

Evaluation of a nursery school program in long-term Karen refugee camps in Thailand

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ABSTRACT

The Karen, an ethnic minority group in Burma, have experienced a prolonged state of exile in refugee camps in neighboring Thailand due to ethnic conflict in their home country. Nursery schools in the three largest Karen refugee camps aim to promote psychosocial development of young children by providing a child-centered, creative, learning-friendly environment.

Psychosocial development and potentially concerning behaviors of two- to five-year old children in nursery schools were examined using a psychosocial checklist. The results showed that psychosocial development of the children increased with age, with a majority of five year olds being proficient in playing cooperatively with other children. A third of the children showed sadness or emotional outbursts. Difficulty separating from parents was also observed. The results also showed that children who attended the nursery schools for more than a year were better at playing cooperatively with other children and were more aware of their own and others' feelings. On the other hand, children who were newer to the nursery schools were more polite and better at following rules and controlling their feelings when frustrated. The results indicate that nursery schools can be a promising practice to promote healthy psychosocial development of children in protracted refugee situations.

BACKGROUND

Burma (also called Myanmar), a country in Southeast Asia surrounded by Thailand and Laos on the east, the People's Republic of China on the northeast, India on the northwest, and Bangladesh on the west, has been ruled by a military regime since 1962. Aside from the majority Burman ethnicity, there are more than one hundred different ethnic minority groups within the country, making up roughly one-third of the population and occupying 55% of the land, mainly in the border areas of the country (Human Rights Documentation Unit, 2009). The Burman-led central government and ethnic minority groups have a long history of military conflicts, with the minority groups seeking increased autonomy or independence. The Karen are an ethnic minority group who reside mostly in the eastern part of the country neighboring Thailand with a claimed population of 7 million, although official census figures from 1983 show the number to be much smaller (South, 2011). Military conflict with the ruling government and Karens started in 1949, soon after Burma's independence from Britain, making it the oldest continuing civil war in the world (Human Rights Documentation Unit, 2009).

The military regime of Burma, State Peace and Development Council (SPDC), is known for its suppression of prodemocracy movements and exploitation and human rights violation against its citizens (Bureau of Democracy, Human Rights, and Labor, 2011). Its exploitation and attacks against Karens, mostly in villages nestled in jungles along the Thai-Burmese border, have been well documented (Bureau of Democracy, Human Rights, and Labor 2007, 2011; Human Rights Documentation Unit, 2009; The Karen Women's Organization, 2007). Karen villages have been burnt or forcibly relocated, and villagers' property and food supplies have been confiscated or destroyed. The villagers have been cut off from economic sustenance, raped,

tortured, shot and killed on sight, and forced into labor such as serving as porters for the Burmese military. Numerous landmines have been placed by both the Burmese military and armed Karen groups around villages and jungles nearby.

These difficulties have displaced many Karen in jungles along the Thai-Burmese border, and have pushed a significant number across the border to Thailand. Since 1984, Karens have sought refuge in formal and informal refugee camps in Thailand (Burmese Border Consortium, 2004). As of September 2006, there were seven official Karen refugee camps in Mae Hong Son, Tak, Kanchanaburi, and Ratchanaburi provinces of Thailand bordering Burma, housing a total of over 128,000 people (Thailand Burma Border Consortium, 2006). As of the end of 2005, of all people of concern in Thailand (including asylum seekers and refugees from Laos, Cambodia, China, and all ethnicities from Burma) 48% were children (under 18 years old), and 14% were under five years old (UNHCR, 2006).

Due to the long-term refugee situation for Karens, many children have been born in the camps and have grown up there. Although the situation has overcome chaos, insecurity, and extreme deprivation of newer camps, long-term encampment of refugees has its own challenges. The residents of the camp suffer from a lack of freedom of movement, crowding, lack of sufficient employment opportunities and dependency on minimal international aid, frustration, despair, or helplessness that comes from uncertainty about their future, and a lack of constructive activities. Young Karen children who were a part of more recent waves of migration to the camps have experienced violence and an arduous journey to Thailand, and may have been separated from or lost parental figures. Even if the children were born in the camps, their parents likely were exposed to traumatic experiences that triggered their migration and may be suffering from mental health consequences from these and other stresses of life in refugee camps.

Mental health issues experienced by refugee children are well-documented. However, most studies of mental health among refugee children focus on school-age children and adolescents or cover a wide age range in their original community or after resettlement (Bronstein & Montgomery, 2011; Lustig et al., 2004; Kinzie, Sack, Angell, Manson, & Rath, 1986; Goldstein, Wampler, & Wise, 1997; Mollica, Poole, Son, Murray, & Tor, 1997), and the mental health status of young children in refugee camps has hardly been described. In addition, most of the literature focuses on the mental health of children who have been exposed to significant trauma themselves, and the mental health effects of a long-term refugee situation on children who were born there or may not remember events that led to the camp are uncertain. However, even if the children did not experience traumatic events themselves, their parents likely did, and they may be traumatized and their mental health affected. Parental mental health and experience of trauma have been found to affect their children's mental and behavioral health (Riley et al., 2009; Kiernan & Huerta, 2008; Vaage, Thomsen, Rousseau, Wentzel-Larson, Ta, & Hauff, 2011; Yehuda, Halligan, & Grossman, 2001; Bombay, Matheson, & Anisman, 2009; Dekel & Goldblatt, 2008).

