



Enhancing Persistence on Mastery Tasks Among Young Preschool Children by Implementing the “I Can” Mastery Motivation Classroom Program

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Shazia Iqbal Hashmi³¹, Chua Bee Seok³² & Murnizam Hj Halik³³

Abstract

Task persistence plays important role in school readiness and helps to enhance young children's cognitive development and academic skills; thus, designing and implementing programs to enhance it is vital. The objective of the present research was to assess the effectiveness of the “I Can” mastery motivation classroom program in enhancing young children's persistence on mastery tasks. Altogether, forty-four ($n = 44$) children between the ages of two to three years selected from three kindergartens in Malaysia participated in the research, which was conducted by using a randomized pretest and posttest experimental-control group design. Persistence on three mastery tasks and mastery pleasure were assessed by using the Individualized Assessment of Mastery Motivation manual. The experimental group ($n = 25$) was exposed to the “I Can” mastery motivation classroom program, while the control group ($n = 19$) attended regular classroom lessons. There was a significant gain score difference between the experimental and control groups on task persistence for puzzles but not for shape sorters, cause and effect toys, and mastery pleasure. Thus, the program was effective in enhancing persistence on some mastery tasks. The content and findings of the intervention should help policy makers understand this important aspect of early childhood education.

Keywords: persistence, preschool children, motivation, mastery tasks, structured class room activities, puzzles, shape sorters, cause & effect toys

³¹ University Malaysia Sabah, Sabah, Kota Kinabalu, Malaysia, shaziah@ums.edu.my, ORCID 0000-0001-9221-9322

³² University Malaysia Sabah, Sabah, Kota Kinabalu, Malaysia, chuabs@ums.edu.my, ORCID 0000-0002-9394-4638

³³ University Malaysia Sabah, Sabah, Kota Kinabalu, Malaysia, mzam@ums.edu.my, ORCID 0000-0002-0384-4132

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Introduction

Looking at the history of scientific discoveries and exploring the personality characteristics of world renowned scientists and inventors, it is revealed that most of them showed one subtle characteristic; i.e., their persistence in solving problems and remaining with it until they achieved their desired solutions. Persistence is also considered as one of the important developmental milestones for young children as they learn to control their impulses to quit working on a task when facing difficulty or initial failure and remain focused until they achieve their goals. Such persistence helps them to enhance their self-efficacy as well. Children who are persistent acquire developmental skills better than those who give up while facing failures. White (1959), while describing the concept of “effectance motivation” suggested that infants’ persistence during play activities showed their desire to affect their environment. He also suggested that infants’ persistence remained stable and thus would predict later competence in various domains of child development. White’s theory about the role of persistence in child development motivated several developmental psychologists to proceed in this direction and explore developmental progressions of infants’ persistent behavior as well as its relationship with child development.

Mokrova, O’Brien, Calkins, Leerkes, and Marcovitch (2013) while studying the relationship between task persistence and academic skill acquisition among kindergarten children, suggested that preschoolers’ persistence on tasks was related to their academic skills two years later over and above early cognitive-linguistic skills as well as demographic factors. They suggested that young children’s task persistence while facing a challenging task could be considered an important aspect of their development in terms of school readiness.

Belsky, Friedman, and Hsieh (2001), while predicting the role of attentional persistence towards children’s school readiness, also found that low attentional persistence (displayed by children with shorter attention span during an unstructured play session) along with high negative emotionality at the age of three, were found to be related to more behavior problems. These children showed less social competence, and perhaps less school readiness as well. Belsky et al. (2001), while discussing the research findings, further suggested that the results might have been different if attentional persistence was high in infancy. Sigman, Cohen, Beckwith, and Topinka (1987) also found that higher levels of task persistence at age two, shown by children spending more time trying to open a box which contained a toy was related to many developmental aspects. These children had higher levels of cognitive skills at the age of five years and also seem to have fewer behavior problems, even when controlling for children’s initial cognitive abilities.

Józsa and Molnár (2013) found an association between persistence and both GPA and test achievement in different school subjects in grade 3 and 6. A longitudinal study by

Józsa and Morgan (2014) also found a significant relation between cognitive persistence in grade 4 and GPA later in grade 8.

