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Abstract

In recent times concerns about possible adverse effects of early separation and advocacy for individual rights have resulted in a movement away from organizational level policies about the separation of twin children as they enter school. Instead, individualized approaches that focus on the twin children's characteristics and family perspectives have been proposed. This study, conducted in Australia where all but a few families had choice about the class placement of their twin children, questioned parents ($N = 156$) about their placement decisions. Results indicated that most parents opted for placement together in the early years of schooling. The choice to separate twins at school entry was associated with parent identification of risk in the twin relationship, while being kept together was associated with parent identification of absence of such risk. The findings are discussed in light of the current evidence against separation, and suggest that parent choices regarding the separation of twin children in the early years are informative to educational policy and practice.

Keywords

classroom placement, decision-making, early childhood, education, risk, twins

Since the 1980s, the number of pregnancies resulting in multiple births has risen substantially, with the United States for example recording a 70 percent rise in multiple births between 1980 and 2004 (e.g. Martin et al., 2009). The twin birth rate currently stands at approximately one birth in every 31 in the United States (Martin et al., 2009), one in 34 births in England and Wales (Office of National Statistics, 2008) and one in 59 births in Australia (Australian Bureau of Statistics, 2007). This equates to almost a pair of twins in every school class, or in the case of Australia a twin child in every class. The effect of this demographic shift is that any issues associated with multiple birth children will need to be addressed by every educational organization and their schools.

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Coinciding with the rise in twin births has been the growing awareness of the need to develop a better understanding of the experiences of twin children and the effects of growing up alongside a same age sibling (Danby and Thorpe, 2005; Penninkilampi-Kerola et al., 2005; Rutter and Redshaw, 1991; Tancredy and Fraley, 2006). Two key questions relating to twin children's education have emerged. The first asks whether twin children are an 'at risk group' that might require additional educational support. The second asks whether the twin relationship itself is problematic in the school context and relates directly to the decision about placement of twin children in separate classes or within a single class.

Though there is some evidence that twin children may have some advantages for social development (Pulkkinen et al., 2003; Thorpe et al., 2001), most research regarding twins in school has focused on the increased risks associated with multiple birth, including delays in language acquisition (Rutter et al., 2003; Thorpe and Danby, 2006; Thorpe et al., 2003), increased incidence of ADHD (Levy et al., 1996) and conduct disorders (Simonoff, 1992). The findings of these studies, though they suggest the potential need for additional support for some twin children, do not provide data that can directly inform the decision about class placement.

The decision regarding separation of twins centres on the co-twin relationship rather than on individual problems. The key question is whether the presence or absence of the co-twin is problematic. Adverse effects of the inter-twin relationship on social and academic engagement, particularly problems associated with competition, dominance and identity development, have been presented as the justification of decisions to separate (Beauchamp and Brooks, 2003; Hay and Preedy, 2006; Segal and Russell, 1992). However, the assumption that the co-twin relationship may impede healthy social interaction and academic attainment has derived from the publication of small group analyses (Ballarà and Bollea, 1994; Paluszny and Gibson, 1974) and highly salient case studies of twins with problematic or pathological relationships (Luria and Yudovich, 1959; Wallace, 1996) rather than from larger community samples. On the basis of existing evidence, problems deriving from the twin relationship should be considered – but not assumed.

Policies for twin placement

The issue of twin separation at school is generally approached in one of two distinct ways. The first is what may be termed an *organizational level approach*, where specific schools, district or state boards adopt a generalized policy regarding twin separation at school that is applied to all twin children within that specific population. The second, which might be termed an *individual level approach*, stresses that the differences between individual pairs of twins may far outweigh any characteristics common to twin children, and therefore directs policy to the consideration of the individual twin children's needs.

