

Promoting diversity in early child care education

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(Received 31 March 2008; final version received 18 June 2008)

Preschool-aged children are aware of differences in the race and abilities of the people around them. Given this awareness it is important to promote children's acceptance of diversity in the preschool period. The goals of this study were to assess the extent to which child care centres provide diversity instruction through classroom activities, materials and displays. The extent to which structural quality characteristics (e.g. staff training and education) contribute to diversity-positive classrooms was also examined. Data were collected from 103 preschool classrooms in 64 child care centres serving a population of ethnically diverse families in Toronto, Canada. On average, these classrooms were found to be diversity-positive environments. Hierarchical linear model analyses indicate that utilising a variety of teaching formats, higher salaries, greater supervision and having higher proportions of children who receive a child care subsidy predicted higher scores on a diversity instruction and materials index. This index was largely based on classroom observations. In contrast, lower levels of education and salary predicted staff reports of diversity-promoting activities. These latter counter-intuitive results are interpreted in light of potential self-presentation biases.

Keywords: diversity; diversity instruction; child care instruction; ethnic diversity; ability diversity; preschool instruction

American and Canadian populations are changing. These populations are becoming more diverse, and diversity is an issue that has gained prominence in the last decade for both researchers and policy-makers. Awareness of differences in race and ability starts early and is present in preschool-aged children (Garcia Coll & Vazquez Garcia, 1995; Katz, 1982; Ramsey & Myers, 1990). As more and more children are cared for outside of their homes while their parents work, child care centres are a natural context for helping young children develop positive attitudes about diversity. Potential benefits of the promotion of diversity in child care centres to both children belonging to minority and mainstream groups have also been suggested (Diamond, Hestenes, Carpenter, & Innes, 1997; Ramsey, 1995; Swadener, 1988). However, we know virtually nothing about what child care centre staff do to promote positive attitudes towards experiences with people who are different from oneself. The goals of this study are to assess the extent to which early child care classrooms are set up to promote positive attitudes towards diversity, both in how the physical environment of the classroom is structured and the activities staff conduct in this domain. We also assessed the structural characteristics of child care centres that predict diversity-positive classrooms.

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Ethnic minorities currently make up a quarter of the American population (U.S. Population Reference Bureau, 2006) and 13% of the Canadian population (Statistics Canada, 2001a). The percentage of visible ethnic minorities in both the USA and Canada is expected to rise dramatically in coming years. Eighteen percent of the American population has at least one disability (U.S. Census Bureau, 2006), while this is true for 12% of the Canadian population (Statistics Canada, 2001b). Though a large percentage of the population is ethnic and/or has a disability, they are part of outgroups in North American society that suffer the consequences of discrimination and prejudice (Barry & Grilo, 2003; Finch, Kolody, & Vega, 2000; Lahti, Liebkind, & Perhoniemi, 2006). Grouping along ingroup–outgroup boundaries starts young. Affective and attitudinal dispositions towards minorities have been documented in past research with preschoolers, demonstrating that the basis for the social institution of prejudice is in place early in social development (Popp, Fu, & Warrell, 1981; Spencer & Markstrom-Adams, 1990). It is important to counteract this trend by encouraging the development of attitudes that are more tolerant of diversity. There is a growing body of the literature illustrating the need to address these issues in the preschool environment and to have policies in place that promote diversity in early child care centres. However much of this literature is not empirical and basic descriptive information such as whether child care centre staff systematically provide materials and activities for this specific purpose is currently limited, highlighting the need for the present study. The field lacks basic research tools such as validated measures of staff activities that are intended to support diversity-positive attitudes.

Awareness and implications of outgroup status in preschool

The stigma of being a member of an outgroup can create many barriers. Outgroup distinctions occur early in development. Research indicates that at age 5, many White American children attribute negative characteristics to Black Americans and positive characteristics to White Americans (Bigler & Liben, 1993; Doyle & Aboud, 1995). Popp et al. (1981) show that when rating slides and videotapes of children, preschool children prefer able-bodied children to disabled children.

Classic doll studies conducted by Clark and Clark (1947) revealed responses to racial differences as early as three years of age. Since then, a growing body of research confirms the awareness and responsiveness of young children to cues of diversity (Clark, Hocevar, & Dembo, 1980; Garcia Coll & Vazquez Garcia, 1995; Goodman, 1952; Spencer & Markstrom-Adams, 1990). By three or four years of age, many children are able to categorise based on salient cues such as gender, race or in certain cases, ability (Garcia Coll & Vazquez Garcia, 1995; Katz, 1982; Ramsey & Myers, 1990), and children often choose friends based on these categorisations (Ramsey, 1991; Ramsey & Myers, 1990). Attitudes towards categories like colour start to form and develop during the preschool years (Crooks, 1970; Goodman, 1964; Katz, 1982). Thus preschool teachers are in a position to address issues of diversity as they naturally become salient at the appropriate developmental stage, and place diversity in a positive framework of acceptance.