Persistence and mastery pleasure have been considered as important components of mastery motivation. Barrett and Morgan (1995), while explaining the concept of mastery motivation, suggested that it has two aspects; the instrumental aspect of mastery motivation is defined as measurable behavior such as remaining persistent when working on a given task, while positive affect such as display of pleasure and pride are affective aspects of mastery motivation. Lewis, Alessandri, and Sullivan, (1992) also stated that children show pride and shame in response to their success or failure while accomplishing a task. Historically, persistence while working on different types of moderately challenging tasks using toys was considered a measure of mastery motivation among young children (MacTurk, Morgan, & Jennings, 1995; Morgan, Busch-Rossnagel, Maslin-Cole, & Harmon, 1992; Dichter-Blancher, Busch-Rossnagel, & Knauf, 1997). Persistence also has been considered an important aspect of emotional regulation and executive functions among young children. According to Eisenberg, Gershoff, Fabes, Shepard, Cumberland, and Losoya (2001), young children's persistence while facing challenges and controlling their frustrations, as well as their compliance with care givers, are part of acquiring emotional self-regulation. Therefore, keeping in mind the importance of persistent behavior for child development outcomes, it is of great importance to develop and implement early childhood programs that can enhance young children task persistence.

Early Childhood Programs to Enhance Young Children's Task Persistence

Task persistence is considered as an important aspect of motivation. Wigfield, Eccles, Schiefele, Roeser, and Davis-Kean (2006) suggested that child's level of persistence and engagement in particular activities can affect a child's performance in these activities. Longer and deeper involvement in a task tends to provide the opportunity to practice existing skills and to acquire new ones; thus, according to them, motivation in early childhood is an important aspect of child development. Based on the work of Wigfield et al., it appears that task persistence contributes directly and indirectly to children's early academic skills and overall development in many domains; therefore, measures should be taken to support and encourage task persistence among young children. Any structured classroom programs or activities to enhance young children's ability to remain persistent on tasks can positively affect their cognitive, motor, and language development. Hauser-Cram (1998) also suggests that teachers can help to encourage mastery motivation among young children by providing moderate choice of activities, encouraging them to learn rather than be correct or incorrect, supporting them, and discussing with parents their children's interests.

On the basis of findings from evidence-based practice, when implementing programs and curriculum with young children, it can be assumed that early childhood programs can help in strengthening and maintaining children's enthusiasm, persistence, and

engagement in learning. Powell, Burchinal, File, and Kontos (2008) found that early childhood programs that use the small groups approach encourage children to engage more actively in the learning process. On the other hand it was also found that children seem to be least engaged during whole group activities. Wigfield, Guthrie, Tonks, and Perencevich (2004) suggested that early childhood programs that integrate across academic or subject matter domains appear to promote children's interest, motivation, and persistence. Hyson (2008) also found that learning programs that foster choice, independence, and appropriate levels of challenge can help to enhance children's motivation, which in turn can improve their persistence. Thus findings from these earlier researchers were integrated into the "I Can" mastery motivation classroom program evaluated in this article.

Looking at most of existing programs that are designed to provide services to children, we can see that the focus of these programs is usually on children who are at risk for of facing various biological or demographic challenges such as poverty, low socio-economic status, health-related issues, or combinations of these problems. There is less focus on the children who do not have these problems; however, children without these types of social problems also need services to enhance their basic learning-related skills, such as persistence, attention, and focus, which are needed for school readiness. Therefore, the present research is aimed at determining the efficacy of the "I Can" mastery motivation classroom program developed by Hashmi, Seok, & Halik (2014) used to enhance persistence on mastery tasks among preschool children with the objective that every child should have access to quality care and programs. The purpose of the "I Can" mastery motivation classroom program was to promote the importance of task persistence among young children. It has five modules based on the Dimensions of Mastery Questionnaire developed by Morgan, Busch-Rossnagel, Barrett, and Wang (2009). These modules are (1) object oriented (cognitive) persistence, (2) gross motor persistence, (3) social persistence with adults, (4) social persistence with peers/children, and (5) mastery pleasure. During the present research, each module was implemented for three weeks in the form of structured lesson plans using 10 age appropriate classroom activities. It was assumed that involvement in the "I Can" mastery motivation classroom program would enhance young children's persistence while working on moderately challenging puzzles, shape sorters, and cause and effect toys.