Data on positive psychosocial development such as prosocial behavior, adaptation, and peer relationships among refugee children have been scarce and mixed, with some studies showing higher or comparable levels of positive behavior exhibited by children with refugee or war experience (Raboteg-Saric, Zuzul, & Kerestes, 1994; Macksoud & Aber, 1996; Fazel & Stein, 2009 (prosocial behavior)), and some showing lower levels (Habir, Marriage, Littlefield, & Pratt, 1994; Fazel & Stein, 2009 (peer problems); Kerestes, 2006). These data are mostly on older children, with the exception of Raboteg-Saric et al. (1994) focusing on preschoolers during the war in Croatia. Studies of non-refugee children who have experienced similar adversities,

such as poverty, maternal mental health issues, and exposure to violence have shown potential delay in development, including psychosocial development (Alaimo, 2001; Kiernan & Huerta, 2008; Riley et al., 2009; Osofsky, 1995; Flisher et al., 1997; Lamphear, 1985).

Thus, despite the multitude of factors that are likely to negatively affect refugee children psychologically and socially, there has been a scarcity of data in this area for young children, especially those in refugee camps. In addition, there has been a lack of data on primary prevention programs that aim to support positive psychosocial development of young refugee children. The need for such programs is especially pronounced given that protracted refugee situations have become the norm in the world (Milner & Loescher, 2011), which means that children may spend a large part of their childhood in refugee camps.

One program designed to promote psychosocial development of young children in Karen refugee camps is the nursery schools run in the three largest Karen camps— Mae La, Umpien Mai, and Nu Po in Tak province—by a community-based women’s organization and supported by an international non-governmental organization (NGO). The schools provide protection, nutritious meals, and a supportive, child-centered curriculum to promote child development. This paper presents data on the psychosocial development of young Karen children in nursery schools in these three refugee camps in Thailand collected as a part of the evaluation of the nursery school program to 1) describe psychosocial development of children and potential behaviors of concern, and 2) whether or not nursery schools with a child-centered curriculum were able to promote psychosocial development of young children.

DESCRIPTION OF THE PROGRAM

The nursery schools started in Karen refugee camps along the Thai-Burmese border informally. In 1998, NGO support in Mae La camp started and in 2000 in Umpiem Mai and Nu Po camps. At the time of this evaluation, a Karen women's organization operated the nursery schools day to day whereas the NGO provided technical and material support and supervision. As of September of 2006, the three camps these nursery schools served had a population of 81,805 (48,956 in Mae La, 19,561 in Umpiem Mai, and 13,288 in Nu Po) (Thailand Burma Border Consortium, 2006). In 2006, 35 nursery schools in the three camps employed 200 teachers who were themselves refugees and residents of the camps and served 3,901 pre-kindergarten-aged children (2,355 in Mae La, 936 in Umpiem Mai, and 610 in Nu Po). The minimum qualification for the teachers was having completed grade 6 and being at least 18 years old.

The nursery school program addressed child development holistically, including physical, cognitive, and psychosocial development. The nursery schools provided the children a safe place to be during the day, nutritious meals, sanitary environment and good hygiene practices, as well as stimulation, interaction, and affection within a child-centered curriculum in which teachers were considered "facilitators" of child development.

Although the program addressed many facets of child development, the women's organization and the NGO considered that the primary aim of the nursery program was to meet children's psychosocial needs. The teachers provided emotional and social support to children, promoted socialization and cooperation, and used positive discipline while the children engaged in free play and participatory learning activities.

In order to ensure the quality and sustainability of the program, the NGO provided the nursery school teachers and local partners with a curriculum manual and trainings. Topics covered included the principles of early childhood development, guidelines for caregivers, concepts of child-centered nursery school management, child hygiene and nutrition, teaching methodology, and self-evaluation. Creative activities enjoyed by children, such as songs, stories, games, picture drawing and role playing intended to transmit local values and to help children construct their own thinking, were also promoted through activity booklets created with the participation of children and teachers. Parents of the children also received early childhood development booklets describing child development, parenting, and child learning activities and were encouraged to get involved in nursery schools through parent-child meetings and volunteering at nursery schools.

METHOD

Development of Psychosocial Checklist

A brief checklist to assess psychosocial development of children which could be completed quickly by nursery school teachers was needed. Based on a review of psychosocial development literature and existing instruments to assess psychosocial development of young children, a list of 32 items describing developmentally appropriate as well as worrisome behaviors and characteristics was compiled. Although the focus of the evaluation was on the psychosocial development of children, items describing possible concerns were included because of the literature suggesting a high prevalence of mental health and behavioral issues observed among refugee children. Once the first list of items was available, the nursery school teachers

gave feedback based on the oral presentation of the items. The items intending to measure positive psychosocial development were rated regarding their importance to children's success in the classroom and in life. The items intended to measure potential problem behaviors were rated with regard to how much teachers would be concerned if the children showed these behaviors.

Based on the result of these ratings, a draft checklist with 29 items was created in English. The checklist asked the teachers to rate the children based on their behavior in the past month. Out of various suggested scale options such as frequency scales, "True" (Yes), "False" (No) choices were preferred for its simplicity. However, child development is gradual, and many children display skills occasionally or only with prompts or assistance by adults before they have mastered them. Thus, for the items intended to measure psychosocial development, a middle choice, "Sometimes true, Somewhat true, or Requires assistance or encouragement" was added to capture the stage of development when the skills were unstable. In addition, to the item, "Follows rules when playing games with others", a response choice of "The child does not participate in many games with rules" was added, which was treated as missing in the analysis.