In an organizational level approach, decisions are made without regard to the individual experiences, personalities, relationships and wishes of the unique twin pairs and are most often based on explicit beliefs and ideologies relating to multiple birth children as a homogeneous group (Beauchamp and Brooks, 2003; Dean, 1999; Larche, 2007; Nilsson et al., 2009; Preedy, 2001). When this policy is one of separation, several key beliefs are given as justification for these decisions. These include decreasing competition and comparison, decreasing dominance of one twin over another, developing individuality, decreasing dependency between the twins and development of separate friendships (Beauchamp and Brooks, 2003; Nilsson et al., 2009; Preedy, 2001; Segal and Russell, 1992). Here, the focus is primarily on risk, and does not consider the potential advantages of twinning (Thorpe and Danby, 2006). In some cases, although less common, schools, districts and states retain policy that see all twin children placed together (Nilsson et al., 2009; Preedy, 1999; Segal and Russell, 1992). Such policies focus on the benefits of twinning and

represent the view that keeping twins in the same class may facilitate twin children's ability to transition to school more easily, to provide social support for each other, and to avoid the more practical issues related to the children having separate school teachers, work requirements and parent–teacher interactions.

In recent years there has been a growing consensus among researchers and professionals that rejects organizational level policy regarding twin placement and instead favours more flexible approaches (Arc, 2008; Grime, 2008; Hay and Preedy, 2006; Tully et al., 2004; van Leeuwen et al., 2005). Commensurately generalized organizational level policies, particularly in the United States, have invoked a significant backlash from parents. This has included legal action and lobbying for parents' rights to have a say in the class placement of their twin children (Davidson, 2005; Larche, 2007; Martin, 2006). This trend for a more individual level approach to twin class placement, is also reflected in the Australian context, where state education bodies, such as the Queensland Education Board have placed directives that schools must employ flexible policies for the placement of twins (Hay, 2004).

Research evidence of systematic differences between separated and non-separated twin children

A series of studies has examined the effects of separation or joint placement of twins on child outcomes (Coventry et al., 2009; DiLalla and Mullineaux, 2008; Polderman et al., 2009; Tully et al., 2004; van Leeuwen et al., 2005; Webbink et al., 2007). Three key themes emerge from these studies. The first is that children who are separated and specifically those separated early have higher rates of adverse outcomes, including externalizing (Coventry et al., 2009; van Leeuwen et al., 2005) and internalizing (Coventry et al., 2009; Tully et al., 2004; van Leeuwen et al., 2005) behavioural difficulties and poorer scholastic attainment (Polderman et al., 2009; Tully et al., 2004; Webbink et al., 2007). The second is that there are systematic pre-existing differences between those that are separated from those that are placed together. For example, twin children who are separated are reported to have higher levels of usage of special education services (Tully et al., 2004; van Leeuwen et al., 2005), to be of lower social economic status (Polderman et al., 2009) and to have pre-existing behavioural (Coventry et al., 2009; DiLalla and Mullineaux, 2008; Polderman et al., 2009; van Leeuwen et al., 2005) and literacy problems (Coventry et al., 2009). All of these pre-dispose the child to ongoing difficulties and underscore the need to further understand the decision of class placement from the perspective of those who have made these decisions.

Finally, in those studies that control for pre-existing problems and differences in SES (Coventry et al., 2009; DiLalla and Mullineaux, 2008; Polderman et al., 2009; van Leeuwen et al., 2005), externalizing and scholastic effects disappear; however, there remains some evidence of internalizing difficulties (van Leeuwen et al., 2005). In line with these findings, evidence from a small qualitative study of twin children in the early years of school indicates that some twin children respond to forced separation with feelings of sadness, anger, fright and loneliness which may subsequently impede their progress in school (Grime, 2008). This study points to the importance of the context in which individual decisions about twin placement are made.