Method

Research Design

The present research was conducted as a randomized pre and post experimental-control group design. After conducting assessments of task persistence and mastery pleasure during the pre experimental stage, the intervention based on the "I Can" mastery motivation classroom program was administered. The program was implemented for fifteen (15) weeks. Post experimental assessments of task persistence and mastery

pleasure were carried out after program implementation by a tester who was “blind” to whether the participating child was in the experimental or control group.

Participants and Procedures

All the participants of the present research, which consisted of 44 children between ages of two to three years, were selected from three kindergartens around the urban areas of Kota Kinabalu, Sabah State in Malaysia. The kindergartens were similar in terms of services and facilities as well as the curriculum they used. The child-teacher ratio was also similar. After considering geographic factors such as proximity and parents socio-economic status, the three kindergartens were identified as suitable to conduct the present research. Once kindergarten personnel agreed to cooperate, they were given a briefing about the flow of the research. Children were screened to determine whether they met criteria for inclusion in the research, which were: the child was developing typically and was between ages 2 and 3. Brief information about the research in the form of pamphlets were distributed to parents. Mothers along with their children were seen for a first meeting of approximately 30 minutes to explain the objectives, methodology, duration and materials of the research. Mothers were informed that all testing procedures as well as other materials used during research were safe and consisted of age-appropriate educational toys. Mothers were also asked to sign informed consent forms and were assured that all the information about their child obtained during research was to be only used for academic purposes and would not be released to anyone. Based on the required age range, 47 children were selected to take part in the present research. After getting informed consent, each participating child at the three different locations was randomly assigned to either the experimental ($n=26$) or the control group ($n=21$), with deliberate over-assignment to the experimental group (Figure 1).

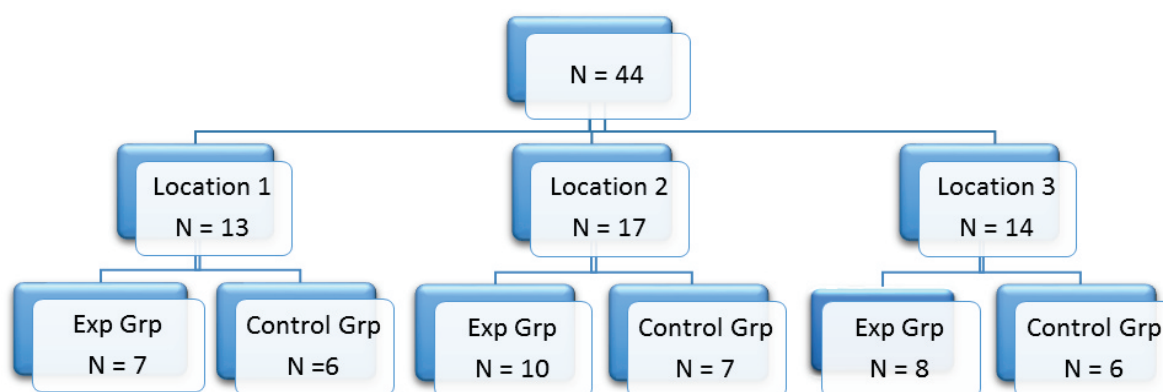


Figure 1. Number of participants randomly allocated to the experimental and control group at each location.

It took 5 months to complete data collection (including pre experimental assessment, intervention phase, post experimental assessment); 3 cases were dropouts (1 family moved to other state, 1 mother went on maternity leave so the child missed many days of kindergarten, and 1 family moved to another neighborhood so they changed kindergartens). Therefore, the remaining number of participating children was 44; the

experimental group having 25 and the control group having 19 participants. The children were individually assigned to the experimental group or control group from all three locations regardless of scores attained for task persistence during the pre experimental condition.