With more worrisome behaviors, children often display some difficult or negative emotions or behaviors, but not often or intensely enough to be of concern. For example, it is normal for a child to be sad sometimes, but if it is more often than not and can be described as her stable characteristic, it becomes a concern. Thus, "Sometimes or somewhat true" as a middle rating was added for the items measuring behaviors of possible concern.

Once the checklist was developed, it was translated into Sgaw Karen, one of the Karen dialects spoken by the majority of Karen. Then the checklist was back-translated into English. The original checklist and the back-translated version were compared, issues were discussed, and revisions were made.

The resulting checklist was pilot tested in each camp (a total of 50 checklists were completed). The data were analyzed and along with feedback from the Karen-speaking NGO staff and teachers, some items were dropped or modified and new items were added to create the final 26-item checklist. The final checklist included 17 items asking about behaviors reflecting positive psychosocial development and 9 items of possible concern. The final version also included a section that asked about the child's age, birthday, the date the child started attending the nursery school, and the date the checklist was completed.

Once the final version of the checklist was developed, the checklists were completed by nursery school teachers at a teacher training. Each teacher completed checklists for two children selected randomly from their classroom. Random selection was ensured by each teacher choosing two random numbers between one and the total number of children in the classroom, and then looking at a numbered list of children in her classroom. The checklists were completed for the children corresponding to the numbers the teacher chose. As the teachers completed the checklist, Karen-speaking NGO staff also read aloud the items and response choices verbatim in front of the group. After the administration was completed, feedback on the checklist was again sought from the nursery school teachers. Based on the feedback, two items intended to measure psychosocial development were found to be of questionable validity in Karen language, thus were excluded from the analysis.

Once checklists were completed by the teachers, data were entered into a database. Data analysis for this paper was conducted using SPSS version 19.0.0.

Data analysis

First, demographics of the children were examined, including gender distribution and age (distribution and mean). Children's age at the time of assessment was calculated by taking a difference of the date of checklist completion and the child's birth date. Age when children started attending nursery school was also examined, along with the length of time the children attended the nursery school. Age when children started attending nursery school was calculated by taking the difference between the birth date and the date of entry into the nursery school. Length of time in nursery school was calculated by taking the difference between the date of psychosocial checklist completion and the date the children entered nursery school. No adjustment was made for two months of vacation per year when the nursery schools were closed. These analyses were first done including all children who had the psychosocial checklist completed to show the full range of the children in the nursery schools. In addition, results are also presented restricting the sample to only two- to five-year olds, since the number of children younger than two or older than five years old was small and were excluded from subsequent analyses.

Second, psychosocial development and prevalence of behaviors of possible concern were examined by age. Higher levels of psychosocial development were expected by age, thus higher scores on these items with increased age indicated validity of the checklist. No such hypothesis was in place regarding behaviors of possible concern. The analysis included two steps. One was to examine the overall psychosocial development and possible concern scores, and the second was to show the results of individual items.

For the overall analysis, the checklist items were factor analyzed using principal component analysis and varimax rotation to develop composite scales. For all items, "False"

was coded as 1, “Sometimes true, Somewhat true, or Requires assistance or encouragement” or “Sometimes or somewhat true” was coded as 2, and “True” was coded as 3. Factor analysis yielded two factors named Psychosocial Development and Possible Concern. One item, “Easily gets angry, gets upset, or cries” did not load highly on either of the factors, so was excluded from analyses using these composite scales but was included in the analysis of individual items. The alpha coefficient for the Psychosocial Development scale was .747 and .730 for the Possible Concern scale. Scale scores were created by averaging scores from the items falling in each scale. The plan was to exclude children who had missing values on more than half of the items for each scale. However, the maximum number of missing values was four for Psychosocial Development and three for Possible Concern (with one child missing all items under this scale), so none of the children were excluded for missing values. Two scale scores were analyzed using analysis of variance (ANOVA) using age (four levels ranging from two to five year olds) and gender (two levels) as factors including the interaction between the two.

Results for the individual items were also examined in order to obtain more detailed understanding of children’s development and behaviors of concern. For each item, percentage exhibiting the behavior was examined by age (from two to five years). For psychosocial development items, in order to capture those who are consistently showing each behavior, rather than those who are in the process of mastering it, only the “True” rating was included. The same was true for behaviors under the Possible Concern scale in order to exclude occasional behavior or feelings that are within the typical range. Statistical significance of the difference by age was examined by Chi-square test.

A third analysis examined the impact of the nursery schools on the psychosocial development of children. The hypothesis was that nursery schools would have a positive impact

in promoting the psychosocial development of children. No such hypothesis was in place for behaviors of concern, since the teachers were not trained to handle or reduce behavioral or mental health issues among children. Since all checklists were completed on children attending the nursery schools, it was impossible to directly examine the impact of attending nursery schools on psychosocial development. However, an attempt was made to indirectly answer this question by comparing the scores of the children who had attended nursery schools for different lengths of time. Analysis of covariance (ANCOVA) with the age of the children as covariate and length of time in nursery school (two levels, up to one year versus more than one year in nursery school) as a factor was conducted. The cut-off of one year for length of time in nursery schools was selected so there would be sufficient sample size in each group for all age groups.

A decision was made to conduct individual item-level analysis if the length of time in nursery school was statistically significant in ANCOVA using composite scales. For each age, the percentage endorsing the item was compared by length of time in nursery schools. Chi-square test and Fischer's exact test were used to examine statistical significance of differences.