Prior studies on the rationale for separate and shared placement of twins

Although studies have examined the reasons for, and practices regarding, the separation and non-separation of twins from the standpoint of school based professionals (Gleson et al., 1990; Jones

and De Gioia, 2010; Nilsson et al., 2009; Preedy, 2001), the authors are aware of only two studies, both conducted in the early 1990s, that have examined placement decisions from the perspective of the parent (Gleeson et al., 1990; Segal and Russell, 1992). Neither of these studies distinguishes between parents who did or did not have choice in the placement of their twin children. Segal and Russell (1992), using open-ended response questions, focused on parental knowledge of and perceptions towards school placement policies and the reasons for these policies. They surveyed 63 mothers of monozygotic and dizygotic same-sex twins (dizygotic opposite-sex twins were not included in this sample) ranging in age from 6.9 to 11.5 years, all drawn from a small suburban area in the United States. Segal and Russell report that the most common reasons given by these parents for separation was the promotion of independence and individuality, whilst for non-separation, parents highlighted security and support. The study, however, did not distinguish between parents' reasons for their own choice, and reasons given for placements decisions made by school bodies. This is particularly pertinent considering that, in the sample, almost half (49%) of the participants indicated that their schools had a strict policy on the classroom placement of their twins, with 81 percent of these policies being to separate.

Gleeson et al. (1990) also examined parents' perceptions regarding class placements in an Australian cohort of 784 families, and 1264 teachers, of twin children in grades one to six. They report that 29.3 percent of children in the study were separated on school entry, although this number increased to nearly 50 percent by year 2 and then stabilized at approximately 60 percent for the continuing four years. Parents and teachers were asked to highlight from a list of nine issues (e.g. zygosity, popularity, ability differences) the four that were most important in decisions regarding separation. The authors report that both parents (23.1%) and teachers (29.6%) ranked dependency/reliance as the most important factor in the decision made. However, the study did not make clear how the decision made (separation or not) and the conditions under which it was made (organizational or parental choice) were associated. Again, this is particularly pertinent as a large percentage of parents in this study report that they were never (35%) or rarely (40%) consulted.

To understand the process underlying the class placement of twin children requires data on the rationale for these decisions, the context in which these decisions are made (choice or enforced) and their timing (at school entry or later). Drawing on an Australian sample, the current study examines the decisions made by parents regarding the placement of their twin children in the early years of school and the factors considered by parents when making these decisions. In addition, applying both close-ended and open-ended response measures, we aimed to identify those reasons that distinguish the decision to separate from the decision to keep twin children together. We address the following two research questions: 1) what rationale do parents use in making their decision about the class placement of their twin children, and 2) how does this differ between twin children who are separated and those placed together. This information not only has the potential to allow for greater support for parents in the decision-making process, but also to guide policy, professional practice and further research in this area.

Method

Sample

Parents of twin children who completed questionnaires as part of a large national Australian Research Council (DP0666254) funded project examining twin children's social development and transition to early schooling are included in this study. Recruitment was voluntary and was conducted with the assistance of the Australian Multiple Births Association (AMBA) and the Australian Twin Registry (ATR) via email contact lists and their network of clubs located throughout Australia.

As the primary interest of the study was parental decisions regarding class placement in the context of choice, parents who indicated that they had had no choice in the decisions regarding the placement of their twin children were excluded from the sample. This led to the exclusion of five parents, giving a final sample of 156 parents. Of these, 50 (32%) had twin pairs attending a Kindergarten year, whilst 106 (68%) had twin children attending Year 1. Mothers comprised 98 percent of the respondents, ranging in age from 25 to 50 years ($M = 38.1$). The sample was primarily Caucasian Australian and with varied socioeconomic backgrounds. The twin children of these parents included 62 pairs of monozygotic twins (33 males and 29 females), 69 pairs of dizygotic same-sex twins (40 males and 29 females) and 25 pairs of dizygotic opposite-sex twins. The children ranged in age from 44 to 77 months ($M = 58.6$ months).