Measurement of Task Persistence and Mastery Pleasure

The Individualized Assessment of Mastery motivation Manual for 15-36 months old children developed by Morgan et al. (1992) was used to assess children's level of task persistence and mastery pleasure during the pre experimental and post experimental stages. Structured play activities in a test-like situation were used with the objectives that (a) the tasks presented were moderately challenging to the individual child, (b) the child was able to engage in the task directed behavior without interference for an extended period of time, and (c) the total amount of time the child was involved in task directed behavior was recorded (Morgan et al., 1992). The assessment used three types of toys; i.e. puzzles, shape sorters, and cause and effect toys. The toys included four wooden puzzle boards, arranged from 1-4 according to the level of difficulty, four sets of shape sorters, also arranged from 1-4 according to the level of difficulty, and four cause and effect toys. However, after the pilot study, the level 1 wooden puzzles which included interchangeable circles was removed as it was found to be very easy for children. Persistence at tasks was rated in every 15 second time block during the four minutes period on each toy assumed to be at appropriately challenging levels of task difficulty. The possible score range of task persistence was 1- 16 for each toy. To determine the appropriate level of task difficulty, criteria suggested by Morgan et al. (1992) for moderately challenging tasks were adopted. Moderately challenging tasks were operationally defined as tasks for which the child solved at least one part within 120 seconds, but did not complete all components within that same time. The coding procedure suggested in the Individualized Assessment of Mastery Motivation Manual was used. Live coding was done on target behaviors as is suggested by the manual (Morgan et al., 1992).

Mastery pleasure and positive affect displayed while achieving a solution to moderately challenging tasks were also measured. Behaviors displayed by children such as showing excitement, laughing, smiling and "high-five" were recorded only when successfully completing the mastery task so the range was 0-1 for mastery pleasure. The administration and scoring in the Individualized Assessment of Mastery Motivation Manual to assess task persistence and mastery pleasure involved categorical measurement of child behavior on a given task; thus, the inter-rater reliability was determined by using Cohen's Kappa Value (Cohen, 1960). Reliabilities were calculated from independent scoring by a second observer during a pilot study, pre experimental assessment, and post experimental evaluation. According to Fleiss (1981), Kappa values > .60 are considered acceptable. Table 1 presents the Cohen's Kappa values for task persistence and mastery pleasure.

Table 1. Cohen's K inter rater reliability values for task persistence

Scales	Pilot study Cohen's K	Actual study Cohen's K
Task persistence	0.70	0.72
Puzzles	0.71	0.77
Shape sorters	0.70	0.73
Cause and effect toys	0.69	0.68
Mastery Pleasure	0.82	0.75

Description of the "I Can" Mastery Motivation Classroom Program

The experimental group was taught using the lesson plans designed by the researcher based on the "I Can" mastery motivation classroom program resource manual for fifteen (15) weeks, while the control group had typical lesson plans designed by the kindergartens. As shown in Table 2, the intervention module included fifteen 2-hour structured lessons, three times a week, divided into five modules. Each module was repeated three times, so it took fifteen (15) weeks to complete the intervention phase.

Table 2. "I Can" mastery motivation class room program module specifications and implementation

Program Modules	Module	Lesson	Week
Object oriented persistence	1	1,2,3	1, 6, 11
Gross motor persistence	2	4,5,6	2, 7, 12
Social persistence with adults	3	7,8,9	3, 8, 13
Social persistence with children	4	10,11,12	4, 9, 14
Mastery pleasure	5	13,14,15	5, 10, 15

The "I Can" mastery motivation classroom program was implemented by one research assistant who was trained to implement the intervention module along with the kindergarten teachers. The intervention phase was conducted in different rooms for the experimental and control groups.

Programs such as the Incredible Years, Dina Dinosaur child training program developed by Webster-Stratton (2002), Social Skills in Pictures, Stories, and Songs developed by Serna, Nielson and Forness (2007), and Al's Pals developed by Wingspan (1999) were used as guidelines to design the overall lesson plans, the activities, and the length of each lesson as well as the duration of the whole "I Can" mastery motivation classroom program. Guidelines suggested in "Developmentally appropriate practice in early childhood programs serving children from birth through age 8," a position statement of the National Association for the Education of Young Children (2009), was also used to plan the activities and lesson plans of the "I Can" mastery motivation class room program.