RESULTS

Description of the children

Table 1 presents the descriptive information on the children for whom the psychosocial checklists were completed by their teachers. The number of children assessed in each camp roughly reflected the comparative number of children served in nursery schools in each camp. Slightly more than half of the children were boys. Most of the children were two to five years old, but there were some children who were under one year old and as old as seven (Table 3).

The largest number of children entered nursery schools when they were two (41%) or three (36%) years old. Eight percent of the children had entered nursery schools when they were younger than two years old, and five percent did not enter nursery schools until they were five years old.

Table 2 presents the length of time the children attended nursery schools by the age of the children. The length of time generally increased with age for children up to five years old, but six and seven year olds tended to have attended nursery schools for a shorter time (most commonly 12-24 months).

Psychosocial development and behaviors of possible concern by age of children

Table 3 shows the average scale scores by age and gender of children. Statistical testing using ANOVA showed that the Psychosocial Development scores demonstrated an expected increase by age ($F(3,322)=6.091, p=.000$). Scores on the Possible Concern scale also showed significant effects of age ($F(3,321)=2.877, p=.036$), with the mean scores decreasing with age. Effects of gender as well as interaction between age and gender were not statistically significant for either of the scales.

Table 4 presents the results for each item on the checklist by the age of the children. The results are presented in terms of the percentage of children who were rated as “True” for each item. As expected, of the items falling under Psychosocial Development, the percentage of children rated as “True” increased with age (a percentage higher for five year olds than for two year olds) for 13 out of the 15 items. The difference across age groups was statistically significant for five items. The two items that did not show better results for five year olds compared to two year olds were “Appropriately asks for help if she/he needs it” and “Says good words, not arguing, yelling or shouting.”

Items with the largest percentage of five year olds rated as “True” include “Participates in games or group activities with other children” (69%), “Follows rules when playing games with others” (56%), “Participates in activities with other children that require cooperating and working together” (54%), “When she/he cannot get something she/he wants or is not allow to do what she/he wants to do, she/he is able to control his/her anger or hurt feelings” (51%), and “Appropriately asks for help if she/he needs it” (50%). The smallest percentage of five-year old children were rated “True” on “Apologizes when she/he does something wrong” (22%), “Follows school and classroom rules” (30%), “Greetts adults when he/she sees someone she/he knows” (33%), and “Does not ask questions or statements that might embarrass or hurt others” (35%).

Of the items that measure behaviors of possible concern, across all ages, more than 30% of the children were rated by their teachers as seeming sad and as easily getting angry, upset, or crying. The prevalence for these items for five-year olds was more than 25%. Across all ages, 26% of the children had difficulty separating from their parents, with more than 30% among three-year olds, and more than 20% for five-year olds. When change by age was examined, the percentage of children frequently showing signs that they were ill was 40% for two-year olds but much lower for older age groups (12% for five-year olds), a statistically significant decrease. Another item that showed a statistically significant difference by age was having fears, which seemed to peak at 3 years of age.

Psychosocial development by length of time in nursery schools

Table 5 presents the average scores for the two scales by length of time in nursery schools (up to one year compared to longer than one year) controlling for the age of children at the time of the assessment. Children who attended nursery schools for a longer period of time

had significantly higher scores on the Psychosocial Development scale ($F(1,328)=4.070$ $p=.044$). The scores on the Possible Concern scale did not differ by the length of time in the nursery school.

Since ANCOVA results were statistically significant for the Psychosocial Development scale, individual checklist items that belonged to the scale were also examined for the effects of length of time the children were in nursery schools. For each age (two to five year olds), the percentage of children who were a given “True” rating was compared between those who attended the nursery schools up to one year and more than one year. The items and age groups that showed more than a 10 percentage point difference by the length of time in nursery schools are presented in Table 6.

The children who had attended nursery school for a longer period of time were rated as more likely to follow rules when playing games with others (two and five year olds), participate in activities with other children that required cooperation (four year olds), be able to talk about feelings they were experiencing (five year olds), show empathy and caring for others (two and five year olds), not say things that may embarrass or hurt others (three and five year olds), and put away materials or toys after using them (three, four, and five year olds). The difference between groups was statistically significant at $p<.05$ level for not embarrassing others for three year olds, and for three to five year olds for putting away materials after using them.

On the other hand, a larger percentage of the children who were newer in the nursery schools were found to be able to control their feelings when they could not get their way (two and five year olds), follow teachers' directions (two and four year olds), greet adults that they knew (three year olds), follow school and classroom rules (four year olds), and apologize when

they did something wrong (two year olds). The difference was statistically significant for following teachers' directions for four year olds.

DISCUSSION

Psychosocial development of children

The results showed that scores on the Psychosocial Development scale increased with age, which is expected and demonstrates the validity of the checklist. All but two of the individual items showed improvement by age as well. One item that did not follow the expected age-related pattern, "Appropriately asks for help if she/he needs it," showed an increase from three to five year olds, but the rating for two year olds was higher than for five year olds. This pattern may be due to a shifting standard for what is "appropriate" by the age of the children, and the item would benefit from clearly stating behaviors that are considered "appropriate."

The result for the second item, "Says good words, not arguing, yelling or shouting," showed two year olds with the highest rating, with a decreasing trend up to four year olds. This is surprising, since, as expressed in the phrase "terrible twos", in the Western world, two year olds are not known for politeness, but for outbursts and tantrums, considered a reflection of a developing need for autonomy. However, the appearance of "terrible twos" is not culturally universal (Mosier & Rogoff, 2003), and communication with Karen NGO staff suggested that this was not a predominant characteristic for two year olds in Karen culture.

