly use the toys in a manner that it would not hurt their classmates. The children were able to play without having to throw toys or push. They also became aware that the toys are limited and thus share the toys to the others by just getting some of the props needed and made sure that there was still left for the others to use. They also exhibited saying "borrow" when they wanted something from a classmate before getting it (e.g. whenever a child wanted to play with the toys that his classmates were using).

It was also observed that when the teacher sung the "*Don't throw the toys*" song, a child was seen packing away the toys properly – placed it in the right container without the need to throw it. For another child, the researchers saw that he was able to now cooperatively help in packing away the toys, even if she didn't use them. She enjoyed singing the song for packing away and helped her other classmates put back the toys in the right container.

All of the problem behaviors lessened except for the crying for no good reason. The child's temperament can be a possible reason for this. Since a child's temperament is a

child's personal style of how he or she reacts to the world (Allard & Hunter, 2010), what might be sensitive to one child might not be sensitive to another. There are children who are too sensitive, thus, results to crying.

Furthermore, examining the paired t-test of the children's problem behaviors during free play in Table 2 showed that these problem behaviors were significantly lessened ($p < 0.01$).

Table 2. Paired T-test of Problem Behaviors during Free Play

	Before intervention	After intervention
Mean	18.85714286	10.85714
Variance	136.8095238	44.47619
Observations	7	7
Pearson Correlation	0.959036053	
Hypothesized Mean Difference	0	
df	6	
t Stat	3.761298768	
P(T<=t) one-tail	0.004692092	
t Critical one-tail	1.943180281	
P(T<=t) two-tail	0.009384185	
t Critical two-tail	2.446911851	

The action songs served as a great prompt for good behavior. During and after the intervention, the children already knew what to do when a song was being played or sung. With the use of the songs (e.g. "Gentle Hands", "No more shouting" song), the children followed more and needed less reminders when using indoor voices during Free Play and settling down. They also needed lesser prompts when they needed to settle down to relax and the use of indoor voice during Free Play. For a child, after the intervention was introduced, he uses more of his words when expressing himself and he has developed sportsmanship and would even say, "I'm okay" or "I'm not going to cry" when he is taken out of the game. He is able to control his emotions better and would not easily cry over illogical reasons.

Additionally, some children were also observed reminding their classmate of proper behavior. For example, when a classmate would display problem behaviors (e.g. continuously running around), they would tell him to "Stop that, it is not nice."

Changes in Problem Behaviors in Other Learning Periods

The music and movement activities were not limited to be practiced during the Free Play, but it was also integrated in the other learning periods. This served as an opportunity for the students to apply what they have learned from the music and movement activities.

Table 3 shows the impact of music and movement activities in other learning periods aside from free play. Though the focus of the action research was the Free Play period, we can notice that the occurrence of problem behaviors lessened in all the other learning periods after the intervention, especially for transition time (68% less) and snack time (63% less).

Table 3. *Frequency of Problem Behaviors in Other Learning Periods*

Period	Before intervention	After intervention	% less
Circle time	100	62	39%
Snack time	49	18	63%
Activity time	97	56	42%
Transition time	95	30	68%

Looking further at the paired t-test results in Tables 4 to 6 indicate significant decrease in the problem behaviors for circle time ($p < 0.05$), snack time ($p < 0.05$) and transition time

Table 4. *Paired T-test of Problem Behaviors during Circle Time*

	Before intervention	After intervention
Mean	14.28571429	8.857142857
Variance	88.9047619	64.14285714
Observations	7	7
Pearson Correlation	0.821653026	
Hypothesized Mean Difference	0	
df	6	
t Stat	2.669269563	
P(T<=t) one-tail	0.018531337	
t Critical one-tail	1.943180281	
P(T<=t) two-tail	0.037062674	
t Critical two-tail	2.446911851	

($p < 0.01$). Overall, the results suggest that music and movement activities have a carry-over effect and can also be used to lessen problem behaviors on other learning periods. Most of the time, the teachers only needed to sing for the students to follow.

Table 5. Paired T-test of Problem Behaviors during Snack Time

	Before intervention	After intervention
Mean	7	2.571428571
Variance	58.66666667	12.61904762
Observations	7	7
Pearson Correlation	0.961699535	
Hypothesized Mean Difference	0	
df	6	
t Stat	2.691415723	
P(T<=t) one-tail	0.017992386	
t Critical one-tail	1.943180281	
P(T<=t) two-tail	0.035984772	
t Critical two-tail	2.446911851	

Table 6. Paired T-test of Problem Behaviors during Transition Time

	Before intervention	After intervention
Mean	13.57142857	4.285714286
Variance	98.28571429	44.23809524
Observations	7	7
Pearson Correlation	0.798354989	
Hypothesized Mean Difference	0	
df	6	
t Stat	4.025970678	
P(T<=t) one-tail	0.003455908	
t Critical one-tail	1.943180281	
P(T<=t) two-tail	0.006911817	
t Critical two-tail	2.446911851	

Discussion

Songs and activities reinforce the everyday benefits characteristics such as respect, responsibility (Elias, 2009). Through the observations that were done before, during, and after the intervention, it is evident that students' problem behaviors, specifically during free play, have improved with the use of a combination of music and movement activities. All students were able to follow more when the intervention was implemented. Moreover, it was also observed by the researchers that each student responded differently from the others with the implementation of the music and movement activities. This is supported in other studies which states that the musical experience of any listener involves expectations, and these expectations are based on the listener's cultural experiences with music. When the music conforms to our expectations, we relax and enjoy the ride. However, when our expectations are not met, we experience tension (Moyer & Gilmer, 1954).

Additionally, every time there is a new song introduced, the researchers made sure that they are able to review the children regarding what they have learned from previous music and movement activities, which is supported in literature that music is an effective medium for learning and retaining information (Elias, 2009). It was seen that when the researchers use the active songs for classroom management, some students sung along, which helped the teachers to remind the other students who are displaying problem behaviors to show behavior that are expected from them all across the different routines. Thus, every time the active songs were implemented, the students responded and moved more quickly which is parallel to what is transpired in this action research.

Lastly, during the intervention, the students also needed fewer prompts or reminders to pay attention, follow directions, or move faster. Some students did not even need any additional reminders when the intervention was implemented and followed directions independently and immediately.

Conclusions and Future Study

The data from this research revealed significant improvement of children's problem behaviors with the use of music and movement activities during their free play. Effects also

extended in other learning periods. These improvements in the preschool children's ability to display more appropriate behavior in this study implied the great promise that music and movement activities can offer to help in managing behavior and maximizing engagement and time for main classroom activities. Although the study was conducted to a small sample size, it provided a glimpse into how children behave differently with the use of music and movement activities.

For children to understand the expectations associated with the music and movement activities, the teacher should explain the expectations primarily (Carta, Renauer, Schiefelbusch, & Terry, 1998). Before the researchers implemented the intervention, they allotted time for introducing the music and movement activities (songs and active games) while also explained the behavioral expectations for the different tasks. Also, the researchers were consistent in applying the intervention as for not to cause confusion within the students. As recommended by Anderson & Lawrence (2007), plenty of time and opportunities for practicing these music and movement activities were also given to the students across the different learning periods, in which these became the norm in their daily routine. These may have contributed to more appropriate behavior and the positive response of the children to the intervention. The researchers encouraged that early childhood educators practice these strategies as well.

Finally, the researchers also recommend that future researches include a larger population and sample size, as well as compare the effects of the use of music and movement activities in improving problem behaviors to students of different ages.

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