The "I Can" mastery motivation classroom program has five modules based on the Dimensions of Mastery Questionnaire developed by Morgan et al. (2009). An activity from each module is described next; during each activity, teachers and the research assistants provided verbal prompts, praise, and small rewards for the children's efforts to complete the task and to remain persistent. The object-oriented persistence module used an activity such as sorting and matching where children were provided with plastic

buttons, straws, plastic shapes, and 3 small buckets into which they sorted and matched objects based on shape, color and size. The gross motor persistence module used an activity such as animal walk (slither like snake, hop like a bunny rabbit and spring like a kangaroo) on a 20 feet long zigzag trail made with tape on the floor. The social persistence with adults' module used an activity such as circle time with hand puppets, where children engaged in conversation with the teachers for a longer-than-usual time period about their puppet. The social persistence with children module used an activity such as hand games (hot cross bun, pat a cake); hula hoops were used to create a space for each pair of children, so that each pair can sit inside their individual space and play with that friend. The mastery pleasure module used an activity such as treasure hunt where the children were asked to hunt for the hidden toys in places in the room which were easily accessible to children. Each lesson plan also included other types of activities such as completing the puzzles, singing, table tasks, story time, and getting active time. Some activities in the "I Can" mastery motivation classroom program were carried out in small groups of 3-4 children in a group, and in some other activities children worked individually. Table 3 is a brief summary of the focus and goals of the "I Can" mastery motivation classroom program.

Table 3. "I Can" mastery motivation classroom program modules

Program Modules	Focus	Goals
Object oriented persistence	Attempt to master the task, work for a longer time, keep repeating new skills, and task completion	Children will learn how to remain focused and persistent on a task
Gross motor persistence	Encouraging and involving children in gross motor activities and repeating motor skills	Children will learn how to remain focused and persistent while working on gross motor activities.
Social persistence with adults	Encouraging and involving children to develop social persistence while interacting with adults.	Children will learn how to remain focused and persistent while interacting with adults.
Social persistence with children	Encouraging and involving children to develop social persistence while interacting with children.	Children will learn how to cooperate with each other to work as a team and remain focused and persistent while interacting with children.
Mastery pleasure	Encouraging positive affect such as smiling and clapping hands after completing a task or when he or she makes something happen.	Children will learn to relate positive affect with mastery and task completion

Content validity of the "I Can" Mastery Motivation Classroom Program

The program manual was sent to two experts in field of child psychology to review and evaluate the content validity of the program. They were asked to assess whether the "I Can" mastery motivation classroom program to enhance task persistence among young children provides appropriate and adequate lessons, modules and materials. Both external evaluators reported that the program manual was well structured, the contents were appropriate, instructions were easy to follow, and the goals set were achievable.

Data Analysis

Data collected were analyzed using SPSS. Inferential statistics (i.e., independent *t* tests) were used to determine gain scores differences in task persistence and mastery pleasure between the experimental and control groups.

Results

Demographic Information

The participants of the present study were 44 children who were physically healthy and were considered to be achieving normal developmental milestones. Gender, age and ethnic distribution of the participants are given below (See Table 4).

As expected, because children were randomly assign to the groups, there was no significant difference between the experimental and control groups on task persistence for puzzles ($t = .98, p = .33$), shape sorters ($t = 1.93, p = .06$), cause and effect toys ($t = .31, p = .76$) and mastery pleasure ($t = -.58, p = .56$).

Table 4. Demographic Information about Children in the Experimental ($n = 25$) and Control Groups ($n = 19$)

Variables	Experimental group		Control group	
	Frequency	Percentage	Frequency	Percentage
Gender				
Male	11	44	9	47.4
Female	14	56	10	52.6
Age				
24-30 months	14	56	12	63.2
31- 36 months	11	44	7	36.8
Ethnic				
Malay	7	28	4	21.1
Chinese	2	8	1	5.3
Others	13	52	13	68.4
Indians	3	12	1	5.3

The effect of participation in the “I Can” mastery motivation classroom program on children’s task persistence and mastery pleasure was determined by calculating the gain scores (posttest minus pretest), which were analyzed using the *t* test to compare the gains of intervention vs. control. Table 5 shows that the increase in task persistence on puzzles was greater for participants in the intervention condition, with a large *d* effect size. Although the gain score differences for shape sorters and cause and effect tasks were not significant, the *d* effect sizes were between medium and small (Cohen, 1988). There was no difference for mastery pleasure and the effect size was essentially zero, so it was very small (Table 5).