Implications for outgroup status after preschool

Outgroup distinctions present in preschool continue throughout childhood and adolescence. Disabled school-age children are more likely than able-bodied children to be

rejected by their peers (Odom, Zercher, Li, Marquart, & Sandall, 1998 as cited in Odom, 2000). Students' perceptions of racial or ethnic discrimination and their school climate are associated with their academic performance (Stone & Han, 2004). Low teacher expectations, inappropriate placement and inflexible or inappropriate curricula can lead to academic and behavioural problems of minority youth. Prejudice and discrimination debilitate outgroup members in both childhood and adulthood.

The effects of racial/ethnic and ability discrimination on psychological well-being

As adults, perceptions of group discrimination are associated with poorer mental health and general health status (Barry & Grilo, 2003; Lahti et al., 2006; Roberts, Swanson, & Murphy, 2004). Perceived discrimination predicts depression (Finch et al., 2000; Noh, Beiser, Kaspar, Hou, & Rummens, 1999; Pernice & Brook, 1996) and lower levels of both life satisfaction (Brown, Wallace, & Williams, 2001; Liebkind & Jasinskaja-Lahti, 2000) and self-esteem (Barry & Grilo, 2003; Verkuyten, 1998).

Disabled persons are defined here as persons with social, emotional, intellectual or physical delays or abnormal functioning. They are more likely to feel lonely (Rokach, Lehcier-Kimel, & Safarov, 2006) and experience lower levels of life satisfaction (Mehnert, Krauss, Nadler, & Boyd, 1990). Occupational discrimination leads disabled persons to obtain lower levels of employment status and income (Randolph, 2004). Victims of discrimination are left with poorer levels of well-being, fewer avenues to achieve occupational and academic success and limited accessibility to the physical and mental health services they need most.

The negative effects of outgroup status on psychological well-being, however, can be mitigated when a positive sense of group identity is present. Research on ethnic identity indicates that members of ethnic minorities who participate and have a positive sense of belonging and pride in their cultural group are more likely to have higher levels of well-being (Mossakowski, 2003; Phinney, Lochner, & Murphy, 1990; Spencer & Markstrom-Adams, 1990; Verkuyten & Lay, 1998).

Action directed at changing discriminative attitudes and promoting positive self-identity in minorities must be directed at all institutions that make up our society. Child care centres may be especially important as it is during the preschool years when attitudes towards outgroup members first form. A Vygotskian approach suggests that teachers have a responsibility to impart not only social skills and academic knowledge to their students, but also the values and customs of the larger society. Child care centre teachers can encourage the formation of positive attitudes towards members of minorities, support children who are at risk of developing poor ethnic and ability identity and present an environment that appreciates diversity and supports interaction among children of different backgrounds.

Research on the promotion of diversity in child care and school settings

Classroom programmes designed to discuss race and racial attitudes can help reduce prejudice in students who show highly discriminatory attitudes (Aboud & Doyle, 1996). Multicultural programmes can promote tolerance, acceptance and knowledge about diverse cultures and traditions, while instilling a sense of pride and appreciation in children for where they come from and who they are (Laosa, 1974).

Inclusive programmes supporting the interaction between disabled and non-disabled children lead to positive outcomes for both groups of children. Kishi and Meyer

(1994) examined the change in attitude towards disabled children after six years in an inclusive programme and found more positive attitudes, higher levels of social contact and more support for full community participation. Typically developing children in inclusive classrooms are more willing to interact with disabled children, have a better understanding and knowledge of disabilities and are more likely to develop tolerance and appreciation for people who are different from themselves (Diamond et al., 1997).

Little is known about what child care staff do to promote acceptance of diversity among preschoolers. Furthermore, while the promotion of diversity in early child care centres is recognised as important by both researchers and policy-makers alike, it is not clear if child care centres are actually employing adequately trained and educated staff, providing appropriate in-service training, and structuring the child care environment in a way that encourages learning and acceptance of different cultures and abilities.

One of the main aims of the present study is to describe the extent to which activities and materials that support the acceptance of diversity are employed in child care centres. To do this, we examined data collected from 103 Toronto child care centre classrooms. Diversity-positive centres and classrooms were those that contained toys, equipment, materials and displays that reflect both ethnic and disability diversity, and whose teachers engaged in activities regarding diversity with their students. Structural characteristics of the centres such as staff-child ratios and staff education, experience and specialised training were explored as potential predictors of a diversity-positive environment. The emotional climate of each classroom was also assessed. Warm, positive classroom environments may be more likely to promote inclusion and acceptance of others. A teacher that is sensitive to the needs of his or her children and strives to create a positive environment may be more likely to be sensitive to the diversity present in the classroom, and/or broader society. It may also be the case that teachers who are flexible with their children, and understand the value of teaching through a variety of modalities and perspectives, may be more likely to incorporate diversity-sensitive materials and activities. However, it is possible that classroom warmth, teacher sensitivity and flexibility, and the use of a variety of perspectives in teaching, are not related to diversity-positive practices. At this time there is no empirical data to use as a basis for speculation. Presenting such data is one of the goals of the present study.

Having little prior information on the quality and quantity of diversity instruction in child care centres, the present study is a largely exploratory examination aimed at assessing the presence of these practices. Due to the lack of policy directives and academic research in this area, it is expected that the quantity of diversity instruction will be limited at best. Strong structural characteristics such as low staff-child ratios, high levels of teacher training, education and experience, and high levels of staff support however, are expected to predict higher levels of diversity-positive instruction.