In reviewing the results on individual items, it should be noted that in presenting the percentage of children rated positively, the most stringent criteria of including only those rated as "True" was taken. Only those who exhibited these behaviors consistently without assistance or

encouragement were included. Considering this, by five years, children were developing nicely in the area of playing cooperatively with other children. In contrast, items that covered areas of courtesy and following rules (apologizing, following school and classroom rules, greeting adults, not saying things to embarrassing or hurt others) were rated the lowest, with only about a fifth to a third of five year olds mastering these behaviors. Most of these were also areas in which children who were in nursery schools for a longer period of time showed worse results than children who were newer to the schools, as discussed in the section on impact of nursery schools on psychosocial development.

Behaviors of concern

There was no a-priori hypothesis for the relationship of behaviors of concern to age. In the young age range examined in this evaluation, the overall results showed that the scores on the Possible Concern scale showed a decrease by age. This may be because, although consistent exhibition of these behaviors are of concern, young children are still developing skills to manage these behaviors (e.g., separation anxiety, being able to control feelings, asking for help).

Children with frequent illnesses decreased with age, which is consistent with developing immunity as children grow older. The item “Easily gets angry, gets upset, or cries,” meant to measure a possible emotional problem, did not statistically fit the Possible Concern scale. It may be that the teachers did not interpret this as a negative behavior, or saw this as a concern but its appearance did not correlate with other behaviors of concern.

The scores on the Possible Concern items showed that more than 30 percent of the children seemed sad or got angry/upset or cried easily. Again, these are the children for whom teachers rated these characteristics as “True”, not sometimes or somewhat true. Thus, sadness or

emotional outbursts can be considered pervasive characteristics of these children. Anger, upset, and crying may also be a reflection of irritability, often a symptom of depression in young children (American Psychiatric Association, 2000; Office of Surgeon General, 1999) or a sign of general stress. Sadness, depression, and emotional problems have been found at higher prevalence among refugee children, although evidence has mostly been with older children (Bronstein & Montgomery 2011; Mollica et al., 1997). These results indicate that depressive symptoms are common among younger children in long-term refugee situations as well.

Difficulty separating from parents was common, with 26% of all children having the difficulty, peaking at 33% for three year olds and 21% even among five year olds. Although separation anxiety is common among young children, it typically does not continue for a prolonged period in familiar settings such as day care or preschool where children attend every day. However, cultural differences in the display of separation anxiety have been found, with young children from cultures where closer proximity and physical contact to parents are the norm exhibiting more anxiety and distress than children from western cultures (Miyake, Chen, & Campos, 1985). This may be the case in Karen culture as well. Examination of turnover and work shifts of teachers at nursery schools may also shed light on whether children are having the opportunity to develop secondary attachment to their teachers (Bowlby, 2007).

On the other hand, trauma experience in childhood has been found to heighten anxiety reactions in later years (Heim & Nemeroff, 2001); thus, heightened separation anxiety may be a reflection of an effect of trauma in their lives. Parents with unresolved trauma or loss may also behave in ways that make it difficult for their children to develop secure attachment to them and to feel safe while being away from them (Cassidy & Mohr, 2001; Schuengel, Bakermans-

Kranenburg, & Van Ijzendoorn, 1999). Thus, even if the children have not been exposed to traumatic experiences themselves, they can be indirectly affected by their parents' experiences.

Impact of nursery schools on psychosocial development

The adjusted mean score on the Psychosocial Development scale was higher for children who attended the nursery schools for a longer period of time compared to children who had attended nursery schools for one year or less. This result is consistent with the idea that attending nursery schools facilitated psychosocial development of the children. More positive findings for children who attended nursery schools longer were found for following rules when playing games, participating in activities that require cooperation, being able to talk about feelings, showing empathy and caring for others, not saying things that may embarrass or hurt others, and putting away materials or toys. These seem to indicate increased cooperativeness and awareness of their own and others' feelings for the children who had attended nursery schools for a longer period of time. This is consistent with the program's emphasis on promotion of socialization and cooperation among children.

On the other hand, some items were more frequently endorsed for children who were relatively new to the nursery schools. Children who had attended nursery schools for one year or less were found to be more likely to greet adults that they knew, apologize when they did something wrong, follow school and classroom rules, follow teachers' directions, and be able to control their feelings when frustrated. These items have a theme of politeness, obedience, and constriction. It may be that these children are still in the process of getting comfortable in the nursery school environment and cannot express their feelings freely. In addition, they may be accustomed to teachers as authoritarian figures from their experience in Burma or with adults in

the camp community in general, compared to more authoritative environment of child-centered nursery schools. Thus, they are more likely to behave politely, not act out their feelings, and follow rules and teachers' directions.

Many of these items were also the ones over which the smallest number of five year olds had shown mastery. The skills covered by these items were considered important for the children's success in life and classroom by teachers, since the checklist items were developed based on their input on this dimension. It may be that although the teachers believed that these were important skills for success, the western-influenced curriculum that they were following did not promote them, at least not as much as it did other skills, or as much as more traditional cultural values emphasized them.

A longer stay in nursery schools was not related to a reduction in problem behaviors. Although secure, warm, and supportive environments can have a positive effect on children with emotional and behavioral issues, the program was not intended to treat mental health or behavioral problems. However, this type of program in a refugee camp setting would benefit from training to increase teachers' awareness of and skills to work with children who have behavioral/emotional issues. In addition, they should have consultative access and relationships with mental health specialists in the camps so they can refer or seek support for children who exhibit serious behavioral issues or signs of mental health problems.