Table 5. Mean, Standard Deviations, and Gain Score Differences for the Experimental Group (n = 25) and the Control Group (n = 19) During Pre Experimental and Post Experimental Conditions

Variable	Groups	Pretest	Post test	Gain Score	<i>t</i>	<i>p</i>	<i>d</i>
		Mean (SD)	Mean (SD)	Mean (SD)			
Puzzles	Experimental	11.72(1.81)	13.56(1.83)	1.84 (1.46)	3.38	.002	1.05
	Control	11.21(1.54)	11.68(1.63)	0.47(1.12)			
Shape sorters	Experimental	12.08(1.84)	12.64(1.47)	0.56(2.21)	1.00	.323	0.31
	Control	11.11(1.37)	11.10(1.14)	0.01(1.15)			
Cause and effect toys	Experimental	11.68(1.77)	13.36(1.72)	1.68(2.05)	1.11	.273	0.34
	Control	11.53(1.38)	12.57(1.53)	1.04(1.54)			
Mastery Pleasure	Experimental	2.48(0.87)	2.60(0.86)	0.12(1.01)	.044	.965	0.01
	Control	2.63(0.83)	2.84(0.95)	0.21(1.19)			

Discussion

The present research attempted to determine the effectiveness of “I Can” mastery motivation classroom program. The major features of the program were a structured classroom environment, pre-planned age-appropriate lessons and activities, support of caring adults, appropriate feedback and use of reward when children displayed task persistent behaviors, as well as opportunities to work independently some times and cooperatively at other times. “I Can” mastery motivation classroom program has five modules which address different dimensions of mastery motivation and persistence including object-oriented persistence, gross motor persistence, social persistence with adults, social persistence with children, and mastery pleasure. However, due to lack of reliable behavioral measures to assess gross motor persistence, social persistence with adults and social persistence with children, only persistence at object-oriented tasks and mastery pleasure were measured during the pre and post experimental condition.

During the present research, only individualized mastery tasks were used to measure children mastery motivation and mastery pleasure; however, as suggested by Morgan, Józsa and Liao (2017), if possible, researchers interested in assessing mastery motivation among children should use both behavioral measures and the Dimensions of Mastery Questionnaire (Józsa & Morgan, 2015; Morgan et al., 2015; Morgan, Liao, Nyitrai et al., 2017) for better research outcomes.

It was hypothesized that the “I Can” mastery motivation classroom program would help children achieve the goals set for the target population. Based on the results of the current study, children in the experimental group who attended the “I Can” mastery motivation classroom program showed better gain score task persistence on puzzles compared with the control group. No significant gain score difference was found between the two groups on shape sorters, cause and effect toys, or on mastery pleasure. However, the *d* effect sizes for shape sorters and cause and effect tasks were medium to

small, so with larger samples it is possible that there also would be significant improvement on these tasks as well as on puzzles.

Puzzles pose more challenging problems than the cause and effect toys, which may be why intervention was more effective with them. The battery operated cause and effect toys were less challenging and were popular with most children from both the experimental and control groups who showed similar amounts of interest, task persistence and mastery pleasure while working on them. During program implementation, it was observed that children were able to grasp the concept of persistence and motivation. They were able to understand the concept that if they keep on trying to solve some problem, such as a puzzle, they might end up solving it correctly. Some of the children who early in the program had difficulty controlling the urge to quit while working on a challenging task seem to have somewhat overcome their tendency to quit towards the end of the program. Therefore, it seems that the “I Can” mastery motivation classroom program was effective in enhancing task persistence among young children at least on some tasks. As for mastery pleasure, it was found that the “I Can” mastery motivation classroom program was not effective in improving it. Children in both the experimental and control group displayed similar mastery pleasure related behaviors in post experimental condition. Observations also revealed that more excitement, and positive affect was displayed by children during both pre and post experimental conditions while working on cause and effect toys compared to puzzles and shape sorters.

The findings of the present research also suggest that systematic efforts to enhance children’s task persistence can be successful. Young children can be encouraged to be more persistent if we provide an appropriate environment and activities. These findings are supported by various earlier researchers such as Malakoff et al. (1998), who studied the influence of inner city environment and an early Head Start program on persistence on challenging tasks and the intrinsic motivation of 78 preschoolers. They found the program to be effective with an effect size of 0.38. Note that this effect size is similar to that found for the shape sorters and cause and effect toys in the “I Can” mastery motivation classroom program intervention, but the early Head Start program results were significant because of the larger sample. The Head Start children showed greater curiosity, were more likely to select challenging tasks, worked more independently and persistently on tasks, and were more interested in the type of symbolic rewards typically used in school than children who were waitlisted and had not attended the head start program.

