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Home visiting: The effect of a hospital based nurse home visiting programme on the rehabilitation of children following their discharge from a child psychiatry inpatient unit

Gordon H. Peers
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Home Visiting:

The effect of a hospital based nurse home visiting programme on the rehabilitation of children following their discharge from a child psychiatry inpatient unit.

by

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RMHN, RN, BHSc. (Nursing)

Thesis submitted in partial requirement for the award of

Master of Nursing

School of Nursing
Faculty of Health and Human Sciences
Edith Cowan University

Date of Submission: January 1997

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"I certify that this thesis does not incorporate, without acknowledgment, any material previously submitted for a degree or diploma in any institution of higher education and that, to the best of my knowledge and belief, it does not contain any material previously published or written by another person except where due reference is made in the text".

I gratefully acknowledge the assistance and guidance given to me by Mr Sven Silburn, Consultant Clinical Psychologist, of the Western Australian Institute for Child Health Research, for his guidance in my analysis of the research data.

Gordon H. Peers
Date 04.01.97

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ABSTRACT

The purpose of this study was to examine the effect of a nurse home visiting programme on the rehabilitation of children following their discharge from a dedicated child psychiatry hospital. The research was based on the premise that a nurse home visiting programme may have a positive influence on the outcomes of the rehabilitation of children following their discharge from hospital, if it reduces the need of outpatient appointments with the psychiatrist and the need for children to be readmitted to hospital.

The study was guided by Peplau's Theory of Interpersonal Relationships in Nursing

Data was collected over twelve calendar months from the twelve subjects eligible to participate in the study. The twelve subjects were randomly allocated into either the control or experimental group; that is, six subjects in each group. The number of follow-up contacts by nursing staff and psychiatrist outpatient appointments were collated, and between group comparisons were made. The number of readmissions were also calculated for each group. The Achenbach Child Behaviour Checklist (CBCL) Parent's

Form for ages 4-16 was used to measure changes in the subject's behaviour. The form was completed by parents six weekly intervals three times over an eighteen week period.

Because of the small sample size, a parametric test could not be used. For this reason, the non-parametric Mann-Whitney U test was applied for the between groups analysis. Statistically significant differences between groups were not obtained.

The repeated measures within groups could not be analysed because N was too small. The results of the measures were graphed to examine trends, but the results were negative.

The length of stay in hospital for the experimental group was shorter than that of the control group but that cannot be attributed to home visiting as these results may be by chance.

Contrary to expectations the Experimental group had more Outpatient appointments than did the Control group and there were no readmissions during the data collection period.

In-depth analysis of home visit “cases” was conducted to gain a deeper understanding of each of these children’s therapeutic context.

The implication for nursing practice is the need for careful discharge planning and the appropriate resolution of the therapeutic relationship.

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CHAPTER 1

Introduction

This thesis describes an evaluation of a nurse home visiting programme for children and their families. This was conducted after the child's discharge from an inpatient unit where they had been treated for emotional or behavioural disorders. The main research question addressed was: Did home visiting have a beneficial effect on the rehabilitation of children?

Background

The Western Australian Health Care Context

This study took place against a background of competing demands for improved health care by the community and with government pressure for increased productivity and cost effectiveness. The budget had been reduced by 2.6 % that financial year; the fifth reduction for five consecutive years (Seymour & McKimmie, 1995). These primarily economic factors, along with restructuring and privatisation contributed to the resignation of many psychiatrists from the public sector with little hope of attracting qualified or trainee psychiatrists to replace them. For example, in 1995, all of the psychiatrists working at Hillview Terrace Child and Adolescent Mental Health Service had resigned to pursue a career in private practice and the service has been unable to attract psychiatrists to replace those who left. This led to the temporary closure of the hospital until the service of a child and adolescent psychiatrist could be procured from within or outside of Australia (McKimmie, 1995). The service provided an inpatient treatment for adolescents and a comprehensive range of family interventions and child and family therapy

programmes in an outpatient service. It was described as a “model service” (Burdekin, Guilfoyle, & Hall, 1993).

Other mental health care facilities in the Perth metropolitan area are now also experiencing similar difficulties in retaining and recruiting psychiatrists. This has led to an increasing demand on those health professionals who continue to work in the public sector and has resulted in longer waiting lists.

A recent report, “Healthy Families: Healthy Nation” (Sanders, 1995) presented a review of the scientific evidence that links family functioning to well-being. The role of family was examined as a therapeutic intervention in treating and preventing mental health problems. Recommendations were made for mental health policy to State and Federal Government. The key recommendation of this report was:

“The National Mental Health Policy should be changed to reflect more clearly the central importance of healthy family relationships as a fundamental goal of mental health policy and to reflect the effects of mental health problems on the family” (Sanders, 1995, p21).

The report concluded that the well-being and stability of the family unit must become a priority in the provision of mental health services. There appears to be a growing recognition of the importance of the mental health of the family unit. It is the family as a whole that is the consumer of child and adolescent mental health services. Currently only the child is recorded in the Mental Health Register as the patient and it is the number of attendances by the child only which are recorded and reported. The time spent with the parents is not recorded as they are not the “indexed patient”. Consequently the number of attendances by the child do not

reflect accurately the amount of support or therapy provided to the family. This has ramifications for continued funding of the service, as superficially at least, it would appear to be a very expensive service “per capita”. However, the degree of support to the family as a whole has probably been grossly underestimated. Reporting of intervention is currently under review within the service. Hopefully in future all the clinics will report statistics that convey the real nature of the service provided and this will permit comparisons across clinics in terms of cost effectiveness. To this end the downgrading of services and the failure to keep staff has probably been significantly underestimated.