Method

Participants

Sixty-four child care centres were recruited through a partnership with the City of Toronto, which oversees the quality of care in all licensed child care providers in the Greater Toronto Area. All centres in the sample are licensed and not-for-profit. Forty-five of the participating centres are directly operated by the City of Toronto. Centres

had a mean of 59.90 children ($SD = 16.87$). Data were collected from 103 classrooms that served preschool-aged children only, having a mean of 17.19 children ($SD = 4.48$), and 5.80 children per teacher (child/staff ratio) ($SD = 1.38$). These centres tended to be of high quality as captured by the Early Childhood Environment Rating Scale-Revised (ECERS-R; Harms, Clifford, & Cryer, 1998), which is a frequently used inventory of classroom quality. The average ECERS-R scores in these classrooms was 5.33 which is somewhat higher than the average ECERS-R scores of 4.71 reported for centres across Canada in the You Bet I Care Study (Goelman et al., 2006). These centres serve a highly ethnically and economically diverse population of families. Sixty-three percent ($N = 1088$) of the parents whose children attended these centres agreed to share information about their children. Sixty percent of those who consented responded to a survey about their child's demographic characteristics. Based on reports from this subsample of parents, the ethnic makeup of the children in these rooms was as follows: 46% White, 35% Black, 10% Chinese, 9% Other.

Procedure

Data for this study were collected as part of a project looking at the quality of child care centres in a variety of domains. Two pairs of data collectors independently obtained data from each classroom over the course of a full morning. Each pair collected data at a particular site within one week of the other. With a few exceptions, in centres that had one or two classrooms that served preschool-aged children, each classroom was assessed. Thirty-nine centres had three or more classrooms that served preschoolers. In these centres, two classrooms were randomly selected for inclusion in the study. All permanent staff assigned to a classroom included in the study were asked to complete a Teacher Survey and centre directors were interviewed. The number of staff and children in each classroom was recorded. Average child to staff ratios were calculated for each classroom (at 30-minute intervals over the course of one morning). The proportions of children in each class that qualified for subsidy (monetary assistance from the government) were provided by the City of Toronto.

Instruments

Teacher survey

All permanent full-time staff members in each class that were employed by the centre were asked to complete this survey. For the purposes of the current study, items capturing supervision of the staff (e.g. 'How supported do you feel by your supervisor?' along a four-point Likert scale from 1 = 'not at all' to 4 = 'a lot'), professional development opportunities, staff education and work history were analysed. The teacher response rate was 96%.

The Classroom Assessment Scoring System Pre-K Version (CLASS; Pianta, LaParo, & Hamre, 2008)

This is an observational instrument that assesses classroom quality as measured by three major components: emotional support (comprising four scales: positive climate, negative climate, teacher sensitivity and regard for student perspectives), classroom organisation (comprising three scales: behaviour management, productivity and

instructional learning formats) and instructional support (comprising three scales: concept development, quality of feedback and language modelling). Each scale uses a seven-point Likert-type format ranging from low displays of the measured construct (1,2) to high displays of the measured construct (6,7) with moderate displays of the construct falling in the mid-range (3,4,5). The CLASS coding was conducted in each room every 15 minutes over the total observational period by one of two data collectors. Scores on each scale were averaged across the total observation period to obtain a single score on each scale for each classroom. The coefficient alpha for the CLASS was acceptable at $\alpha = .78$.

For the purposes of this study, the negative climate, teacher sensitivity and behaviour management subscales were assessed to measure the emotional warmth of the classroom and teacher flexibility. The instructional learning formats subscale was also assessed to identify teachers who used a variety of different modalities and perspectives in their lessons. Behaviour management and the instructional support scales were not included because they did not relate to the construct of teaching of diversity as closely. Data collectors who maintained a minimum percent agreement of 83% or higher over six trials were deemed reliable on the CLASS. This level of agreement is comparable to levels of data collector reliability found in other studies using the measure (e.g. Early et al., 2006; Peisner-Feinberg et al., 1999). Observer drift was tested at regular intervals during the period of data collection to ensure that data collectors remained reliable.

Diversity measures

Due to a lack of well-developed measures of diversity-promoting practices, we adopted a strategy whereby individual items were collected from a variety of sources. Where conceptually appropriate and with sufficient empirical basis, items were combined to create summary scores as described in the results section.

Self-reported class activities. The following item concerning classroom activities was included in the *Teacher Survey*: 'Please briefly describe up to four activities you have done with your class in the last six months that focused on increasing children's understanding of diversity'. Teacher responses concerning diversity-related activities were coded according to quantity and content. A point was awarded for each appropriate activity that was stated, and another point was awarded for specifying the diversity theme or learning goal of the activity, resulting in a maximum of eight points.

Physical environment checklist. This form was completed by trained data collectors and captures the type, quantity and state of materials in the classroom, as well as the availability and quality of playgrounds. For the purposes of the current study, the following item was used: 'How much of each set of materials below is available to children for indoor play? Learning about diversity, e.g. people of different ages, ethnicities, abilities in pictures, books, DVDs'. This item was rated on a four-point Likert scale (1 = 'a lot' to 4 = 'none', scores were reverse-coded).