Measures

Class placement decisions. Three measures were used to examine parents' class placement decisions and the reason for these decisions. First, parents were asked to indicate whether their twin children were currently in the same or separate classes. Second, parents were given a list of 17 items reflecting potential influences on placement decision (e.g. 'the children's personality'). For each item the parents were asked to indicate how important each were in making their choice about separation or not' from 0 = not important, 1 = considered in choice, 2 = important, 3 = very important. These items were generated by the authors and based on the available literature regarding twin placement decisions (Gleeson et al., 1990; Nilsson et al., 2009; Preedy, 2001; Segal and Russell, 1992). Finally, parents completed an open-ended response question that asked parents to 'comment on the reasons for your choice' regarding school separation.

Zygosity. Zygosity denotes the genetic similarity and dissimilarity of different twin types. Monozygotic twins are genetically identical, whilst dizygotic (fraternal) twins are non-identical and can be either same-sex or opposite-sex pairs. In the current study, twin zygosity was determined via cross-checking parent reports of zygosity, against scores for a standard zygosity inventory regarding physical similarities. This form of zygosity determination has been found to have high reliability against biological testing (Sarna et al., 1987; Segal, 1993).

Coding

The coding of open-ended responses involved two stages. First, content analysis was conducted, with a focus on the factors considered by parents in their decisions to separate and keep their twin children together at school. The coding of these reasons were guided by the literature and mapped on to factors previously identified in the literature such as dominance, competition, independence and social support. Parents' intentions to consider future separation and twin children's involvement in decision-making, situations of conflict with school bodies over their decision and school structure influences were also coded within this analysis. Second, to examine the influence of these factors on the final decisions made by parents, responses were subsequently grouped into three super-ordinate categories of *risk* (choice avoids a difficulty for child or family), *absence of risk* (choice made because no difficulty exists to necessitate the alternative) and *advantage* (choice bestows an advantage to child or family). These categories were emergent from the data. Example classifications of reasons for each of the four categories are presented in Table 1. A fourth category *other* was used to classify those responses where none of the reasons given could be classified into the other three groups or where insufficient information was available to classify reasons accurately.

Table 1. Categorization of parent reasons for choices regarding class placements of their twin children (together or separated)

	Together	Separated
Advantage: choice bestows an advantage to child or family	We wanted them to have the opportunity to support each other. ... to make it easier all around with homework and learning the same thing at the same time and the same way. ... 'Twin 1' would benefit by having 'Twin 2' there as a role model.	... to be individuals within own friendship groups. To develop their individuality, independence and meet and mix with other children. ... easier for teachers to get to know an individual.
Risk: choice avoids a difficulty for child or family	I did not want to risk adding to any stress (starting school) by separating them as well. Because they are developmentally delayed with expressive & receptive language disorder if we separated 'Twin 1' and 'Twin 2' they would have found it hard to cope.	Very poor behaviour when together, shut out instructions from adults, fight frequently. ... became strangely attached to a degree that they didn't need other friends. 'Twin 1' has a more dominant and extroverted personality and we felt 'Twin 2' was at times in his shadow.
Absence of risk: choice made because no difficulty exists to necessitate the alternative	... they usually make friends independently and neither excessively dominates the other. ... (we) felt they were independent enough not to become 'merged'.	'Twin 1' and 'Twin 2' requested their own classrooms this year; they felt very strongly about having their own teacher and classroom. The decision was totally theirs.
Other:	Options for twins in year 1 were a prep/1 and a 1/2. Boys both developmental and maturity levels more suited to a prep/1 class.	

Reliability

Inter-rater reliability analysis via two independent raters was conducted on a random sample of 50 percent of the coded qualitative responses. The Kappa statistic for the four categories: risk, advantage, absence of a problem and other were .71, .77, .78, and .87 respectively, indicating adequate reliability.

Results

Placement decisions

The number of twin children placed in the same class was substantially greater than those separated, with less than a quarter of parents indicating that their twin children had been placed in separate classes at school entry (Table 2). Although a slightly higher proportion of dizygotic opposite-sex twins and female twins were placed in the same class as their co-twin, chi-squared analysis of cross-tabulations showed that any differences in proportions of twin placement across zygosity or gender types were not statistically significant, with uniformly low levels of separation across these groups. There was, however, a statistically significant difference in placement between school year levels, with more twins placed in separate classes in Year 1, $\chi^2(1, N = 156) = 7.1, p = .01$.

