

IMPROVING INSTITUTIONS: EFFECTS OF SMALL UNIT SIZE ON QUALITY OF CARE OF PEOPLE WITH SEVERE INTELLECTUAL DISABILITIES

By Timo Saloviita

Abstract: Two studies analysed the effects of small unit size of six to eight residents on the quality of care in institutions for people with intellectual disabilities. The results showed improvements in small units when compared with larger wards with 10 to 20 residents. Overall, the outcomes were small or modest, and the quality of care remained below standards typically achieved in community environments.

The dehumanising nature of the traditional, large institutions built for people with intellectual disabilities was documented several decades ago (Blatt & Kaplan, 1974; King, Raynes & Tizard, 1971; Vail, 1967). Currently, numerous research studies have shown the superiority of community living over that of institutional care of people with severe intellectual disabilities with regard to environmental quality, development of personal independence, and quality of life (see for reviews Haney, 1988; Larson & Lakin, 1989; Lynch, Kellow, & Wilson, 1997; Rotegard, Bruininks, Holman, & Lakin, 1985). Despite this ample evidence, large institutions have continued operating in many countries. Over the years, however, they typically have undergone various changes with efforts to alter institu-

tional environments to causing their inhabitants less harm. One strand of this development has been in unitisation. Beginning in mental hospitals in the early 1960s, unitisation has come to mean various organisational arrangements bringing the responsibilities of individual staff more to the forefront (Raynes, Bumstead, & Pratt, 1974). Frequently, this has meant the division of big institutional wards into smaller sections by physically dividing the old units into smaller ones and by permanently assigning direct-care staff to smaller groups of residents.

While no positive outcomes have been reported on the downsizing of an entire institution (Stancliffe & Hayden, 1998), several studies have shown the positive effects on institutional care of small

unit size. The benefits have included increases in adaptive skills and decreases in challenging behaviour (Hemming, Lavender & Pill, 1981; Murphy & Zahm, 1978). The level of positive activity of residents has been higher in smaller units than in larger units (Dalgleish & Matthews, 1981; Miura, 1986). Interaction between residents and care personnel in smaller units has been more frequent (Byrd, Sawyer, & Locke, 1983; Harris, Veit, Allen, & Chinsky, 1974; Hemming, Lavender, & Pill, 1981), and the level of daily care practices less institution-oriented (McCormick, Balla, & Zigler, 1975). Such results have even inspired hope that it would be possible to humanise institutions and make them function well enough (Zigler, Hodapp, & Edison, 1990).

Some recent studies indicate that institutions have actually changed. In their review, Emerson and Hatton (1994) point out that people who move from large-scale institutions to smaller community-based services typically experience improvements in their lives. However, great variation exists within each service model so that life "in the community" may appear, at least in some aspects, relatively indistinguishable from life in institution. Saloviita and Åberg (2000), for instance, present data which indicate that institutional wards, community group homes, and even single apartments overlap in the degree of self-determination afforded to the residents.

Unitisation has meant reduction in residential group size. Traditional institutional wards often accommodated more than ten residents. Based on his review of previous research, Conroy (1992) concluded that housing units under ten residents were clearly better than those with over ten. The association between smaller unit size and quality of care in the community environment has further been confirmed in the size-range from two to eight (Conroy, 1992), and from one to five (Tossebro, 1995; Stancliffe, 1997).

Unitisation in Finnish institutions

Most present-day Finnish institutions for people with intellectual disabilities were built relatively late compared with those in other Nordic countries. The majority of institutions were opened during the sixties and seventies, the last one as recently as 1979. Originally, many of the new institutional wards were small, accommodating only eight resident each. Very soon after the opening of these institutions, however, these small units of eight used to be combined into single wards of 16. The reason for this probably was rationalisation of the care. Another sign of rationalisation was the disappearance of the furnishings originally provided. Broken or worn-out items were seldom replaced by new ones. As a consequence, especially those wards accommodating people with severe challenging behaviour eventually were almost empty (Saloviita, 1989). This trend toward deterioration in care was

reversed during the early eighties when ideas of normalisation, spreading mainly from Sweden, became more well known among professionals working in the field. An ad hoc committee nominated by what was then known as the National Welfare Association for the Mentally Deficient made several recommendations aiming to normalise conditions in institutions. Among them was reduction in unit size (Weckroth, Huovinen, Miettinen, Kaipio, Panelius, Komulainen, & Hiila, 1981). Although the ideas presented by the committee received fierce objections at first, conditions in the institutions slowly began to improve.

In 1989, I conducted a survey of superintendents of Finnish institutions concerning their unit size, and found in the country's 17 large institutions 426 housing units. Of these units, 80 (19%), housed more than ten people each. Many superintendents were interested in breaking the still remaining big units into smaller ones, and during the next years, measures were taken towards this goal.

Measures of quality in residential services

In studies concerning the quality of care in residential services, quality has been approached differently; Bellamy, Newton, LeBaron, and Horner (1990) described three types of measurement: of progress, of capacity and of lifestyle. Progress measurements evaluate the quality of services in terms of their success in

increasing an individual's skills, adaptive behaviour, or community adjustment. Measurements of progress of adaptive behaviour were exceedingly popular during the sixties and seventies, to the extent of coming under criticism (Emerson, 1985). Capacity measurements analyse various program procedures and environmental features such as the level of normalisation (Wolfensberger & Thomas, 1983).