Families appear to be disadvantaged in Western Australia due to the contraction of services. In an article published in a local newspaper, a parent wrote about his experience in obtaining help for his son who has Attention Deficit Disorder:

“There are few places to turn to. Our son is an outpatient of Stubbs Terrace Hospital in Shenton Park, but the Health Department is cutting back. This means our visits are decreasing in frequency. The professionals we see regret they cannot see our son weekly. On each visit, the psychiatrist and psychologist spend time with my wife and me, but the focus of these visits is our son. The Government has no funds to spend on parents” (Whitham, T. , 1995).

A Western Australian survey found that 17.7 per cent of Western Australian children aged four to sixteen had a current mental health problem (an estimated 53,500) and only 2 per cent of these children had attended a child and adolescent mental health clinic in the past months (Zubrick, Silburn, Garton, Burton, Dalby, Carlton, Shepard, & Lawrence,

1995). Of the small percentage of these children seen at any of the five metropolitan child and adolescent mental health outpatient services, an even smaller number of children are admitted to a dedicated child psychiatry inpatient hospital for treatment, approximately fifty children per year (Stubbs Terrace Hospital, 1994). The present study was devised to evaluate one aspect of a treatment programme of a child psychiatry inpatient unit; that is, nurse home visiting.

Nurses also have had to adapt to the new economic climate by working harder because of staff cuts. They have learned to become more creative in order to achieve effective client care and lessen patients' dependency on the health care system and on inpatient treatment.

One programme instituted by nurses to alleviate the care deficit problem is a home visiting programme for children following their discharge from an inpatient unit for the treatment of emotional and/or behavioural disorders. This programme has the potential to reduce the requirement for outpatient appointments with the psychiatrist and to minimise the risk of recurrence of the problem. Recent research findings have highlighted the need for such interventions.

The Hospital Treatment Setting

The subjects of the present study have all been inpatients in a fifteen bed hospital which was built specifically for the treatment of children with emotional and/or behavioural problems or developmental delays of childhood. The design of the hospital has taken into account that most of the patients tend to be physically well and, therefore, quite active.

Consequently, a large amount of space is dedicated to activity areas such as table tennis, sewing, arts and craft, computing and woodwork as well as providing a dining and lounge room. Outdoor activity areas include a barbecue area, a tennis/basketball court and play equipment. The hospital is situated in an inner suburb of the capital city of Western Australia with easy access by public and private transport and in close proximity to the major paediatric hospital.

Admission Criteria

There are three admission criteria:

1. The psychiatrist in his/her assessment determines if the child has a condition which requires inpatient treatment, such as being at risk of self harm or risk of other physical or psychological harm.
2. The presenting symptoms are expected to respond to the average inpatient treatment which is one school term or approximately fourteen weeks. This is only an initial assessment and some children require a longer stay in hospital than the average. For example children with a diagnosis of Anorexia Nervosa are often hospitalised for 25 weeks, because of the life threatening degree of the disorder.
3. The patient's parents must agree to be involved in the treatment process and have the necessary resources and willingness to do so. Parents who are unwilling to visit the child in hospital and do not want to have them home on weekends are offered alternative therapies.

Therapy

When the psychiatrist recommends a child's admission, the parents are invited to inspect the hospital. They are shown around by the nursing staff and given all the information they require to make an informed decision as to whether or not they wish to admit their child. While in hospital, the children attend the local school, are visited by their parents during the week, and go home on leave over the weekend to maintain family links and to gauge behavioural changes.

The therapy is based on the principles of "Milieu Therapy". "Milieu" is taken from the French word meaning "environment" (Beck, Rawlins, & Williams, 1984). The therapeutic milieu refers to those aspects of the hospital structure, organisation and setting which may assist in reducing emotional and behavioural disorders in children. The environment is structured to provide a variety of human relationships, satisfying emotional interactions, opportunities for new learning and experiences and mastery of personal and social competence. The nursing staff, by forming one to one relationships with the children, use these relationships therapeutically to meet the children's need for respect, appreciation, approval and praise (Rutter & Hersov, 1985). In a hospital catering for fifteen residents, all of whom have different psychological difficulties and personalities, it is not possible or desirable that every nurse will form an in-depth relationship with every child. The goal is that every child and his/her family form a special therapeutic relationship with at least one of the nursing staff. To facilitate this process, each family has appointed to them a case manager whose role is one of coordination and communication between the nursing staff and the family during the treatment process. If there is more than one nurse who has developed a therapeutic relationship

with either the child or the family, the coordination role is the responsibility of the case manager. The purpose of developing relationships with the children and their families is to reduce anxiety, guilt and psychological conflict, to strengthen existing competencies and to develop new skills within the family (Rutter and Hersov, 1985).

For this study it is the nurse who has formed best the relationship with the child who will undertake home visiting.

Nursing staff provide structure and manage the patient milieu as well as forming one to one relationships with children (Tuck & Keels, 1992). They also liaise with other professionals so that holistic treatment of the child is attained. For example, if a child happened to be admitted for relationship problems and was also a non-compliant diabetic, staff would liaise with the paediatrician, diabetic nurse and dietitian. The nursing staff are involved with the children in all daily living activities from rising in the morning to going to bed and caring for them during the night. This also includes daily liaison with the children's school, attendance at school assemblies and concerts and any other important occasions. The nursing staff also observe during family visits and will initially set limits on a child's behaviour, if the parents cannot carry out this function, with a view towards helping the parents gain these skills by demonstration and modelling.

Psychochemotherapy, family therapy and behavioural techniques are also employed where appropriate. Other specialist treatments such as diabetic management, dentistry, physiotherapy or speech therapy are normally provided at facilities outside the hospital setting. This is felt

appropriate, as children living at home would normally go out to attend a specialist for treatment.