Table 2. Number of twin pairs in same and separate classes across zygosity, gender and year level groups

	Same class	Separate classes
Total	120 (77%)	36 (23%)
Zygosity		
Monozygotic	50 (80.6%)	12 (19.4%)
Dizygotic same-sex	48 (69.6%)	21 (30.4%)
Dizygotic opposite-sex	22 (88%)	3 (12%)
Gender ^a		
Male	61 (72.6%)	23 (27.4%)
Female	59 (81.9%)	13 (18.1%)
Year level		
Kindergarten	45 (90 %)	5 (10%)
Year I	75 (70.8%)	31 (29.2 %)

Note: Percentages are based on total for each group type, for example, within total number of males.

^aExcludes dizygotic opposite-sex twins.

Influences upon parental decisions regarding separation

Rating of importance for factors associated with parental decisions regarding twin placement between those who opted for joint and separate class placements are shown in Table 3. Due to the interval nature of the data, non-parametric Mann-Whitney U analyses of group difference were employed. These analyses showed that parents who opted to place their twin children together rated the children's emotional security, twin children's own request, the children's opportunity to enjoy being twins, practical for you and information from books as more important in their decisions regarding class placements than those parents who opted to place their twin children separately. For those who had chosen separate class placements, the children's opportunity to be individual, competition between the twins and the dominance of one twin were rated higher. To control for family-wise error, these analyses were examined using a statistical significance cut-off level of $p < .003$. At this more stringent p -value, statistically significant group differences in the importance of the children's emotional security, the opportunity to be individual, the children's opportunity to enjoy being twins, practicality and competition between the twins remained.

Differences in responses for parents of children attending Kindergarten or Year 1 also were examined. The results indicate that parents of children in Year 1 ($M = 1.5$, $SD = 1.01$, mean rank = 82.8) reported higher levels of importance for teacher recommendations than those in Kindergarten ($M = 1.0$, $SD = 1.01$, mean rank = 61.0), $z = -3.0$, $p = .003$. No other statistically significant differences were observed for year level on any of the other items. Analysis of group differences was also conducted for zygosity and gender. Results revealed no statistically significant difference for zygosity, however, parents of male twin pairs rated practicality ($M = 1.0$, $SD = 1.1$, mean rank = 57.9) as less important than parents of female twin pairs ($M = 1.4$, $SD = 1.1$, mean rank = 70.5), $z = -2.01$, $p < .05$.

Major themes in decision-making

Of the 156 parents in the study, 121 (77.6%) provided open-ended responses commenting on the reasons for their choice regarding class placement. Of these, 93 (76.9%) had twin children placed together, whilst 28 (23.1%) were placed in separate classes. Analysis of parents rationale provided

Table 3. Rating of importance for factors associated with parental decisions regarding twin placement