The most recent development in the assessment of program quality are lifestyle measurements. They evaluate directly the lives of the persons served. Difference between capacity and lifestyle measurements are, however, not always clear. Sometimes the only difference may be the unit of analysis: capacity measurements are interested in the properties of the environment, such as its overall safety, whereas lifestyle measurements focus on the individual outcome of feeling safe.

This article presents two studies on the effects of unitisation in two different institutions. These studies utilise several measurements of quality. The first applies traditional progress measurement of adaptive behaviour (Nihira, Foster, Shellhaas, & Leland, 1974). Both studies use the capacity measurement of the Child Management Scale developed by King, Raynes and Tizard (1971) aimed at measuring daily care practices. Because the quality of their furniture has been a problem in institutions, both studies attempt to measure the level of

cosiness of the institutional environment by listing surviving items of furniture. Finally, the first study employed a lifestyle measurement, the Personal Appearance Index (McClannahan, McGee, MacDuff, & Krantz, 1990).

Study 1

Method

Participants. The participants were six men, aged 18 to 25, with severe intellectual disabilities. Their level of adaptive behaviour was average for an institution, but they all displayed serious challenging behaviour. They were selected for the new small unit in hopes of their improved behaviour. One of the participants moved after the study began and was replaced by a new resident. Therefore, both ABS assessments were available from only five residents.

Intervention. The participants moved from three other wards of the institution, with 10 to 20 residents each, to small unit described below. These previous wards were later used as a non-experimental contrast group for the small unit. The small unit program was initiated by the superintendent of the institution with the aim of bettering the quality of care. The small unit received special attention from the directors of the institution, leading to additional consultation and training of the small-unit staff. Research into the results of

this experimentation was one strand of this special attention.

Setting. The small institutional unit consisted of a lounge, a kitchen, five bedrooms, and one toilet. The personnel had a common office with the neighbouring unit. Two to three nurses worked on the morning shift and two the evening shift. A night nurse was shared with the neighbouring unit. The unit was part of an institution housing 360 people.

Data collection. The adaptive behaviour of the residents was measured twice: when the unit started, and then two years later, by the AAMD Adaptive Behavior Scale or ABS (Nihira, Foster, Shellhaas & Leland, 1974). Part One of the scale measured adaptive skills and Part Two maladaptive behaviour. The interrater reliability of the Finnish translation of the ABS Part One was .97, and .53 for Part Two (Saloviita, 1990).

Daily care practices of the small unit and its contrast wards were measured on the Child Management Scale (King, Raynes, & Tizard, 1971). This 30-item scale, shortened here to 29 items, measured resident-oriented care practices vs. institution-oriented care practices and was arranged along four dimensions: rigidity of routine, block treatment, depersonalisation, and social distance. The scale was scored by use of interviews and direct observation. Scores could range from 0 to 58, with higher

scores indicating more institution-oriented practices. An example of the items and their scoring is item 18: "Whereabouts do they keep their daily clothes?" The item was scored zero if the clothes were in residents' private possession. It was scored one if they were shared and supplied weekly, and scored two if they were in communal provision and shared daily. The construct validity of the Child Management Scale has been confirmed in several studies (McCormick, Balla, & Zigler, 1975; Raynes, Pratt, & Roses, 1979).

The physical environment of the small unit and the contrast wards was measured by the Cosiness Inventory developed by Saloviita and Heikkilä (1989). This inventory measured the normality of the furnishings of the apartment by a 45-item scale, ranging from zero to 90 points, higher scores indicating higher normality. An example of the scoring is given with item 14: "What do the potted plants look like?" The item was scored zero if there were no plants in the living-room. It was scored one if there is something abnormal about the plants, for example, they were plastic or were placed too high to see. The item was scored two if the plants look normal. If there were several rooms of the same category, like sleeping areas, the mean score was calculated. The inventory was scored by observation of the environment and had an interrater reliability of .93 (Saloviita & Heikkilä, 1989).

Physical appearance and personal care of the residents was measured by the Personal Appearance Index - extended form (PAIX). It was based on the index developed by McClannahan, et al. (1990) but was extended to contain eight more items. Each item was scored either zero or one. Item One, for example, asked if the hair was free of lint, foreign material, and excessive oil. Exceptions included scalp (boldness), dandruff, barrettes, and hair bands. Interrater reliability of PAIX was .89 (Saloviita, 1992).

Results and discussion

The AAMD Adaptive Behavior Scale Part One scores from the initial assessment ($M = 106.8$, $SD = 28.6$) were compared with the follow-up assessment ($M = 104.4$, $SD = 20.6$). The Wilcoxon Signed Ranks Test showed no differences between the two assessments, $Z = -.730$. Neither were there changes in maladaptive behaviour as measured by Part Two of the ABS, when initial assessment ($M = 63.4$, $SD = 19.4$) was compared with follow-up assessment ($M = 68.0$, $SD = 25.3$). Here, the test statistic was $Z = -.135$.