Early Childhood Environment Rating Scale-Revised (ECERS-R; Harms et al., 1998)

The ECERS-R is a 43-item inventory that provides a measure of the quality of a child's preschool or kindergarten classroom environment. Each of the 43 items is

responded to on a seven-point scale, with indicators for inadequate (1), minimal (3), good (5) and excellent (7). The coefficient alpha for the ECERS-R was high at $\alpha = .90$. For the purposes of the current study, only two items – ‘Promoting acceptance of diversity’ and ‘Provisions for children with disabilities’ – were analysed. Following the reliability procedures developed by the authors of the ECERS-R (see ECERS-R Interrater Reliability Sheet, 2000, for an example of the ECERS-R scoring sheet), reliability was calculated by comparing the trainee’s score to the ‘consensus’ score agreed upon by the trainee and the expert. ECERS-R data were collected from 99% of the classrooms included in the sample. Inter-observer reliability for the ECERS-R was 80% or above for each of the items.

Toronto operating criteria. This tool is used by the City of Toronto to measure child care centre quality, and is designed to help programmes evaluate, plan and set goals for all aspects of the child care centre. Each of the 36 items is evaluated against established criteria on a five-point scale (1 = ‘does not meet criteria’ to 5 = ‘exceeds criteria in all areas’). For the purposes of the current study, two items were analysed – ‘all displays are free of bias and stereotypes, are developmentally and culturally appropriate and include representation of a variety of abilities/disabilities, races, cultures, languages and family structures’ and ‘all materials are free of bias and developmentally appropriate or adapted. Materials must represent a diverse range of cultures, races, abilities/disabilities, languages and family structures’. Toronto operating criteria data were collected from 96% of the classrooms included in the sample.

SpeciaLink Child Care Inclusion Practices Profile and Principles Scale (Irwin, 2005)

This measure comprises two separate scales, made up of a total of 17 items. The Practices Profile is a tool used for assessing inclusion quality in child care centres. It covers the physical environment, equipment and materials, staff support and training, centre director and board of directors’ views on inclusion and what needs to be included in the programme. Coefficient alpha for the Practices scale was acceptable at $\alpha = .82$. The Principles Scale focuses on underlying attitudes and beliefs of inclusion in child care centres. This tool focuses on understanding why and how inclusion of children with special needs practices are supported or hindered. Coefficient alpha for the Principles subscale was also acceptable at $\alpha = .82$. All constructs are assessed on a seven-point Likert-type scale (1 = ‘inadequate’ to 7 = ‘excellent’). SpeciaLink data were collected from 93% of the classrooms included in the sample.

Results

Means and standard deviations were computed for classroom scores on measures of promotion of diversity through toys, activities, displays, equipment and materials (see Table 1). On an average, classrooms are moderately to somewhat highly diversity-positive. They contain adequate numbers of diversity-sensitive displays, toys, equipment and materials, and teachers both report and are observed to carry out diversity-related activities. Examples of diversity-sensitive toys, displays, equipment and materials include things like dolls depicted to be in wheelchairs or on crutches, posters or pictures of children from different parts of the world, ethnic clothing provided in the dress-up area etc. Examples of reported diversity-related activities include reading

Table 1. Descriptive statistics for measures of promotion of diversity.

Measure	<i>M</i>	<i>SD</i>	<i>N</i>
Physical environment indoor play materials (PEIP Mat)	3.14	0.83	103
ECERS item – promotion of diversity	4.51	1.76	101
Bias free and multicultural displays	2.93	1.41	99
Bias free and multicultural toys/equip/materials	2.91	0.9	99
Self-reported class activities	2.27	1.06	100
SpecialLink practices subscale	4.03	0.68	96
SpecialLink principles subscale	4.96	0.62	96

stories, discussing diversity-related topics, preparing ethnic foods and inviting special guests, all of which focused on topics such as multiculturalism, (e.g. celebrating holidays, traditions and languages), physical diversity (e.g. discussions about children with different skin colours) and different abilities or special needs.

Correlations between measures of promotion of diversity indicate both expected and unexpected patterns of associations (see Table 2). As expected, measures of diversity-positive toys, displays, equipment and materials, were moderately positively correlated with each other. The ECERS-R item concerning the observed incidences of promotion of diversity through classroom activities was also moderately positively correlated with these measures. Unexpectedly however, self-reported teacher accounts of diversity-related activities did not correlate with either the toys, displays, equipment and materials measures or, perhaps more surprisingly, the ECERS-R item regarding observed activities and materials. As the other measures of diversity-sensitive toys, displays, equipment, materials and observed activities correlated well, they were totalled to provide a more reliable criterion variable that was named the Diversity Promotion Index (DPI). Each of the ECERS-R items was on a seven-point scale. However, four points on the scale (1, 2, 5 and 6) were rarely used (point 1 was chosen two times; point 2 was chosen six times; point 5 was chosen one time and point 6 was chosen two times). To equate the scales of the ECERS-R items with the other five-point items, adjacent response options 1 and 2 and 5 and 6 for those two items were collapsed. Thus, the DPI was made up of the items previously detailed under the

Table 2. Correlation matrix for measures of promotion of diversity.