In interpreting these results based on the length of attendance at nursery schools, some limitations and confounding factors should be noted. Differences observed among children may be due to factors other than attendance at nursery schools. We must ask the question: why did some children not start attending nursery schools until recently, whereas other children have been attending for a long time? It may be their parents were not aware of the existence of

nursery schools or their benefits, which may indicate that the parents may be less connected to community resources in general or less educated about children's needs. It may be that the children's parents were not working so they did not feel the need to bring their children to others' care, which may mean that the family had enough financial support from extended family or they were more economically deprived than families with working parents. It may be that the children who just started attending were not only new to the nursery school, but to the camp as well. In that case, trauma that led to their flight from their home villages was more recent.

Unfortunately, due to the program's need to collect information from teachers with the least amount of burden for them and without access to children's parents, additional information such as arrival date to the camp and other information on family situations could not be collected. However, differential effects of attendance on psychosocial development (an area that teachers were trained to promote) and emotional/ behavioral issues (an area that teachers were not trained to impact), supports the program theory and likely indicates that nursery schools did have an intended positive effect on children. In addition, characteristics reflected in the items that were rated higher for children who attended nursery schools for a longer period of time versus those rated higher for the children who were relatively new were consistent with the impact of the nursery school curriculum versus the effects of larger culture in Burma and the camps.

Limitations of the study

As discussed above, restriction of data collection to a short and simple questionnaire that could be completed by teachers limited the scope of information that could be collected for this study. A lack of background information on children beyond gender, age, age when starting the nursery school, and length of nursery school attendance is a further limitation. Items asking

about commonly observed symptoms among children who had experienced trauma, such as night terrors, also could not be included in the checklist since teachers did not have reliable information on such incidence without asking parents. Information on trauma history, date of arrival at camp, and family environment would have greatly deepened the interpretation of the results, but was beyond the capacity of the program to collect. Sample size also restricted the number of comparisons and variables that could be included in statistical testing. Increasing the number of checklists collected to more than two per teacher would have increased their burden and not been feasible.

In addition, other studies examining reports of children's behavior have shown different patterns of results based on type of informants (e.g., Kerestes, 2006). Thus, the behaviors reported by the teachers for this study should be understood as children's behavior as seen by nursery school teachers in nursery schools, which may be different from their behavior at home as seen by parents, or in other settings. However, for the purpose of program evaluation of the nursery schools, assessing the behavior of the children at nursery schools as assessed by the teachers was sufficient.

The development of a psychosocial checklist through iterations of input from Karen NGO staff and nursery school teachers is a strength of this study in terms of ensuring cultural appropriateness. The instrument was developed for the evaluation purpose to obtain its meaning from comparison of different groups and from change over time. At the same time, use of a unique instrument without a norm or comparison data limits the interpretation of the results in terms of comparative development level or prevalence of mental health symptoms of these refugee children. In the same vein, it should be noted that the endorsement of the highest rating

(“True”) on items on the Possible Concern scale does not indicate that the behaviors are of clinical significance.

Conclusion

Refugee children face many risks for compromised psychosocial development, including their trauma history as well as that of their parents, mental health issues, and the stress of lack of control over their lives. With two-thirds of the refugees in the world living in protracted exile, more information on primary prevention programs to support healthy psychosocial development of young refugee children in refugee camps is needed.

Current evaluation of the child-centered nursery school program in Karen refugee camps shows promise in its approach. Results of the assessment using a psychosocial checklist developed for the Karen population demonstrated that two- to five-year-old children in nursery schools showed higher levels of psychosocial development with increasing age. Despite potential unmeasured confounders, nursery schools are likely to be making a positive difference in psychosocial development of young children in the refugee camps, especially in the areas of cooperation with others and awareness of self and others’ feelings. There was no evidence of attendance in nursery schools ameliorating behaviors of potential concern. Since nursery schools can be an ideal setting for early identification, referral, and intervention for potential concerns, additional teacher training on mental health and establishment of connections with mental health specialists in the camps are recommended.

ACKNOWLEDGEMENT

The nursery school program and program evaluation were supported by the Bernard van Leer Foundation. I would like to thank the staff of Taipei Overseas Peace Service for supporting the development of the psychosocial checklist and collecting input and final data from the teachers. I would especially like to thank Muetae for providing information and answering my questions to support writing of this paper. I also express gratitude to all the nursery school teachers for their great work with children and for completing the checklist for the evaluation.

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Table 1: Basic descriptive information on the children included in the evaluation

	Overall		2-5 year olds	
	N	%/Mean (SD)	N	%/Mean (SD)
Camp	350	100.0%	331	100.0%
Mae La	226	64.6%	215	65.2%
Umpiem Mai	84	24.0%	81	24.5%
No Po	40	11.4%	35	10.6%
Gender	350	100.0%	330	100.0%
Girls	163	46.7%	153	46.4%
Boys	186	53.3%	177	53.6%
Age ^a	342	4.33 (0.96)	331	4.29 (0.88)
0 year old	1	0.3%	na	na
1 year old	1	0.3%	na	na
2 year old	30	8.8%	30	9.1%
3 year old	95	27.8%	95	28.7%
4 year old	122	35.7%	122	36.9%
5 year old	84	24.6%	84	25.4%
6 year old	8	2.3%	na	na
7 year old	1	0.3%	na	na
Age starting nursery school ^a	342	3.13 (0.91)	331	3.10 (0.86)
0 year old	4	1.2%	3	0.9%
1 year old	20	5.8%	19	5.7%
2 year old	139	40.6%	139	42.0%
3 year old	122	35.7%	120	36.3%
4 year old	40	11.7%	38	11.5%
5 year old	17	5.0%	12	3.6%
Number of years in nursery school ^a	342	1.20 (0.89)	331	1.19 (0.89)

Notes.