	Class placement				z	p
	Together		Separate			
	Mean (SD)	Mean Rank	Mean (SD)	Mean Rank		
The children's emotional security	2.6 (0.6)	82.6	3.0 (0.9)	6.0	-3.6	<.001
The children's personality	2.3 (0.8)	75.9	2.3 (0.9)	78.5	-0.3	ns
The relationship between the twins	2.3 (0.7)	79.1	2.0 (0.9)	65.7	-1.7	ns
Your twin children's own request	1.9 (1.0)	80.8	1.4 (1.0)	60.0	-2.6	.01
The children's opportunity to be an individual	2.1 (0.8)	67.7	2.7 (0.5)	103.5	-4.6	<.001
The children's friendships	1.9 (1.0)	77.1	1.7 (1.2)	74.7	-0.3	ns
The children's opportunity to enjoy being twins	1.6 (1.1)	82.3	0.9 (0.9)	55.0	-3.4	.001
The academic abilities of your twin children	1.4 (1.1)	72.0	1.7 (1.2)	84.7	-1.6	ns
Practical for you	1.4 (1.1)	86.1	0.3 (0.6)	42.6	5.4	<.001
Recommendation from teacher	1.4 (1.1)	77.1	1.2 (0.9)	72.5	-0.7	ns
Dominance of one twin	1.0 (1.0)	72.3	1.5 (1.29)	88.3	-2.0	.05
Recommendations from parents with twins	0.9 (0.9)	77.1	0.7 (0.9)	68.2	-1.2	ns
Competition between your twins	1.0 (0.9)	69.6	1.7 (1.1)	97.3	-3.5	<.001
Recommendation from other professional	0.8 (0.9)	70.6	0.8 (1.0)	70.2	-0.6	ns
Recommendation from principal	0.8 (0.9)	72.5	0.9 (0.9)	74.8	-0.3	ns
Information from website	0.6 (0.8)	77.7	0.3 (0.6)	64.2	-1.9	ns
Information from books	0.7 (0.8)	79.8	0.4 (0.7)	61.6	-2.4	.02

Note: Scores for mean range from 0 (not important) to 3 (very important).

in the qualitative data largely mapped onto themes addressed in the close ended items. Key among these was independence/individuality, emotional security, twin's enjoyment/happiness, social development and friendships, competition, academic and education, dominance, and practicality. Of the 121 responses, 55 (45.5%) indicated that their twin children had been included in their class placement decisions. Chi-squared analysis of cross-tabulations was subsequently used to identify differences between twin inclusions in placement decisions across twins placed together (46.4%) and separately (35.7%), as well as differences for those in Kindergarten (23.1%) versus Year 1 (53.5%). No statistically significant difference was observed for the proportion of twin children included in decisions for those placed in separate or same classes. However, there was a statistically significant difference in year level groups, with a far greater proportion of children in Year 1 included in parents' decisions, $\chi^2(1, N = 126) = 10.1, p = .002$. Finally, of the 98 parents who had

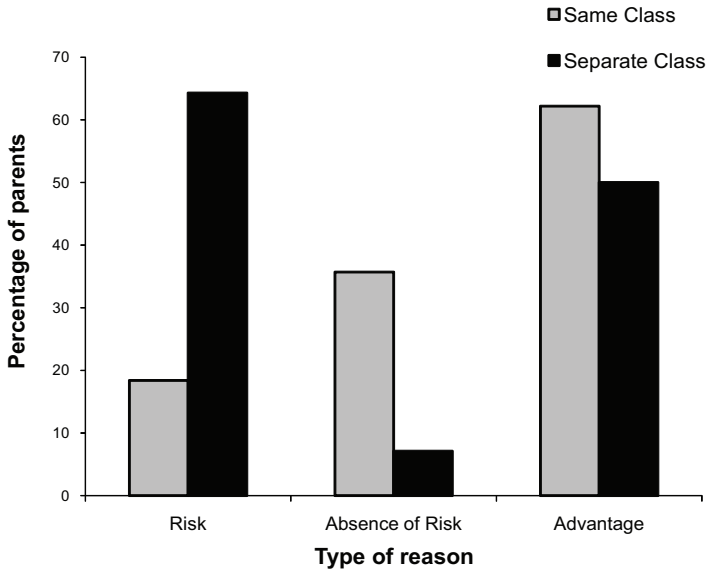


Figure 1. Reasons for parental placement decisions within separated and same class groups.

selected to keep their twin children together, 19 (19.4%) indicated that they would consider future separation, with a further 18.3 (23.5%) highlighting that the children’s current ‘young’ age was a consideration in their decision.

