

Summarising the Evidence on the Effects of Size on Residential Establishments for Children

1. Generally speaking comparative research studies of residential homes and schools for children have failed to find any correlation between the size of residential establishments, placement outputs and child outcomes.

There have been no controlled studies in this area. It would be practically impossible to establish big and small placements and randomly allocate children to different options.

There have been studies in Germany, Holland, Israel and England looking at outcomes for children placed in different size residential settings. Whether one looks at residential education placements (range 100-1200 places); training schools for anti-social young people (range 20-60 places) or homes for children with a need for personalised care (range five-15 places), no correlation between size and success, at least in terms of conventionally expected outcomes, is found. The one possible exception is small residential homes for children (placement size ranging from five-20 places) where there is one study to indicate that small is better. This is especially the case with regard to outcomes for the homes themselves, such as levels of absconding, staff sickness or morale, rather than the long-term outcomes for the children.

2. In the field of education, on the whole, there is no evidence to suggest that big mainstream schools are any more successful than smaller mainstream schools.

Again there have been no controlled studies but the seminal work by Rutter and colleagues shows that size of mainstream school (range 400-2,000) does not correlate with educational performance of children, once other factors, particularly the ability of the children at intake, have been taken into account. The same finding was found for children's attendance, behaviour and delinquency. This evidence appears to sit well with the US literature.

There is also no evidence from controlled studies to suggest that smaller class size correlates with better achievement. But such studies are fraught with problems because they usually look only at correlations and the results may be influenced by other factors. For example, the same teaching methods may be used whatever the size of class and factors such as the level of external scrutiny of teachers or the inclusion of children with special needs in the teaching group may affect professional performance. Nevertheless, teachers and politicians clearly feel that class size is important which may produce a 'Hawthorne' effect.

To answer the question of the effects of class size properly, an experimental design is required. A recent study by the Institute for Economic and Social

Research in England found that reducing class size from 30 to 22 produced better test scores, a 10% improvement in the reading ages of infants. There were, however, problems in implementation. For, example, reducing all classes to a maximum of 20 would require massive recruitment of new teachers and re-training of existing ones as opportunity on its own may not be enough to change practice (this is confirmed by the poor quality and unimaginative education in reform schools where pupil numbers were small). These factors could reduce the quality of teaching and thus negate any gains produced by smaller classes.

3. Economic and ideological factors and not considerations about optimal child development generally determine establishment size.

Historians find that economic and ideological factors have been the main drivers of size of residential placements. Although average sizes have mostly fallen in recent years, the rank order of sectors according to average size has remained consistent.

Economic factors have driven in both directions. Public or semi-public bodies with access to capital loans and a responsibility for general populations tended to see large buildings, often constructed on inexpensive land and away from urban centres, as the best use of scarce resources. Many voluntary initiatives, in contrast, provided smaller placements that reflected restricted access to funds and a focus on specialist groups often neglected by the public sector.

These strong influences identified by historical explanations produce consistency within sectors. Much detail, however, depends on the desired aims each establishment. Where there is proselytisation and a desire to socialise children, promote solidarity or deny them exposure to other religious beliefs, institutions tend to be large. Kashti, for example, drawing on evidence on the development of residential education in England and Transylvania in the 16th and 17th centuries and in Israel in this century shows how size of living groups for children has decreased as religious or national ethos and ethnic homogeneity have declined. Generally speaking, there is a greater tendency to think about the potential to make placements more effective than to make them smaller (although size may become a factor to be considered given the strong arguments - see below - in both directions).

4. The function of the residential establishment is a strong determinant of the size of the institution and the sub-units within it.

There is a reasonable amount of consistency in placement size within but not between sectors, suggesting a strong functional influence. Establishments offering custody, such as Youth Correction (range 40-500 in US), specialist care reliant on sophisticated technology, such as hospitals (range 1,000-

2,000), and good quality general education, such as private boarding schools (range 100-1,200), tend to be larger than provision for children with special educational, behavioural or care needs (range typically between five-50).