The three direct measurements of quality of care differed. The small unit scored lower (13) on the Child Management Scale than the contrast wards (Mean = 40), indicating more resident-oriented care practices. However, the score remained high if compared with community-based group homes for people with severe disabilities, where

the scores were near zero (Saloviita, 1992). The Cosiness Inventory showed that the small unit was more homelike (62) than the contrast wards (Mean = 38). However, that unit clearly remained below the normal level (85) which was obtained by asking the care personnel to rate their own homes (Saloviita & Heikkilä, 1989). The PAIX Inventory, which measured personal appearance, did not show any differences between residents of the small unit (Mean = 81) and those in contrast wards (Mean = 82). Taken together, the small unit clearly had more resident-oriented daily care practices and was furnished more cosily than its larger control wards. On the other hand, the level achieved was not comparable to that of average residences in community settings, where the scores have been close to zero (Saloviita, 1992). In contrast, the personal appearance of the residents was not better than in control wards, and there were no gains in the adaptive behaviour of the residents nor decrease in their challenging behaviour.

Study 2

Method

Participants and setting. The study was done in an institution of about 400 residents. Two children's wards accommodating 16 children with severe or profound disabilities in each were selected for the study. Two other large

wards from the same institution were selected as controls.

Intervention. The two wards were both divided into two units by assigning a permanent staff to each. Four new units consisted of 6, 7, 7, and 8 residents respectively, following the removal of four children to other wards. One nurse was added to the number of staff to make this change possible. Both wards were physically easy to divide because they were originally planned to form two units. Each had a lounge, a few sleeping areas, toilets, and a storehouse. Two small units had a common entrance, a small kitchen, a sauna, and office. The staff of the wards resisted the change because they suspected that their work load would increase after unitisation. They were allowed to move to other wards if they wanted, and new staff replaced them on a voluntary basis. Almost all of the nurses elected to leave. The new staff received a few days initial in-service training before the start of their work. The training focussed on achieving better quality of care through normalising the living conditions of the residents.

Data collection. Daily care practices were measured using the 29-item version of the Child Management Scale (King, Raynes & Tizard, 1971). The measurements were made both in experimental wards and control wards half a year prior to unitisation, and one year later. The level of furnishings was measured in experimental wards by

counting all the observed items of furnishing together. The sum score was used as a crude indication of cosiness.

Results

In the initial assessment, the scores of the Child Management Scale were 19 and 25 in the experimental wards, and 31 and 37 in the control wards. In the second assessment, the scores in the new small units were 9, 13, 14 and 18. The scores in the control wards were 24 and 34. Thus, there was a mean change of -8.5 of scale scores in the experimental wards and -5 in the control wards. The number of items of furnishing increased in the experimental wards from 130 to 210, or 62 %.

Discussion

The change towards more resident-oriented practices was somewhat larger in the wards that were divided into smaller units than in the control wards. The change in the level of furnishings was clear and was observable in the larger amount of furnishings. For example, plants, mats and curtains were provided, which previously had been missing from the ward. Because the staff had changed, it was possible that these changes were at least partly due to new, more motivated staff, which freely chose to move to these new small units with a reputation of attempting to achieve a more normal environment.

This person-centered explanation cannot be wholly excluded even if new staff came from other wards of the institution where the level of care did not differ from the wards under study.

General discussion

These two studies illustrate the effects of unitisation in the institutional care of people with intellectual disabilities. They manifest both the possibilities and limitations of efforts towards improving such institutions. In the first study, no changes in adaptive behaviour were observed among the residents of a new small unit. Both studies showed gains in resident-oriented care practices in small units as compared with larger wards in the same institution. However, the changes were not large and the scores lagged behind those reported from community-based group homes. The first study observed that the level of cosiness based on level of furnishings was higher in the small unit than in its larger counterparts. The second study showed that the level of furnishings improved after unitisation. No observable differences, however, were evident in the personal appearance of the residents.

In both studies, unitisation was introduced by the managers of the institution and could be opposed by the direct care staff, who expected negative consequences, a higher work load. In contrast to these expectations, Heikkilä

and Paananen (1989) have reported a lower level of stress among nurses in the small units than for those working in large institutional wards.

Unitisation was associated in both studies with improvements in the quality of care but the effects remained small or moderate. These results are in accordance with other experiences of improvements within institutional environments typically leading to only minor changes in quality of care (Landesman Ramey, 1995; Raynes, Bumstead & Pratt, 1974). Unitisation seems to be an important means for improving institutional settings. Still, these outcomes hardly fulfilled expectations as to institutions that work, as proposed by Zigler, Hodapp, and Edison (1990).

Both studies involved reduction of unit size from over ten inhabitants to under ten inhabitants. According to Conroy (1992), this change has typically been associated with improvements in quality. Contrary to this, Tossebro (1995) in his study on 156 Norwegian housing units found positive effects only when the size of living units was in the one to five range. Thus, it is possible that the modest results in the present study were due, at least in part, to the fact that the new small units still remained in the six to eight size range.

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