In keeping with the philosophy of attempting to maintain the environment as close to a home environment as possible, the children attend a local government school where the teaching staff have the support of a clinical psychologist and a specialist teacher to guide and assist with the management of difficult classroom behaviour and academic deficits.

Discharge planning begins at admission and includes making decisions concerning the type of follow-up required for the child. The choice of follow-up, whether outpatient appointments, home visiting, telephone consultations or a combination of these, is made as a joint decision between the referring psychiatrist, the case manager, the clinical psychologist, other involved professionals and the parents.

Current Home Visiting Programme

The home visiting programme provided by the hospital is currently restricted to one or two families at any point in time because of staffing restraints. Nurses can only be released to undertake home visits if there is sufficient staff on duty at the time to provide a safe and therapeutic milieu for the children in hospital. The objective of home visiting is to help maintain the changes in family structure, organisation and in the general processes of the family which enable the family to cope with stressors and to support the gains the child made whilst in hospital. The visiting nurse may see all of the family members or may just see the parent/s or the child according to the needs of the individuals. For example, it may be necessary for the nurse to meet with the entire family to construct

strategies to deal with issues such as sibling rivalry or to support and encourage parents in their parenting techniques, or to provide ongoing support for the child. Every case is different and this presents an ongoing challenge for the visiting nurse.

Occasionally single home visits are made to families who are in crisis after the child's discharge from hospital. For example, if a child who has been treated for school refusal, again commences to refuse to attend school, a single visit from a nurse may assist the parent to regain control and effectively address the problem. The history of the hospital has demonstrated that this intervention has been successful with this particular disorder.

Significance of the Study

Should the results of this study demonstrate that nurse home visiting does promote the rehabilitation of children following their discharge from hospital, this would have an effect on the timing and context of the discharge planning process, particularly if it is also shown to shorten the length of stay in hospital.

Though it did not occur in the current study, it would be proposed to discharge children who have home visiting earlier. Shortening the length of stay would enable more children to be admitted for treatment per year, representing an increase in productivity and cost effectiveness. Also if home visiting reduces the need for follow-up appointments and or future readmissions this may reduce the outpatient waiting list allowing the psychiatrist more time to deliver quality holistic care.

At a second level, the results of this study will have implications for nursing practice with respect to discharge planning and the allocation of human resources for home visiting.

Purpose of the Research

This research project investigated whether the implementation of a home visiting programme by hospital based nurses had an effect on the rehabilitation of children following their discharge from a child psychiatry unit.

Because home visiting would provide individualised ongoing support and appropriate therapy to the children discharged from hospital, as well as provide support and encouragement to their respective family members who provided care to the children, the Research Questions are as follows:

Research Questions

1. Do lower scores for children in the home visiting group show significantly greater gains by 12 weeks following discharge, as measured by CBCL scores of Social Problem, Attention Problem, Thought Problem, Social Competence, Total t score, Internal t score and External t score compared to the group of children who did not receive home visiting? Lower scores as measured by the CBCL for Social Problem, Attention Problem, Thought Problem, Total t score, Internal t score and External t score and higher scores for Social Competence indicate improvement?
2. What are the changes from the time of discharge until week 12 as measured by CBCL scores of Social Problem, Attention Problem, Thought

Problem, Total t score, Internal t score, External t score and Social Competence for children as opposed to those who receive home visiting?

3. Would the children in the home visiting group require significantly less outpatient appointments in the 12 weeks following discharge from hospital, compared to the group who did not receive home visiting?

4. Would the children in the home visiting group require significantly less readmissions to hospital, compared to the group of children who did not receive home visiting?

Organisation of the Thesis

In this chapter the nature of the child's emotional and behavioural problems on admission to hospital and the treatment context within which the care was delivered prior to their participation in the study is described.

A review of the relevant literature is presented in Chapter 2 and is followed in Chapter 3 by a description of the nursing theory which guided the study. Chapter 4 describes the sample tested, measurement instruments and procedure. The following chapter (Chapter 5) presents the results and a discussion based on the results. Chapter six presents the case studies. The thesis concludes with a general discussion and summary of the main findings. Finally, some suggestions for further research are given.

Definitions

CBCL: The CBCL is the instrument used to measure changes in children's psychosocial functioning. The full title is the Achenbach Child Behaviour Checklist for Ages 4-18 years, Parent's Form.

Discharge Planning: discharge planning is described by Blomquist (cited in McMurray, 1993) as part of a continuum of care in which those responsible for a child's treatment collaborate in a multidisciplinary team approach to assist the client and family to move from one phase to the next.

Nurse: registered mental health nurses, enrolled mental health nurses involved in care of clients in a mental health setting.

Client: child with a psychiatric diagnosis.

Gains: positive changes in a child's dysfunctional emotional or behavioural states.

Home visiting: the process of visiting a family in their own home by the nurse who has formed a therapeutic relationship and has the purpose of providing support, advice and strategies for the child and counselling for the parents as required.

CHAPTER 2

Literature Review

This literature review examines research pertaining to the prevalence of, and treatment for, child and adolescent psychopathology. The review then examines studies on the effectiveness of aftercare and home visiting programmes.

Prevalence of Child and Adolescent Psychopathology

The prevalence of psychopathology in children has been reported in the international literature as ranging from 6.6% to 37% of children in the general population (Jensen, 1991). A study of the utilisation of outpatient mental health services by children and adolescents reported the prevalence of psychopathology in children and adolescents as being roughly 20% (17% in New Zealand, 21% in the Isle of Wight and 19% for boys and 22% of girls in Ontario, Canada) Realmuto, Bernstein, Maglothlin & Pandey, 1992. Realmuto and his colleagues in the U.S.A. (from an analysis of data collected from the Minnesota Department of Human Services) also concluded that one fifth (20%) of children and adolescents in the general population met the Diagnostic and Statistical Manual, (3rd edition) criteria for at least one psychiatric diagnosis (Commission on Professional and Hospital Activities, 1986). Of this population only 20-38% were referred for, or sought treatment for, disorders. These findings are supported by other authors who concluded that there is a significant group of children and adolescents with mental health disorders in the general population and only a small percentage of these are receiving

treatment (Daniel, 1991; Jensen, 1991; Patrick, Padgett, Burns, Schlesinger, & Cohen, 1993; Solomon, Evans, & Delaney, 1993).