^a 8 checklists had missing or invalid dates

Table 2: Number of years in nursery school by age of children at the time of assessment

Age	Time in nursery school					Total
	Up to 1 year	More than 1 year to 2 years	More than 2 years to 3 years	More than 3 years to 4 years	More than 4 years to 5 years	
0 year old	1	0	0	0	0	1
1 year old	1	0	0	0	0	1
2 years old	23	5	2	0	0	30
3 years old	64	29	2	0	0	95
4 years old	34	60	23	5	0	122
5 years old	19	21	34	8	2	84
6 year old	0	5	3	0	0	8
7 year old	0	1	0	0	0	1
Total	142	121	64	13	2	342

Notes. The nursery school has a holiday of about two months each year. These two months were included in the time of attendance.

Table 3: Scale scores by age and gender of children

	Overall			n	Boys		N	Girls	
	N	Mean	(SD)		Mean	(SD)		Mean	(SD)
Psychosocial Development^{a,b}									
Overall	330	2.21	(0.31)	177	2.21	(0.33)	153	2.21	(0.30)
2 years old	30	2.01	(0.30)	19	1.98	(0.30)	11	2.06	(0.31)
3 years old	94	2.16	(0.29)	44	2.13	(0.33)	50	2.19	(0.26)
4 years old	122	2.23	(0.31)	64	2.22	(0.30)	58	2.24	(0.32)
5 years old	84	2.31	(0.31)	50	2.35	(0.31)	34	2.25	(0.32)
Possible Concern^{c,d}									
Overall	329	1.78	(0.43)	177	1.78	(0.43)	152	1.78	(0.43)
2 years old	30	1.88	(0.36)	19	1.84	(0.37)	11	1.95	(0.34)
3 years old	93	1.86	(0.45)	44	1.84	(0.41)	49	1.88	(0.48)
4 years old	122	1.74	(0.42)	64	1.74	(0.44)	58	1.75	(0.39)
5 years old	84	1.72	(0.43)	50	1.77	(0.45)	34	1.64	(0.39)

Notes.

- ^a Response choices were 1=False, 2=Sometimes true, Somewhat true, or Requires assistance or encouragement, 3=True. Higher scores indicate higher level of development.
- ^b Effects of age $F(3,322)=6.091$, $p=.000$, sex $F(1,322)=.190$ (n.s.), age x sex $F(3,322)=1.235$ (n.s.)
- ^c Response choices were 1= False, 2=Sometimes or somewhat true, and 3=True. Higher scores indicate higher levels of behavior/characteristics that are of possible concern.
- ^d Effects of age $F(3,321)=2.877$, $p=.036$, sex $F(1,321)=.022$ (n.s.), age x sex $F(3,321)=.889$ (n.s.)

Table 4: Percentage of children whose teachers gave them the highest rating (“True”) by age of the children at the time of the assessment

Item	2 year old		3 year old		4 year old		5 year old		Overall	
	n	% rated "True"	n	% rated "True"	n	% rated "True"	n	% rated "True"	N	% rated "True"
Psychosocial Development^a										
Participates in games or group activities with other children.***	30	40.0%	95	43.2%	122	62.3%	83	68.7%	330	56.4%
Follows rules when playing games with others. ^b **	29	31.0%	88	29.5%	115	38.3%	81	55.6%	313	39.6%
Participates in activities with other children that require cooperating and working together (e.g., pretend play with other children, building something with blocks together).	30	33.3%	95	41.1%	121	49.6%	84	53.6%	330	46.7%
When she/he cannot get something she/he wants or is not allowed to do what s/he wants to do, she/he is able to control her/his anger or hurt feelings.*	27	22.2%	94	38.3%	120	32.5%	82	51.2%	323	38.1%
Appropriately asks for help if she/he needs it.	29	51.7%	95	44.2%	120	45.8%	84	50.0%	328	47.0%
Follows teachers' directions.	28	32.1%	93	39.8%	119	45.4%	84	47.6%	324	43.2%
Can talk about what kind of feelings that she/he is experiencing (e.g., "I'm mad" "I'm sad").*	30	26.7%	94	28.7%	122	24.6%	84	45.2%	330	31.2%
Says good words, not arguing, yelling, or shouting.	29	55.2%	95	50.5%	121	39.7%	84	42.9%	329	45.0%
Puts away materials or toys after using them.	30	16.7%	93	34.4%	121	33.1%	84	41.7%	328	34.1%
Shows empathy and caring for others.	30	26.7%	94	29.8%	119	35.3%	83	38.6%	326	33.7%
Shares with other children.	30	16.7%	95	34.7%	122	37.7%	83	36.1%	330	34.5%
Does not ask questions or statements that might embarrass or hurt others.	30	23.3%	95	29.5%	119	30.3%	84	34.5%	328	30.5%
Greets adults when she/he sees someone she/he knows.	30	10.0%	94	29.8%	120	30.8%	84	33.3%	328	29.3%
Follows school and classroom rules.**	30	16.7%	91	17.6%	116	37.9%	81	29.6%	318	28.0%
Apologizes (says "I'm sorry") when she/he does something wrong.	29	17.2%	95	9.5%	119	18.5%	83	21.7%	326	16.6%

Notes.

^a Response choices were “False”, “Sometimes true, Somewhat true, or Requires assistance or encouragement”, and “True”.