From the available evidence, it would seem reasonable to hypothesise that the size of placement for children decreases with (a) the younger age of children served; and (b) the classification and levels of special needs (educational, behavioural, psychological) they present. Since many residential services in Western nations are increasingly (although not exclusively) reserved for children with some kind of special need, sizes of both institution and living unit have generally decreased in the last quarter of the last century.

5. Two factors, one ideological the other psychological, provide the intellectual justification for this trend to smaller size. The first is the growing strength of an ideology of individualism in Western societies and a move away from collective socialisation and group indoctrination. This is manifest in the increasing sensitivity to the needs of individual children, the categories of need used to fashion plans for them and the clear obligation to try and meet them effectively. It is also apparent in changes of desired aims from values such as encouraging religious belief or preparing for military or domestic service to issues such as safety, self expression and family contacts.
6. The second factor was fuelled by growing awareness of the negative effects on children of separation from their birth families. This evidence has accumulated since the Second World War and has arguably had the greatest impact on the organisation of size of residential placements

The Second World War caused separation of large numbers of children in Western Europe (with some children shipped over to North America). This created an interest in the effects of movement, separation and substitute care on child development that has produced some highly influential schools of thought in child psychology. This subject deserves a summary in its own right and justice cannot be given to it here. On the whole, it points to the potential damaging effects of extended separation that diminish with age.

For children whose extended separation is a necessity, residential placements have tended to adapt to meet their needs by creating smaller family-like environments within a larger establishment. Various called 'cottage homes' or 'family-group homes', the tendency has been for units of 6-12 children supported by consistent care givers in a family like environment. While these models are not particularly new – they were used in the nineteenth century, especially for girls - nearly all child welfare establishments are now organised on such lines.

6. Although large placements are no more or less successful in terms of child development outcomes, there are negative effects associated large size that require attention.

Studies of large size placements across sectors have noted the potential for the following types of difficulty:

- Resistance among staff to change and program development
- An undue concern with questions of organisation and administration
- As a corollary, a tendency to neglect emerging evidence about changing needs of children
- Potentially unhelpful staff and child sub-cultures

7. The literature also notes the potential strengths of large size placements.

Effective large-scale residential settings capitalise on their size by:

- Flexibility in meeting the needs of children who do not settle in one part of the establishment
- A variety of services within the placement to meet the varying needs of children
- Resources to devote to improved understanding of the needs of children and a preparedness to experiment with new methods to meet those needs

8. The various research studies that are available suggest some rules of thumb when thinking about size in relation to residential placements.

Despite the lack of authoritative evidence, there has been an understandable desire on the part of policy makers for numbers that can be used as rules of thumb when planning or developing interventions. The following indicators have emerged in response to this demand. The numbers should not be treated as absolute (eight is probably as good as seven and better than 17) nor taken as the product of carefully controlled research. The numbers are, nonetheless, frequently referred to in policy statements.

Tizard and Kushlick's work in the 1960s, partly undertaken in residential placements for mentally handicapped children, showed that groups operate most efficiently when they consist of six to eight people. For example, two or three people are not as creative as seven and a unit of 20 people requires organisational structures that detract from focus on primary objectives. This work has been used to rationalise the size of units in which children live and by management theorists seeking to optimise group dynamics, such as McCullough and Ely who recommended the mystical number of seven. However, Barbara Tizard's work on residential nurseries urged caution before adopting a set formula. She found that residential nurseries with two staff (a nurse and an assistant) to eight children produced less stimulation and staff-

child interaction than those with one nurse to six children. This was because of the different staff dynamics in the two models and the disabling effects of the pairing on staff feelings of empowerment and autonomy.

Other unexpected factors can also enter the calculation. In education, there has been a recent pre-occupation in the United States with questions of security in mainstream schools, primarily stemming from a series of incidents in which children have shot pupils and teachers. Although isolated (only a tiny proportion of schools have experienced such an incident) there is a suggestion that large size may be a contributory factor. This has prompted the Gates Foundation to mount a study into the potential for capping school size at 400 places.