	PEIP Mat	ECERS Prom Div	OC Displays	OC Toys/Equip/Mat	Reported activities	DPI
PEIP Mat	—	0.52**	0.43**	0.36**	-0.01	0.70**
ECERS Prom Div		—	0.60**	0.47**	0.04	0.82**
Displays			—	0.56**	0.07	0.86**
Toys/Equip/Mat				—	0.00	0.74**
Reported activities					—	0.01
DPI						—

** $p < .01$.

Note: PEIP Mat: Physical environment indoor play materials; ECERS Prom Div: ECERS item – promotion of diversity; OC Displays: Operating criteria bias free and multicultural displays; OC Toys/Equip/Mat: Operating criteria bias free and multicultural toys, equipment and materials; Reported activities: Self-reported class activities; DPI: Diversity promotion index.

diversity measures section, and was scored on a five-point scale. Coefficient alpha for the DPI was acceptable at $\alpha = .77$. SpecialLink criterion variables did not show enough variance to be included and were dropped from the analyses.

Hierarchical linear models (HLM) were used to examine what drives diversity promotion in classrooms. HLM is preferred over traditional fixed effects models because classes are nested within centres, indicating that observations from the class-level are not independent. Both classroom-level and centre-level variables were used to predict diversity-positive classrooms (see Table 3). Based on the correlations presented above, teachers' self-reports of class activities focusing on diversity and the DPI were analysed as independent criteria.

In the unconditional model for self-reported class activities focusing on diversity, 99.82% of the variation was at the provider-level and only 0.18% was at the class-level. The full model was carried out to examine which predictors contributed to these variances. As shown in Table 3, the mean educational background of staff in each classroom was negatively related to reported class activities focusing on diversity. For every one-point increase in the mean educational background of staff members in one

Table 3. Classroom predictors and provider effects on promotion of diversity in the classroom: HLM gamma coefficients.

	Full model for self-reported class activities focusing on diversity		Full model for diversity promotion: DPI	
	Coefficients	Standard errors	Coefficients	Standard errors
Intercept	2.243	0.093	12.32**	(0.38)
<i>Level 1: across classrooms</i>				
Staff/child ratio	-0.034	0.072	-0.258	0.295
Mean of staff degree in each classroom	-0.649*	0.234	0.129	0.592
Mean of professional development hours	0.011	0.008	0.005	0.025
Teaching experience	0.002	0.002	0.002	0.003
CLASS: negative climate	-0.395	0.255	-0.862	0.158
CLASS: teacher sensitivity	0.226	0.222	-0.729	0.545
CLASS: instructional learning formats	-0.084	0.232	1.843**	0.613
CLASS: over control	0.265	0.265	0.451	0.734
<i>Level 2: across providers/sites</i>				
Salary	-0.086*	0.034	0.568**	0.126
Supervision	0.055	0.347	2.038*	0.961
Subsidy	0.001	0.008	0.051**	0.026
Random effect	Variance component			
Level 1	0.974		4.483	
Level 2	0.004		4.477	
Reliability	0.006		0.601	
Level 1 variance explained	0.40%		50.03%	
Level 2 variance explained	99.60%		49.97%	

** $p < .005$; * $p < .05$.

classroom, the presence of class activity focusing on diversity decreased 0.65 points. This relationship did not change across sites. Furthermore, the mean salary of early childhood educators and child care assistants at the provider-level was also negatively related to diversity activities in the classroom. For every 10,000 dollar increase in the mean salary of staff, the presence of diversity activities in the classroom decreased 0.86 points. A different pattern of results is found for the constructed criterion variable – DPI. In the unconditional model, 63.10% of the variation in diversity-promoting activities, toys, equipment and materials was at the class-level and 36.90% was at the provider-level. In the full model (see Table 3), most class-level factors did not predict the variance across the DPI. Scoring higher on instructional learning formats however was significantly related to diversity-promoting materials in the classrooms. In the full model, 50% of the variation in the DPI was at the class-level and 50% was at the centre-level. At the class-level, classrooms that scored higher on instructional learning formats, i.e. provided a variety of modalities and materials to maximise children's engagement and ability to learn, had significantly more diversity-promoting activities, toys, equipment and materials. One point higher in the instructional learning format would lead to a 1.84 point increase in the DPI in the classroom. At the centre-level, the mean salary of early childhood educators and child care assistants was significantly related to diversity-promoting activities, toys, equipment and materials in the classroom environment. For every 10,000 dollar increase in the mean salary of staff, there was a corresponding increase in the DPI in the classroom of .57 points. Staff salary was a significant predictor not only after adjusting for class-level factors but also after controlling for the effects of other centre-level factors. Furthermore, the mean level of supervision at the centre-level was also significantly related to more diversity-promoting activities, toys, equipment and materials. For every one-point increase in supervision at provider-level, there was a corresponding increase of 2.038 points in the DPI in classroom.