In Australia, the Commonwealth Health Minister commissioned a national inquiry into the human rights of people with mental illness, the Human Rights and Equal Opportunity Commission, 1992. The Commissioners travelled around the different states of Australia to examine treatment facilities and they undertook wide consultation with the community and professionals. Their report revealed that the prevalence of psychiatric disorder in children and adolescents in Australia was approximately 10% of the population and that 1% of the general child and adolescent population was in urgent need of treatment (Burdekin, et al.(1993).).

When compared to the studies mentioned above, which were conducted in other countries, this estimate may be a conservative one. However 10% of the population is still a very large number of individuals.

The Western Australian Child Health Survey (Zubrick, et al.(1995),) used the Achenbach Child Behaviour Checklist to gather information on children's behaviour. The survey sought information on children's behaviour from caregivers, teachers and from 12 to 16 year olds themselves. The results of this survey found that almost 18% of children aged 4 to 16 years in Western Australia were found to have a significant mental health problem.

The Zubrick et al. (1995) study revealed a family link to mental illness. Children whose parents have a mental illness, are single, or live in the city, are more likely to need mental health support services, such as attending a

Mental Health Clinic, seeing the school psychologist or getting extra support from a teacher.

In Perth, a local paediatrician reported that acute psychiatric illness affected up to 12,000 school aged children (Fitzpatrick, 1995). Fitzpatrick also reported that one in six adolescent deaths in Australia was from suicide. In this report it was estimated that 15% of adolescents have psychiatric disorders and 5% had serious disorders. Whilst there is no agreement on the specific percentage of disturbance in the child and adolescent population, there appears to be little doubt that there is a significant group of children and adolescents within the community who are emotionally disturbed.

Contributing Factors to Child and Adolescent Psychopathology.

The Chief of the Child and Adolescent Research Branch of The National Institute of Mental Health in the United States of America, (USA) expressed concern about the growing crisis in children's mental health. (Jensen, 1991). He surveyed the status of children's mental health and mental disorders to outline major areas of what is known and not known. He cited factors such as the increased rate of divorce, single parent families, intra-family violence and child and drug abuse as just some of the variables linked to the increased incidence of children with mental health problems. In the report of an inquiry into the human rights of people with mental illness in Australia (Burdekin et al., 1993.), the following factors were noted to contribute to mental health problems in young people:

- ◆ “infant or childhood physical, psychological, sexual, or emotional abuse

- ◆ genetic predisposition
- ◆ dysfunctional family life and major domestic conflict
- ◆ parental mental illness
- ◆ other major trauma or disaster
- ◆ parental alcoholism or habitual substance abuse
- ◆ alcohol or substance abuse
- ◆ pre-natal, perinatal and post-natal disease, trauma or distress in mother or baby or both
- ◆ serious childhood physical illness, or physical or intellectual disability
- ◆ family poverty or unemployment
- ◆ homelessness
- ◆ member of an Aboriginal or Torres Strait Islander community
- ◆ non-English speaking background or refugee status
- ◆ living in a rural or isolated area
- ◆ being held in protective or corrective custody.”

(p. 609)

The broad and sweeping factors as listed by Burdekin can only be considered contributing and not causative factors, as many individuals are exposed to some of these factors without exhibiting mental health problems.

However, it should be noted that many factors involved other family members. A report on Western Australian families commissioned by the State Government found that the variables which impacted on child mental health included family structure, parenting styles, the quality of adult relationships, the parents' life skills, working status and income (Department of Community Development, 1995).

Treatment of Child and Adolescent Psychopathology

In the United States of America, the treatment for child and adolescent mental health disorders is provided by a myriad of agencies employing a variety of treatment strategies (Herrick, Goodykoontz, Herrick & Hackett, 1991). Examples of some of the treatment strategies utilised are parental guidance, environmental interventions, family therapy, group and play therapy, chemotherapy, any of the forms of psychotherapy and the more intensive forms of treatment provided in day patient and inpatient settings (Jensen, 1991).

In Western Australia most of the above forms of psychiatric interventions are employed in various settings (Health Solutions, 1994). However, the provision of treatment spans government and non-government agencies and no single agency is responsible for the provision or coordination of services for behaviourally and emotionally disturbed children and adolescents in Western Australia (North Metropolitan Region Health Service, 1993). This, in part, is due to restructuring within the Health Department changing it from one large department to smaller self contained health care regions in the metropolitan and country areas. For a small service, such as the Child and Adolescent Psychiatric Service this restructuring has led to the disintegration of the service, lack of cohesion and, because the individual outpatient services have been isolated and placed under different management structures, this may well be a contributing factor to the exodus of Consultant Child Psychiatrists from the service. Many of the Psychiatrists who have left the service, have expressed a desire for higher remuneration, more autonomy, less interference from non-clinicians and less administrative duties.

Aftercare Programmes

Inpatient treatment for children in Western Australia, as in the USA, provides individual and family counselling, education, and recreational services in a therapeutic milieu (Hodges, Guterman Blythe & Bronson, 1989). These services are designed to treat the child's disorder, and are aimed at reuniting the child with his or her family and effecting a return to a normal life in the school and community. In most instances, admission to hospital is but one phase of an overall treatment plan which includes outpatient treatment and further work with the family, child and school after discharge from hospital (Rutter, et al.(1985)).