A key emergent theme was parents’ use of constructs of risk, absence of risk and advantage. Figure 1 shows the percentages of risk, absence of risk and advantage category responses used by parents who chose to place their twin children in same or separate classes. As shown in the figure, parents most commonly cited advantage(s) in the reason for their choice, with advantage(s) highlighted in 59.5 percent of responses. Risk(s) were identified in 28.6 percent of parental responses, whilst the absence of risk(s) used by 29.4 percent of parents. It is important to note that an additional 26 (20.6%) of the parent responses were categorized as ‘other’ and are not presented in this figure. Of this 26, 17 represent cases where the parents reported that school structure (with a single class available at the school chosen for their children) had dictated the decision, whilst the remaining 11 did not provide enough information to categorize these responses.

Chi-squared analysis identified a statistically significant difference in the percentage of risk-focused reasons for parent decisions across twin placement type, $\chi^2 (1, N = 126) = 22.5, p <.001$, with a far greater proportion (64.3%) of parents where the decision had been one of separation highlighting risk(s) in the reasons for their decisions than for parents who had chosen to keep their twin children together (18.4%). A statistically significant difference also was observed in the proportion of parents highlighting the absence of risk(s), $\chi^2 (1, N = 126) = 8.6, p = .01$, with this category of reasons used by 35.7 percent of parents who placed their twin children in the same class and only 7.1 percent choosing to place their twin children separately. The proportion of parents who highlighted advantage(s) in their reasons regarding class placement was not statistically significantly different across placement type, with advantage(s) highlighted by 50 percent and 62.2 percent of parents in separate or same classes respectively.

Discussion

Entry to school is typically the first point at which the question about whether to separate twin children or place them together in the same class arises. The decision centres on the inter-twin relationship and the intended outcome is to optimize social-behavioural adjustment and scholastic attainment of each twin child. In response to growing evidence on child outcomes resulting from placement decisions (Grime, 2008; Tully et al., 2004; van Leeuwen et al., 2005), there has been a shift from organizational to individual approaches in decision-making that forefront the individual qualities of the twin relationship and the unique needs of individual twin children. School entry is also the point at which the association between class placement and adverse outcomes is most strong (Tully et al., 2004; van Leeuwen et al., 2005). At this point, parents arguably hold the greatest knowledge about their twin children's abilities and relationship and their preferences for class placement represent both this specific knowledge and that which they hold more generally about twin children in the educational environment. For this reason, our study examined parental decisions about class placement of their twin children at entry to school. Importantly, the study examined the rationale for parents' decisions in a context in which parents were free to make choice.

Though there are other studies reporting frequencies for separation (e.g. Coventry et al., 2009), including others based on Australian samples (Gleeson et al., 1990), there are none that specify the conditions under which placement decisions were made. Our data indicate that at school entry, in the context of choice, the majority of parents opt to keep their twin children in the same class. Our data suggest many parents believe the twin relationship provided emotional support and familiarity in the new environment of the school and the choice of keeping twins with their co-twin on transition to schooling was viewed as the least disruptive option. Parents' decisions are consistent with current research evidence. On balance, the available data regarding scholastic attainment or social-behavioural adjustment for twin children indicate that there is greater risk of adverse outcome among children who are separated early than among those separated later or never (Tully et al., 2004; van Leeuwen et al., 2005). The parents of twins in our sample, in the absence of any specific evidence of risk, opted for joint class placements and identified the value of the co-twin relationship as a support mechanism in the transition to school.

It is important to note that the decision to keep the twin children together was not reflective of a lack of parental knowledge of hypothesized risks associated with twinning. Parents of children placed in both separate and same classes demonstrated through their open-ended responses a strong awareness of potential difficulties that are reported in the literature (Hay and Preedy, 2006; Preedy, 2001). They listed a range of aspects of the twin children's relationship that they had considered in their decision. These included rivalry, dominance, discrepancies in ability, friendship, behavioural difficulties, language and communication. Parents' decisions considered not only the *potential risks* but the *evidence of these risks* in the observation of their individual children. In this way parents' decisions regarding the placement of their twin children were highly personalized, with emphasis placed on the personal qualities of the twin children and twin children's relationship. Parents saw recommendation by principals and other professionals and information from books, websites and other parents of twins as least important to their decisions.