Discussion

The results of this study suggest that child care staff are employing diversity-positive toys, displays, equipment and materials, and are observed to conduct activities touching on themes of diversity in the classroom. These findings are reassuring in light of evidence that preschoolers are likely to form impressions and respond to cues of diversity (Clark et al., 1980; Garcia Coll & Vazquez Garcia, 1995). Counteracting the development of prejudicial attitudes in childhood can save many members of minority groups from the debilitating effects of discrimination in both childhood and adulthood. Fostering positive attitudes towards ethnic identity may also lead to higher levels of well-being among ethnic minorities (Phinney et al., 1990).

Fifty percent of the variance in the DPI was explained at the centre-level. The other 50% was explained at the classroom-level. This suggests that director and centre policies play an important role in this domain. Consistent with this, salary-level and the amount of supervision teachers receive (both driven by the centre and its director) were significant predictors of the DPI. The teacher's ability to engage their class through a variety of modalities also predicted a diversity-positive environment. Salary and supervision are structural characteristics that are hypothesised to drive process characteristics like engaging in diversity-positive activities with the class. Teacher's ability to engage the class with a variety of modalities predicted diversity-positive environments. Teachers who are more aware of diversity in general may be more

likely to use a variety of modalities to teach and may be more likely to set up a diversity-positive classroom.

Classrooms serving a higher proportion of children who received a child care subsidy were more likely to score highly on our measure of acceptance of diversity. Families receiving such subsidy in the Greater Toronto Area include a high proportion of immigrants from diverse backgrounds. It is encouraging that these diverse classrooms are likely to be diversity-positive environments. Activities and materials promoting acceptance and celebration of diversity should aid in fostering the development of positive self-identity in members of minority groups.

Low teacher-child ratios, and high education levels, teaching experience and hours of professional development completed by teachers did not predict an observed diversity-positive environment. High levels of teacher sensitivity and warm, positive and flexible classroom environments also do not seem to indicate diversity-positive environments.

Variance in teacher' self-reports of diversity-promoting activities was explained at the centre-level. Unexpectedly, diversity-positive class activities reported by staff were found to be negatively predicted by staff education and salary. Furthermore, no correlation between self-reported and observed measures of diversity-positive activities was found. Teachers with lower levels of education and salary may feel a greater need to present themselves positively when compared to their better educated and paid colleagues. As a result, they may exaggerate their diversity-promoting activities. This may account for the discrepancy between patterns of self-reported and observed measures of diversity-positive activities in the classroom. Or, it is possible that other unaccounted variables such as staff race may explain this relationship. Clearly, self-reported data of the sort used in this study require further exploration. In-depth interview responses may be a better alternative in conjunction with observed data or when such data are unavailable.

Results from the current study indicate that we are a long way from knowing how to properly measure diversity promotion in the classroom environment. Future studies aimed at developing and testing a measure of diversity instructional practices in child care would make an important contribution. Such a scale should capture the quantity and type of diversity-positive toys, displays, equipment and materials, as well as the depth and content of diversity-positive activities. Some authors have cautioned against valuing superficial exposure to token-type depictions of 'exotic' cultures (see Ramsey, 2006 for discussion). The same concern may be heeded about superficial exposure to depictions of ability diversity. Superficial or token-type exposure may serve only to reinforce stereotypes and fail to encourage positive identity development in diverse classroom populations. Investigation into the depth of diversity-promoting activities was beyond the scope of the present study, but is recognised to merit close examination in future studies.

Teachers can facilitate the development of positive attitudes and relationships among children of diverse backgrounds by assessing existing knowledge and attitudes towards diversity present in the classroom, and then planning classroom activities and interactions that will support the needs of individual children (Ramsey, 1995; Swadener, 1988). It is important for teachers to have explicit skills training in early child care and topics of diversity as they relate to child care and awareness of various cultures and disabilities (Laosa, 1974; Odom, 2002). Depending on the province or state, a range of training options are available: early childhood departments, child development and public health agencies, university/college-based institutes

that offer basic courses on early childhood training and specific courses relating to multiculturalism and special needs, as well as on-the-job training. Child care centres as a whole must make the promotion of diversity a priority. In-service training of staff has been associated with greater willingness to care for children with disabilities. Participation in disability training and recent experience serving children with disabilities are also related to teachers' perceptions of the needs and barriers facing inclusive programmes (Mulvihill, Cotton, & Gyaben, 2004; Mulvihill, Shearer, & van Horn, 2002).

Limitations

As mentioned earlier, the sample in the present study consists of licensed, not-for-profit child care centres, and a large proportion of the sample are directly operated by the City of Toronto. This is likely the reason why average ECERS-R scores were somewhat higher than reported national averages and there is a lack of variance in SpecialLink measures used to tap practices and principles demonstrating inclusion of ability diversity. Findings for this sample therefore may not be generalisable to all North American child care settings.

There is much research to be done on the promotion of acceptance of diversity in child care settings. The present study constitutes an initial investigation into the physical environment and practices of child care centres and classrooms, and suggests that licensed not-for-profit centres seem to be providing some diversity instruction. However, measures to comprehensively and adequately tap diversity instruction are wanting. The promotion of acceptance of diversity at the preschool stage is important as it encourages positive social interactions among children from diverse backgrounds, fosters the development of positive self-identities among members of minority groups and supports the growth of a multicultural, inclusive society that celebrates diversity.