Aftercare programmes are designed to maintain the gains the family has made and do not view the child in isolation. One form of aftercare provided in the USA is home visiting or home care which has the purpose of maintaining the gains that have been made during the child's stay in hospital and preventing relapse following discharge.

Dalton, Bolding and Forman (1990) in a follow-up study of psychiatrically hospitalised children concluded that hospitalisation alone was not sufficient to deal with these children and that the families should receive support and assistance post discharge. The importance of providing appropriate aftercare services was also stressed by Hodges et al. (1989) and Guterman, Hodges, Blythe & Bronson (1989). These researchers implemented and evaluated an aftercare programme for children following their discharge from a residential treatment facility in a large mid- western city in the USA. They initially followed up 12 children and then, after modification of the programme, followed up a further 14 children in the second study. The results indicated that regular and consistent contact between the client and residential staff was important to

ease the client's transition from the inpatient setting to their home. As children often returned to an environment that put psychological and behavioural gains at risk it was suggested that home visiting would support the child and maintain the progress made in the inpatient setting.

Child and Adolescent Mental Health Services view the whole family as the client. Troubled and disorganised families have difficulties responding to the needs of their children when their own needs go unmet (Solomon et al. 1993). Guterman et al.(1989) reported parents often show a greater interest and improvement in their parenting skills when their child has been discharged back to their care than was the case prior to hospitalisation. In the first few weeks of returning home, children and adolescents tend to test their environment, with the result that frequently the parent-child relationship breaks down and recurrence of their previous symptomatology returns. Home visiting by a qualified nurse at this stage supports the parent through this challenging period. Such intervention may negate the need for other health professionals to become involved and would be economically efficient in terms of ongoing treatment costs.

Eastman, (1989, p21) concluded that the family should be the focus for treatment, emphasising that:

"experiences in the current family can exacerbate or heal earlier wounds. " Solomon & Evans (1992a ; 1992b) agree, suggesting that service providers must see their responsibility as providing a service to the family and not just the child and this can be done best in the context of home visiting.

Home Visiting

Bodenhorn and Havens (1990) describe home visiting as follows :

"Home visiting is a long-established method of helping families cope with changes in their lives. Home-visiting programmes send nurses, social workers, educators, counsellors, or trained community workers into the home to counsel, support, assist and educate families" (p. 46).

The rationale for home visiting, according to these authors, is founded in the belief that families need help where families are, in the home, and that the intervention in that environment will prevent problems or crises that may burden the health care system.

Home visiting by advanced nurse practitioners may have additional benefits as it provides the opportunity for nurses to assess the patient's environment systematically and to plan and implement appropriate interventions (Robbins, Armstrong, York, Brown, & Swank, 1991). The specialist nurse home visiting service initiated by the Rhonda Health Service in the United Kingdom (UK) is an example of the benefits of home visiting. The purpose of this service was the assessment and treatment of early childhood behavioural difficulties for a community in which one quarter of all parents regarded their pre-school children as having behavioural problems (Pritchard, 1994). The benefit of such a service is that of preventative intervention; that is, identifying a problem early and providing appropriate intervention before more expensive, intensive intervention becomes necessary.

Guterman, et al.(1989) study of 14 boys discharged from a residential treatment facility in the USA suggests that home visits are more effective in providing support to families than are telephone consultations or hospital visits. A visit to the home enables a health worker to collect more data by observing the physical surroundings as well as gaining a better understanding of the family's interpersonal interaction in the natural setting. A greater understanding of the family's functioning enables the visiting nurse to advise the family in more relevant ways. The information gained in the natural setting may not have been observed or discussed in an office or clinical setting. Such information may be used to develop a more appropriate and effective treatment strategy based not only on theory but also on observed behaviours and interactions of the specific individuals. Guterman and his colleagues conducted a client satisfaction survey one month after the termination of aftercare and reported that the parents indicated that they liked the contact and appreciated the fact that goals were jointly developed by the family and worker and that interventions were appropriate for the needs of the child and family. The parents also indicated that aftercare helped improve communication between parent and child and helped them deal with day to day problems.

Home visiting may also have unexpected benefits to the client. Brissette, Zinman and Reidy (1988) conducted a trial in Montreal, Canada to assess the effect of nocturnal home oxygen therapy with twelve patients with advanced Cystic Fibrosis. An unexpected result of this study was the disclosure of concerns about growth, development and intrafamilial relationships which required the application of a wider range of nursing interventions than was initially envisioned. It is probable that the nurses visiting the subjects of this study were exposed

to unexpected events or concerns that required intervention or referral to another agency; for example other medical disorders or psycho-social problems.

In the United Kingdom, Paykel, Mangel, Griffiths & Burns (1982), reported on the success of introducing a home visiting programme in conjunction with existing outpatient services. In this study, 71 patients requiring follow-up were randomly assigned to out-patient care or to home visiting from community psychiatric nurses and their progress was assessed every 6 months for 18 months. There was a marked increase in client satisfaction and a reduction in the demand for outpatient consultations for those having home visiting when compared to those clients attending out-patient care. In New Haven, Connecticut, USA, Austad and Shapiro (1986) reviewed the nature and meaning of post discharge contacts. They reported that appropriate post discharge contact with patients could contain cost by reducing the number of outpatient contacts and the readmission rate. In times of financial difficulties, this is most desirable, as all means of maintaining services to clients, whilst reducing cost, must be pursued.

In the UK providers of finance for health care services require services to demonstrate that the service provided is not only needed, but that it satisfies the client and is cost effective. Lowe (1987) argued that the British Health Visitor Service needed such an evaluation to justify its existence. She claimed that the nursing process documentation was an adequate tool to guide nursing practice, but that it was deficient in that it did not provide a mechanism to critically analyse and evaluate the service. Lowe suggested that the service be “audited” by experienced health

visitors trained in this function, who could then prepare a report to encourage the health visitors in the pursuit of best practice.