In another study, Bryant et al. (2002), while exploring the effects of Smart Start child care on kindergarten entry skills including motivation to learn, found that the program was effective with an effect size of 0.34. Although this motivation study found promising results for a classroom intervention for kindergarten children, few researchers have focused on the influence of this type of intervention program on the psychological and behavioral responses of the young children below the age of 3 years.

Wang et al. (2013) explored mastery motivation in toddlers with and without motor delays and found out that when given moderately challenging tasks, toddlers with motor delay did not show lower persistence and mastery pleasure when compared to toddlers without motor delays. Their finding about mastery motivation and persistence can help clinicians and therapists to design suitable intervention plans for young children with motor delays.

The first five years of life are considered most critical to a child's lifelong development by many prominent researchers. Shonkoff and Phillips (2000) suggested that during the first few years of life, children rapidly develop the social, emotional, behavioral and cognitive capacities that provide the foundation for their future development. It is during this crucial period that young children acquire the skills that are necessary for healthy growth and development, setting the stage for later success in school and life. Kagan, Moore, and Bredekamp (1995), while suggesting five dimensions of school readiness, also emphasized on one of the dimensions; which they described as approaches towards learning. It referred to behaviors that facilitate learning process such as creativity, cooperativeness, independence, and persistence. Learning process start early before any formal education; therefore, efforts to enhance and facilitate learning-related behaviors such as motivation and task persistence can have long lasting positive effects on child development and their school readiness. While observing the process of human development, we can see that children are different in their approaches towards the learning process and overall learning-related behaviors, even in the early stages of development. These differences in overall learning related behaviors can have an influence on children's school readiness as well as their overall success in school. According to National Center for Education Statistics (2001), motivated children who start school with positive attitude such as eagerness and willingness to learn, tend to perform better in academics, and also seem to have better reading and mathematics skills compared to their less motivated peers.

The work of earlier researchers supports the findings of the present research that the early childhood programs designed to achieve positive developmental goals can be effective provided that the programs have achievable objectives. The "I Can" mastery motivation classroom program was designed with the objectives of providing children with the opportunity to maintain focus and persistence on the tasks, and having teachers' provide quick feedback about children's involvement in the activities.

The constructivist framework can be used to understand the demonstrated increase in task persistence levels on puzzles for children who attended the "I Can" mastery motivation classroom program. This framework holds that children should be actively involved in the learning process during early years. Applying this narrative, we can say that young children must engage actively in the learning process to ensure that effective learning takes place. Persistence is considered an important aspect of motivation, therefore, programs targeted to enhance motivation can improve young children's persistence.

In addition to the structured lesson plans used to implement the “I Can” mastery motivation classroom program, another important aspect of the program was the role of teachers. As suggested in the “I Can” mastery motivation classroom program resource manual, teachers and early childhood educators can be trained in five-day workshops to understand the concept of mastery motivation and its implications for child development outcomes. Educators also can learn other aspects of the program, such as promoting mastery motivation among young children and implementing the modules suggested in the resource manual of the program in order to enhance mastery motivation among young children. The findings of the present research suggest that the “I Can” mastery motivation classroom program was only partially effective in enhancing task persistence and mastery motivation among young children. However, the small number of participants and limited age range of participating children are the issues that need to be dealt with when considering improvements in the efficacy of the program and future evaluations of it.

Conclusion

Based on the findings of present research, we can infer that structured classroom activities can be used to promote learning-related skills such as persistence and motivation among children. The structured environment provided during the implementation of the “I Can” mastery motivation classroom program helped in achieving the goals planned for the program. Moreover, early childhood programs and interventions of high quality have been shown to have lasting effects on the learning and motivation of the young children. Quality care and early childhood programs can help children to develop many learning-related skills that can facilitate their learning processes later on. Therefore, steps should be taken to provide children with the appropriate programs to enhance their motivation and learning related behavior at young age. The findings of the present research can help policy makers consider important aspects of early childhood education and use these findings to form guidelines for developmentally appropriate practice.

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