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References

- About, F.E., & Doyle, A.B. (1996). Does talk of race foster prejudice or tolerance in children? *Canadian Journal of Behavioural Science*, 28, 161–170.
- Barry, D.T., & Grilo, C.M. (2003). Cultural, self-esteem, and demographic correlates of perception of personal and group discrimination among East Asian immigrants. *American Journal of Orthopsychiatry*, 73, 223–229.

- Bigler, R.S., & Liben, L.S. (1993). A cognitive-developmental approach to racial stereotyping and reconstructive memory in Euro-American children. *Child Development, 64*, 1507–1518.
- Brown, T.N., Wallace, J.M., & Williams, D.R. (2001). Race-related correlates of young adults' subjective well-being. *Social Indicators Research, 53*, 97–116.
- Clark, K.B., & Clark, M.P. (1947). Racial identification and preference in Negro children. In T.M. Newcomb & E.L. Hartley (Eds.), *Readings in social psychology* (pp. 169–178). New York: Holt, Rinehart & Winston.
- Clark, A., Hocevar, D., & Dembo, M.H. (1980). The role of cognitive development in children's explanations and preferences for skin colour. *Developmental Psychology, 16*, 332–339.
- Crooks, R.C. (1970). The effects of an interracial preschool program upon racial preference, knowledge of racial differences, and racial identification. *Journal of Social Issues, 26*, 137–144.
- Diamond, K.E., Hestenes, L.L., Carpenter, E.S., & Innes, F.K. (1997). Relationships between enrolment in an inclusive class and preschool children's ideas about people with disabilities. *Topics in Early Childhood Special Education, 17*, 520–536.
- Doyle, A.B., & Aboud, F.E. (1995). A longitudinal study of white children's racial prejudice as a social-cognitive development. *Merrill-Palmer Quarterly, 41*(2), 209–228.
- Early, D.M., Bryant, D.M., Pianta, R.C., Clifford, R.M., Burchinal, M.R., Ritchie, S., et al. (2006). Are teachers' education, major, and credentials related to classroom quality and children's academic gains in pre-kindergarten? *Early Childhood Research Quarterly, 21*, 174–195.
- ECERS-R Interrater Reliability Sheet. (2000). The University of North Carolina at Chapel Hill, The Frank Porter Graham Child Development Institute. Retrieved May 19, 2004, from <http://www.fpg.unc.edu/~ecers/supplements/interrater/ECERSR-r.pdf>
- Finch, B.K., Kolody, B., & Vega, W.A. (2000). Perceived discrimination and depression among Mexican-origin adults in California. *Journal of Health and Social Behaviour, 41*, 295–313.
- Garcia Coll, C.T., & Vazquez Garcia, H.A. (1995). Developmental processes and their influence on interethnic and interracial relations. In W.D. Hawley & A.W. Jackson (Eds.), *Toward a common destiny* (pp. 103–130). San Francisco, CA: Jossey-Bass.
- Goelman, H., Forer, B., Kershaw, P., Doherty, G., Lero, D., & LaGrange, A. (2006). Towards a predictive model of quality in Canadian child care centres. *Early Childhood Research Quarterly, 21*, 296–312.
- Goodman, M. (1952). *Race awareness in young children*. Cambridge, MA: Addison-Wesley.
- Goodman, M. (1964). *Race awareness in young children*. New York: Cromwell-Collier.
- Harms, T., Clifford, R.M., & Cryer, D. (1998). *Early childhood environment rating scale* (Rev. ed.). New York: Teachers College Press.
- Irwin, S.H. (2005). The SpecialLink child care inclusion scales (Revised). Retrieved from <http://www.speciallinkcanada.org>
- Katz, P.A. (1982). Development of children's racial awareness and intergroup attitudes. In L.G. Katz (Ed.), *Current topics in early childhood education* (pp. 17–54). Norwood, NJ: Ablex.
- Kishi, G.S., & Meyer, L.H. (1994). What children report and remember: A six-year follow-up of the effects of social contact between peers with and without severe disabilities. *Journal of the Association for Persons with Severe Handicaps, 19*, 277–289.
- Lahti, I.J., Liebkind, K., & Perhoniemi, R. (2006). Perceived discrimination and well-being: A victim study of different immigrant groups. *Journal of Community and Applied Psychology, 16*, 267–284.
- Laosa, L.M. (1974). Child care and the culturally different child. *Child Care Quarterly, 3*, 214–225.
- Liebkind, K., & Jasinskaja-Lahti, I. (2000). The influence of experiences of discrimination on psychological stress: A comparison of seven immigrant groups. *Journal of Community and Applied Social Psychology, 10*, 1–16.
- Mehnert, T., Krauss, H.H., Nadler, R., & Boyd, M. (1990). Correlates of life satisfaction in those with disabling conditions. *Rehabilitation Psychology, 35*, 3–17.
- Mossakowski, K.N. (2003). Coping with perceived discrimination: Does ethnic identity protect mental health? *Journal of Health and Social Behaviour, 44*, 318–331.
- Mulvihill, B.A., Cotton, J.N., & Gyaben, S.L. (2004). Best practices for inclusive child and adolescent out-of-school care. *Family Community Health, 27*, 52–64.