^b This item had an additional choice “The child does not participate in many games with rules” If this choice was selected, the item was counted as missing (n=11).

* Difference by age statistically significant at p<.05 ** p<.01 *** p<.001

Figure 5: Adjusted mean scores by length of time in nursery school (adjusted by age)

	Time in nursery school					
	Up to 1 year			More than 1 year		
	n	Mean	(SE)	n	Mean	(SE)
Psychosocial Development ^a *	140	2.17	(0.03)	191	2.24	(0.02)
Possible Concern ^{b,c}	139	1.75	(0.04)	191	1.80	(0.03)

Notes.

- ^a Response choices were 1=False, 2=Sometimes true, Somewhat true, or Requires assistance or encouragement, 3=True. Higher scores indicate higher level of development.
- ^b Response choices were 1= False, 2=Sometimes or somewhat true, and 3=True. Higher scores indicate higher levels of behavior/characteristics that are of possible concern
- ^c Difference between time in nursery school categories was not statistically significant at p<0.05 level. F(1,327)=0.997 (n.s.)
- * Difference between time in nursery school categories statistically was significant at p<0.05 level.

Table 6: Percentage of children whose teachers gave them the highest rating (“True”) by length of time in nursery school (Psychosocial Development items that showed a difference of 10% or more)

Item	Items that showed better outcomes for those with longer attendance					Items that showed worse outcomes for those with longer attendance				
	Age	Time in nursery school				Age	Time in nursery school			
		n	Up to 1 year % rated "True"	1 year or more % rated "True"	n		Up to 1 year % rated "True"	1 year or more % rated "True"		
Follows rules when playing games with others. ^a	2 year old	22	27.3%	7	42.9%					
	5 year old	18	44.4%	63	58.7%					
Participates in activities with other children that require cooperating and working together (e.g., pretend play with other children, building something with blocks together).	4 year old	33	42.4%	88	52.3%					
Can talk about what kind of feelings that she/he is experiencing (e.g., "I'm mad" "I'm sad").	5 year old	19	31.6%	65	49.2%					
Shows empathy and caring for others.	2 year old	23	21.7%	7	42.9%					
	5 year old	19	26.3%	64	42.2%					
Does not ask questions or statements that might embarrass or hurt others.	3 year old*	64	21.9%	31	45.2%					
	5 year old	19	26.3%	65	36.9%					
Puts away materials or toys after using them.	3 year old*	62	27.4%	31	48.4%	2 year old	23	21.7%	7	0.0%
	4 year old*	34	17.6%	87	39.1%					
	5 year old*	19	21.1%	65	47.7%					

Notes.

Response choices were “False”, “Sometimes true, Somewhat true, or Requires assistance or encouragement”, “True”.

^a This item had an additional choice “The child does not participate in many games with rules” If this choice was selected, the item was counted as missing (n=10).

* Difference between time in nursery school categories was statistically significant at p<0.05 level. Chi-squares test was used for most comparisons. Fischer’s Exact test was used when more than one cell had n of less than 5.

Table 6: Percentage of children whose teachers gave them the highest rating (“True”) by length of time in nursery school (Psychosocial Development items that showed a difference of 10% or more) (cont’d)

Item	Items that showed better outcomes for those with longer attendance					Items that showed worse outcomes for those with longer attendance				
	Age	Time in nursery school				Age	Time in nursery school			
		n	Up to 1 year % rated "True"	1 year or more % rated "True"	n		n	Up to 1 year % rated "True"	1 year or more % rated "True"	n
When she/he cannot get something she/he wants or is not allowed to do what she/he wants to do, she/he is able to control her/his anger or hurt feelings.	2 year old	20	25.0%	7	14.3%	2 year old	20	25.0%	7	14.3%
	5 year old	19	68.4%	63	46.0%	5 year old	19	68.4%	63	46.0%
Follows teachers' directions.	2 year old	21	38.1%	7	14.3%	2 year old	21	38.1%	7	14.3%
	4 year old*	34	61.8%	85	38.8%	4 year old*	34	61.8%	85	38.8%
Greets adults when she/he sees someone she/he knows.	3 year old	63	33.3%	31	22.6%	3 year old	63	33.3%	31	22.6%
Follows school and classroom rules.	4 year old	33	45.5%	83	34.9%	4 year old	33	45.5%	83	34.9%
Apologizes (says "I'm sorry") when she/he does something wrong.	2 year old	22	22.7%	7	0.0%	2 year old	22	22.7%	7	0.0%
Participates in games or group activities with other children.	3 year old	64	39.1%	31	51.6%	2 year old	23	43.5%	7	28.6%
	5 year old	19	36.8%	65	53.8%	5 year old	19	36.8%	65	53.8%
Appropriately asks for help if she/he needs it.	3 year old	64	39.1%	31	54.8%	2 year old	22	54.5%	7	42.9%
	5 year old	19	36.8%	65	53.8%	5 year old	19	36.8%	65	53.8%
Says good words, not arguing, yelling, or shouting.	2 year old	22	50.0%	7	71.4%	4 year old	34	50.0%	87	35.6%
	5 year old	19	52.6%	65	40.0%	5 year old	19	52.6%	65	40.0%

Notes.

Response choices were “False”, “Sometimes true, Somewhat true, or Requires assistance or encouragement”, “True”.

* Difference between time in nursery school categories was statistically significant at p<0.05 level. Chi-squares test was used for most comparisons. Fischer’s Exact test was used when more than one cell had n of less than 5.