Further evidence providing support for the efficacy of home visiting is provided by three evaluation studies in the USA which demonstrated the effectiveness and cost savings of home visiting. Wernert and Runyon's (1992), evaluation of the Visiting Nurse Association of Louisville in the USA demonstrated a significant reduction in the readmission rate of mentally ill adults after home visiting had been introduced. McDaniel (1990), also reported an evaluation of home visiting by community psychiatric nurses. Here home visiting was found to enhance social support, reduce relapse rates and personnel time and cost. Williams and Cooper (1993), in a study evaluating nurse-managed postpartum home care, concluded that the outcomes of the programme demonstrated the safety and cost-effectiveness of the home visiting service.

In New Zealand, a programme using family based interventions was implemented and evaluated. The intervention had advantages over hospital based treatment in that it produced a reduction in the readmission rate. The success of this programme was attributed to a collaborative approach between the families and the mental health service and careful planning of treatment strategies (Falloon, Krekorian, Shanahan, Laporta, & McLees, 1993).

The rising cost of inpatient care places demands on hospitals to shorten a patient's length of stay, and although patients go home more quickly, they are often still sick (Rhoads, Dean, Cason, & Blaylock, 1992). This means there is a critical need for comprehensive discharge planning

involving the hospital and the nurse home visitors to ensure a continuum of care and the patient's full recovery (Rhoads, et al. , 1992; Rozell, & Newman, 1994; Bowers, 1992). Therefore there is a need to identify children who will require home visiting and the collaborative effort of health professionals in-order to achieve the goals of home visiting.

The need to establish outcome measures for home visiting services are supported by research studies conducted by Martin, Scheet and Stegman (1993), Williams et al. (1993), and commentary by Lightfoot (1994). These authors also identified the need for further research into home visiting. Jensen (1991) also argued the need for research specifically on mental health services for children and adolescents. He stated :

“Research on mental health services for children and adolescents is meagre, and there are great gaps in scientific knowledge concerning service needs and services, the adequacy and effectiveness of these services, and the best ways to finance them” (P. 7).

Summary of the Literature

The literature review has demonstrated a significant degree of prevalence of child and adolescent mental health problems internationally and in Western Australia where up to 18% of the population are reported as having mental health problems. The factors contributing to children's mental health problems in Western Australia and the treatment of those problems are similar to those identified in the USA. Aftercare is identified in a considerable number of research studies as an important and cost effective element of a child's rehabilitation, for it has the potential to

prevent relapse and the need for readmission. Home visiting is one element of aftercare that is widely employed in many areas of health care. It has been demonstrated to be effective and cost efficient, especially when the service is provided after careful and comprehensive discharge planning.

There is a paucity of information in the literature regarding the effects of home visiting on the rehabilitation of children and adolescents with mental health problems. Also the CBCL has never been used as a tool to evaluate home visiting. The current study will attempt to address this deficit in nursing knowledge.

CHAPTER 3

Theoretical Framework

The "Interpersonal Relations in Nursing" is a theory proposed by Hildegard Peplau which provides a framework for nursing practice at the current research setting.

Peplau (cited in O'Toole and Welt, 1989) defines nursing as:

"a significant therapeutic, interpersonal process that aims to promote a patient's health in the direction of creative, constructive, productive personal and community living. " (p.356)

Peplau suggested that the nurse-patient relationship is one of the most important elements in the treatment of mentally ill patients. She described the therapeutic relationship as needing to move through four stages: orientation, identification, exploitation and resolution.

Orientation Stage

The first stage, Orientation is described as the initial meeting of the parties and their mutual assessment of each other. In the therapeutic setting this occurs when the parent(s) arrives to inspect the hospital as an aid to making an informed decision to admit their child to hospital. At this time, the senior nurse shows the parents through the unit, explaining the programme and answering any questions the parents may have. At the

same time another nurse shows the child the hospital explaining various aspects of daily living.

Identification Stage

The second stage, (Identification), commences when the individuals decide they like and trust one another. To facilitate the development of the relationship the nurse must be available to the child or family, value them as individuals, accept them as they are without condoning unacceptable behaviour and be open and honest. The nurse aims to address the individual's emotional needs and to establish trust and rapport.

Exploitation Stage

The third stage, Exploitation of the relationship, may only commence if the preceding stages have been successfully negotiated. In this stage the nurse uses the relationship developed to influence behavioural change through the medium of modelling, imitation and suggestion. It must be stressed that to be able to influence behavioural change the nurse needs to be liked and trusted by the child. If the nurse is not liked, suggestions that are given to the child will be ignored.

Planning for Resolution Stage

In the final stage of Resolution, the relationship must be terminated in a satisfactory manner to prevent the formation of dependency or a grief reaction at the change in the relationship with the staff or institution. This needs to be considered when planning a discharge, for if contact is to be ceased at discharge, resolution of the relationship must be commenced prior to the child and family leaving the hospital. If this is not the case,

resolution of the relationship must be planned in the period of aftercare which will include home visiting by the nurse who has the therapeutic relationship with either the child or family. The decision of which nurse will conduct the home visiting is determined by who has the relationship and which members of the family require home visiting. In some cases it is the child who requires ongoing support and in others it is the parents. In either case the nurse who has the rapport will conduct home visiting.

Figure 1 illustrates Peplau's theory of Interpersonal Relationships in Nursing. The second, third and fourth stages of the model provide a framework to guide the research. It is essential that the decision to provide home visiting be made well in advance of the discharge of a child so that enough time is available to ensure a therapeutic relationship by the time of discharge. That is, if no further contact is necessary, the relationship must have achieved resolution. If not, it must be at the stage of exploitation with a view to termination of the relationship during after care.