- Mulvihill, B.A., Shearer, D., & van Horn, M.L. (2002). Training, experience, and child care providers' perceptions of inclusion. *Early Childhood Research Quarterly*, *17*, 197–215.
- Noh, S., Beiser, M., Kaspar, V., Hou, F., & Rummens, J. (1999). Perceived racial discrimination, depression, and coping: A study of Southeast Asian refugees in Canada. *Journal of Health and Social Behaviour*, *40*, 193–207.
- Odom, S.L. (2000). Preschool inclusion: What we know and where we go from here. *Topics in Early Childhood Special Education*, *20*, 20–27.
- Odom, S.L. (2002). *Widening the circle: Including children with disabilities in preschool programs*. New York: Teachers College Press.
- Peisner-Feinberg, E., Burchinal, M., Clifford, R., Culkin, M., Howes, C., Kagan, S., et al. (1999). *The children of the cost, quality and outcome study go to school: Executive summary*. Chapel Hill, NC: FPG Child Development Centre.
- Pernice, R., & Brook, J. (1996). Refugees' and immigrants' mental health: Association of demographic and post-immigration factors. *Journal of Social Psychology*, *136*, 511–519.
- Phinney, J.S., Lochner, B.T., & Murphy, R. (1990). Ethnic identity development and psychological adjustment in adolescence. In A.R. Stiffman & L.E. Davis (Eds.), *Ethnic issues in adolescent mental health* (pp. 53–72). Thousand Oaks, CA: Sage.
- Pianta, R.C., LaParo, K.M., & Hamre, B.K. (2008). *Classroom Assessment Scoring SystemTM: Manual K-3*. Baltimore, MD: Paul H Brookes.
- Popp, R.A., Fu, V.R., & Warrell, S.E. (1981). Preschool children's recognition and acceptance of three physical disabilities. *Child Study Journal*, *11*, 99–114.
- Ramsey, P.G. (1991). The salience of race in young children growing up in an all-white community. *Journal of Educational Psychology*, *83*, 28–34.
- Ramsey, P.G. (1995). Changing social dynamics in early childhood classrooms. *Child Development*, *66*, 764–773.
- Ramsey, P.G. (2006). Early childhood multicultural education. In B. Spodek & O. Saracho (Eds.), *Handbook of research on the education of young children* (2nd ed., pp. 279–301). Mahwah, NJ: Lawrence Erlbaum.
- Ramsey, P.G., & Myers, L.C. (1990). Salience of race in young children's cognitive, affective, and behavioural responses to social environments. *Journal of Applied Developmental Psychology*, *11*, 49–67.
- Randolph, D.S. (2004). Predicting the effect of disability on employment status and income. *Work: A Journal of Prevention, Assessment & Rehabilitation*, *23*, 257–266.
- Roberts, R.K., Swanson, N.G., & Murphy, L.R. (2004). Discrimination and occupational mental health. *Journal of Mental Health*, *13*, 129–142.
- Rokach, A., Lechcier-Kimel, R., & Safarov, A. (2006). Loneliness of people with physical disabilities. *Social Behaviour and Personality*, *34*, 681–700.
- Spencer, M.B., & Markstrom-Adams, C. (1990). Identity processes among racial and ethnic minority children in America. *Child Development*, *61*, 290–310.
- Statistics Canada. (2001a). *Visible minority population by province and territory*. Retrieved July 4, 2008, from <http://www40.statcan.ca/101/cst01/demo52a.htm>
- Statistics Canada. (2001b). *A profile of disability in Canada, 2001 – tables*. Retrieved July 4, 2008, from <http://www.statcan.ca/english/freepub/89-579-XIE/89-579-XIE2002001.pdf>
- Stone, S., & Han, M. (2004). Perceived school environments, perceived discrimination, and school performance among children of Mexican immigrants. *Children and Youth Services Review*, *27*, 51–66.
- Swadener, E.B. (1988). Implementation of education that is multicultural in early childhood settings: A case study of two day-care programs. *Urban Review*, *20*, 8–27.
- U.S. Census Bureau. (2006). *Americans with disabilities: 2002*. Retrieved July 4, 2008, from <http://www.census.gov/hhes/www/disability/sipp/disab02/awd02.html>
- U.S. Population Reference Bureau. (2006). *In the news: U.S. population is now one third minority*. Retrieved July 4, 2008, from <http://www.prb.org/Articles/2006/IntheNewsUS-PopulationIsNowOneThirdMinority.aspx?p=1>
- Verkuyten, M. (1998). Perceived discrimination and self-esteem among ethnic minority adolescents. *Journal of Social Psychology*, *138*, 479–493.
- Verkuyten, M., & Lay, C. (1998). Ethnic minority identity and psychological well-being: The mediating role of collective self-esteem. *Journal of Applied Social Psychology*, *28*, 1969–1986.