While recognising the structural impediments to reducing school class size in mainstream schools, there is also a growing consensus that units no greater than 20 should be an objective in Western nations, especially for younger children. The evidence suggests that given good conditions (a good school, well-trained staff and a supportive environment) smaller classes will improve educational achievement.

It should go without saying that most effective placements are able to ignore some or all of these rules of thumb because of other auspicious features in their organisation.

9. The evidence considered suggests that the question set in the title of this paper is too general to be useful. There are no effects of size per se as much depends on the context. A more fruitful approach, therefore, is to consider the issue in three stages. First, ask what are the desired aims of the establishment (for example, what is the balance between healthy child development, behaviour modification, therapy, control and education). Second, what practices are known from research to best promote these aims. Third, what organisational features, one of which is size of establishment and sub-units, will best facilitate these.
10. Lessons from care of children in large hospitals are probably the most relevant to the issues facing Milton Hershey School

Despite the overwhelming evidence in favour of creating a network of small hospitals near to children's homes, the requirement for collective expertise, technical equipment and advice on a single site means that it is uneconomic to do so. Effective hospitals are big, sheltering several hundred children and adults at any one time.

The pioneering work of Isabel Menzies-Lyth started with this fact but looked for adaptations that fitted with what is known to lead to optimal child

development. Her work has been taken up by hospitals in North America and in Europe. She advocated permitting mothers to stay with the child in hospital, allowing them to undertake simple and routine medical tasks ordinarily undertaken by a nurse or doctor and no restrictions on visits by family members. Her work also had far reaching impacts on units of size *within* hospitals. For example, since it is not always feasible for parents to attend to their child in hospital, she advocated:

- A small nurse team assigned to each child to ensure continuity of care
- Use of smaller wards so that the child can own his or her personal space
- Permitting children to express distress (and so avoiding known pathological responses to institutionalisation, such as withdrawal or attention seeking behaviour).

11. What should Milton Hershey School do?

By its very nature, while the evidence explains why Milton Hershey School is the size it is, it does not answer the question 'should it be any bigger?' However, there are some strong pointers in the evidence that may be borne in mind at the Senior Leadership Team retreat.

First, the review of the literature (that involved talking to experts across Europe and the United States) found no placements *larger* than Milton Hershey School. Residential education placements tend to be larger than other types of residence, but the School is at the upper limit of the current range.

Second, the growth from 1200 to 1500 by 2006 will create its own challenges and there may be much to be said for stabilising at this number before considering further expansion.

Third, the benefits associated with large-scale placement are unlikely to rise exponentially by growing the School.

Fourth, from a research perspective it is too early to say but there may be scope at Milton Hershey School to minimise the disadvantages and maximise the opportunities associated with large scale placement within the 1200-1500 range. Senior Leadership Team will have a perspective on this.

Fifth, there are many more opportunities for improvement by adjusting size *within* the School than there are by adjusting the size of the *whole* School. For example, the size of the three schools within MHS and the extent to which management and direction of these facilities can be devolved deserves further consideration.

Sixth, over the next 18 months, more will become known about the needs of children currently placed within Milton Hershey School and opportunities for improved interventions designed to achieve better outcomes on their behalf. Potential developments could greatly benefit from stability of the overall establishment but greater flexibility and diversity within.

Seventh, Chapin Hall would like to encourage an approach to structural issues (in line with Dartington's Structure, Culture and Outcome model) that uses evidence about the needs of children that can benefit from the School and logic models about how the intervention can optimise child development in the setting of objectives. Opportunity for development in this area will be lost if attention is unduly placed on administrative and bureaucratic questions associated with expansion beyond 1500 beds.

Eighth, the study of the needs of children in the communities that have traditionally supplied recruits for the School is likely to present challenges not only for practices at the current site, but also for new interventions beyond it. These opportunities could be limited by investment on the current campus to expand beyond 1500 places.