It is not surprising that most parents, regardless of whether they made the choice to separate or keep their children together, indicated that they felt the decision made would advantage their children. For those separated, this advantage was most often presented as opportunity for individuality while for those who were kept together, this was presented as an opportunity for emotional support from the co-twin. Content analyses of parents' open-ended responses indicate, however, that those separated are distinguished by the presence of risk while those kept together are distinguished by the absence of risk. It would seem that pre-existing problems are directing parent choice at school

entry but, beyond this point, a process of planned gradual separation commences in which those without problems may also choose to separate. This finding aligns with the finding of higher association of adverse outcome for those separated early compared with those separated later or retained in the same class (Tully et al., 2004).

The opportunity to be individual, although rated more important for parents who chose to separate their twin children, was also rated highly by parents who chose to place their twin children together. This finding, along with the open-ended responses, suggests that parents may not see the provision of separate class placement as the only means of fostering individuality. Qualitative data from this study suggests the possibility for separate and individual experience within class settings. One parent, for example, describes that their choice to select a single class for their twin children was influenced by confidence in the school's ability to foster individuality within the class, stating that 'we were confident that within the school environment they [the twins] would be allowed to grow as individuals, side by side'. To date there are no empirical data examining specific pedagogical practices and opportunities that promote individuality for twin children. There have, however, been theoretical challenges to the position that separation is the only and most appropriate means to facilitate individuality (Grime, 2008; Larche, 2007). Larche (2007) goes as far as to suggest that, contrary to promoting individuality in twin pairs, the separation of twin children may in fact lead to the undermining of the individual identities. She proposes that when teachers and peers are not encouraged to get to know and understand the individual differences between the two children, they have the potential to assume only arbitrary differences between the child in their own class and the 'other' twin.

Parents' practices in staging separation and their reports of teacher practices in affording opportunity for individuality, while acknowledging the benefits of the twin relationship and importance of the twin identity, indicate that there are pedagogic alternatives to the simple structural solution presented by separation. Educational and psychological professionals may provide an important input into assisting teachers with pedagogic strategies to optimize opportunity for both individuality and twin support. The study challenges those who work in and consult with educational bodies to conceptualize the decision regarding twin placement as a process rather than a single change event.

Finally, it should be noted that many parents in our study indicated that they included twin children in their decisions regarding twin placement, with more than half of the children included in these decisions as they entered Grade 1. This provides a marked contrast with studies of the perceptions of teachers (Gleeson et al., 1990), principals (Preedy, 2001) and school counsellors (Nilsson et al., 2009) who report the consideration of the twin children's wishes as one of the least important factors in decisions made regarding their placement. Research conducted by Grime (2008) has highlighted the need to allow children's voices to be heard in regards to the very personal decisions made about their placement at school. This position is consistent with the finding of higher internalizing problems for separated twins (van Leeuwen et al., 2005). Though existing studies do not distinguish between those separated through choice or through enforcement of policy, it is probable that some portion of explanation of these findings are a negative response to unwanted separation and suggest that children's feelings and perspectives are important considerations. Parents' choice to include their twin children in their decisions suggest that parents see their children's feelings as important in their decisions and that in order to make decisions that minimize distress for twin children, the meaning of the co-twin relationship to each twin child should be ascertained.

Conclusion

This study has provided data about class placement of twin children in the early years of school. The data are unique in studying the influences and rationale for parental decisions in the context of

choice and in identifying the role of the absence or presence of risk in the inter-twin relationship in the decision that are made. The findings make two key contributions. First, they help address the question of educational needs of twin children and inform organizational planning and practice. Second, they contribute to the understanding of potential pre-existing difficulties in twin children who are separated and provide direction for research designs assessing the effects of class placement decision on child outcome.

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