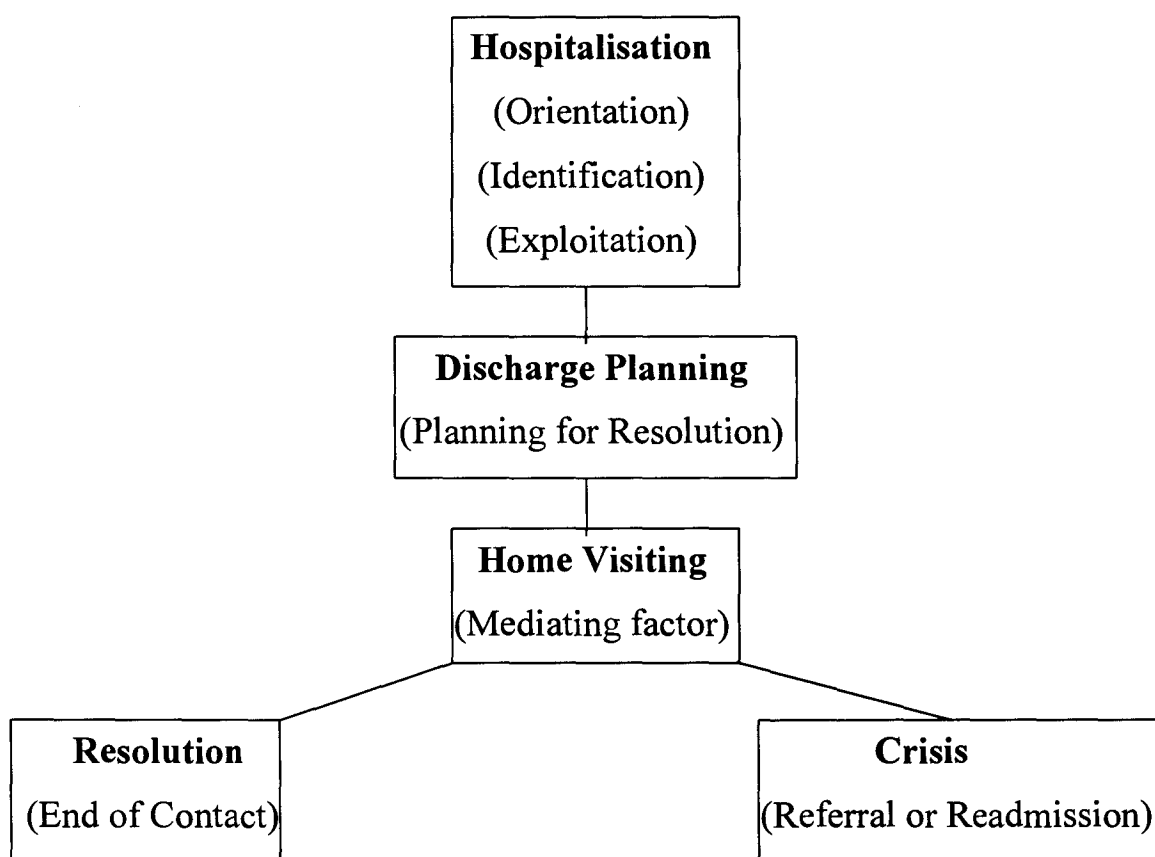


Figure 1 The Four Stages of Interpersonal Relationships in Nursing.

CHAPTER 4

Method

Design

This study employed a “between subjects” and “within subjects” (repeated measures) experimental design in which the independent variable was manipulated. The independent variable was home visiting. The Experimental Group received home visiting, the Control Group did not.

The dependent variables were Social Problem, Thought Problem, Attention Problem, Social Competence, Total t Problem, Internal t Problem and External t Problem.

Prior to the time the decision was made to discharge the child from hospital he/she was randomly assigned to either the Experimental or Control Group. The first subject of this study was allocated to the Control Group by the flip of a coin. From then on the subjects were allocated alternately to either the Control or Experimental Group. All subjects were measured at three points in time on all dependent variables: 0 weeks (discharge from hospital), 6 weeks and 12 weeks after discharge. The time tested was therefore the second (repeated measures) independent variable.

Sample

The subjects for the study were drawn from the population of children discharged from hospital over a 12 month period with the expectation that there would be at least 20 subjects in each group giving a total sample of 40 subjects.

Of forty five children discharged from the hospital in the twelve months from the 1st March 1993 to the 28th February 1994 only seventeen were eligible for inclusion in the study. Twenty eight children were excluded for various reasons.

Exclusion Criteria

1. Six children had a brother or sister admitted to hospital during their own hospitalisation. Ethically, home visiting could not be provided to one child and not the other. Therefore twelve children were excluded from the sample.
2. Six children whose primary residence was outside the metropolitan area were excluded as it was not possible to provide home visiting for them.
3. Four children who had ongoing interventions from other agencies were also excluded as these interventions could easily affect the results of this study.
4. Another three children were discharged against medical advice and were therefore excluded from the study.
5. Two children were discharged into foster care, the natural parent/s being unable or unwilling to provide the support and nurturance the child needed to complete the rehabilitation and normal development. These children were excluded from the study.
6. One family had decided to take a holiday and so would not be available for inclusion in this study.

Once the exclusion criteria had been applied 17 potential subjects remained. Four potential participants failed to return questionnaires and or the parent declined to join the Experimental Group. This left 12 subjects in the sample (a 70. 6% response rate), that is six in each group.

Instrument

The Parent form of the Achenbach Child Behaviour Checklist age 4-18 years (CBCL, see Appendix F) was the instrument used to measure change in the children's behaviour following their discharge from hospital. The forms were completed by the same nominated parent on three separate occasions (in all instances the mother was the parent who chose to fill out the CBCL).

General Instrument Overview

The CBCL is a standardised rating form designed to obtain information from parents on their child's psychosocial functioning. The resultant data is then scored and analysed by the software accompanying the CBCL test to provide a profile of the child's psychosocial functioning in comparison to the general population. The form is described by Achenbach and McConaughy, (1987), to be self explanatory and is able to be completed in twenty minutes by the parent who has at least fifth grade reading skills.

The original CBCL was created by Thomas Achenbach and further refined by Achenbach and Edelbrock (1983). The function of the CBCL was to furnish mental health professionals with a means of assessing the behavioural problems and social competencies of children at a specific

point in time. In 1985 the CBCL was complemented by the creation of the CBCL forms which could be filled out by individuals other than the parents, (The Teachers Report Form, The Direct Observation Form and the Youth Self-report Form Achenbach & McConaughy, 1987). Initially, in the current study, it was intended also to ask the subjects' teachers to fill out the Teacher's Report Form. However, preliminary enquiries with teachers produced negative responses (most said they already had too much to do) and therefore the researcher decided not to include this measure as the response rate was likely to be low.

The CBCL used in the current study was designed to record in a standardised format, the behavioural problems and social competencies of children and adolescents as reported by their parents (Achenbach & Edelbrock, 1983). The resultant data for each child is analysed by software accompanying the CBCL test and is derived from a large sample of the general population ($n = 2000$). Thus the individual CBCL scores provide a standardised profile of the child's psychosocial functioning.

Standardised Profile of Psychosocial Functioning

The examples given below are provided to give the reader an indication of how comprehensive the CBCL is in eliciting a profile of the child's psychosocial functioning from the respondents observations.

The CBCL has 118 items measuring psychosocial functioning. The first seven questions requests the parent to compare their child to others of the same age and how well they do in comparison. For example, question 1 asks the following:

(In relation to the sports the child most likes to take part in)

“Compared to others of the same age, about how much time does he/she spend in each?”

“Compared to others of the same age, how well does he/she do in each one?”

The responses are recorded in a 3 response Likert scale, “less than average” , “average” and “more than average”, and the option of responding “I don’t know”. The other items in this section request the parent to respond to questions in the same manner, about their child’s participation in hobbies, clubs, chores, friends, sibling relationships and academic performance.

The next section enquires about academic problems, and disabilities. It also asks the parent what concerns them most about their child and asks the parent to describe the best thing about their child.

The remaining items describe problems. The parent responds to a three step Likert scale of “0 = not true”, “1 = somewhat or sometimes true” and “3 = very true or often true”. Some examples of the items are as follows:

Does your child:

Act too young for his/her age?.

Argue a lot?

Fear going to school?

Demand a lot of attention?

Fear he/she might think or do something bad?

Feel worthless or inferior?

Appear nervous, highstrung, or tense?

Scream a lot?

Have sexual problems?

Wet the bed?

Behaves strangely?

The CBCL questionnaire produces 118 responses which when analysed by the computer programme produce the following “cross-informant” items which are displayed on the CBCL profile: Activities, School, Withdrawn Problem, Somatic Complaint, Anxious/Depressed, Social Problem, Thought Problem, Attention Problem, Delinquent Behaviour and Aggressive Behaviour.

Second Order Analysis

A second order analysis of the CBCL (using the software provided with this instrument) for the syndromes of Withdrawn, Somatic Complaints and Anxious/Depressed produced the “Internal t Score” and a second order analysis of Delinquent and Aggressive Behaviour produced the “External t Score” and the combination of all the problem score produced the “Total t score” (Achenbach, 1991). The Social Competence is a separate item as it looks for accomplishment rather than a problem.

The CBCL scores for Activities, Social and School are also subject to a second order analysis which produces the “Social Competence Scale”.

The syndromes of Social, Thought, Attention and Sex Problems do not fall into either the External t or Internal t groupings .

It should be noted that there is a Social Competence score and a Social Problem score and the two are not the same. The Social Competence score

reports on the child's *ability* to socialise whilst the Social Problem score reflects *difficulties* in the child's social interaction.

This then produces a manageable 7 dependent variables and reduces the number of variables to be tested. These are operationally defined in the following section.

Operational Definitions of Dependent Variables

Social Problems

The standardised score for Social Problems is derived from items which are summarised as follows. “Acts young for their age, clings to adults, doesn’t get along with others, teased, not liked, overweight, clumsy and prefers to be with younger children”.

Thought Problems

The standardised Thought Problem score is derived from items on the CBCL. These are: “mind off task, hears things, repeats acts, sees things, stares, strange behaviour and strange ideas”.

Attention Problems

Eleven items are used to produce the standardised Attention Problem score. These are: “acts too young, cannot concentrate, cannot sit still, confused, daydreams, impulsive, nervous, twitches, poor school work, clumsy and stares”.

Social Competence

The combined scores on the CBCL for Activities, Social and School are used to produce the standardised score for Social Competence. The questionnaire examines how many friends the child has, how often and how long they play, what clubs or organisations they belong to and how they do. What jobs they do and how well and how they achieve at school and what are there difficulties there may be in each of these items. This score is not included with the problem scores in the Total t Score.

Total t Scores

The total t score (derived from all of the problem scores) is a standardised score which reflects how the child is functioning, compared to others of the same age with respect to this combination of variables.

Internal t Scores.

The CBCL Withdrawn, Somatic and Anxious/Depressed scores are combined and the internal t score is a standardised score which reflects how the child is functioning, compared to others of the same age with respect to this combination of variables.

External t Scores

The CBCL items of Delinquent Behaviour and Aggressive Behaviour are combined and the internal t score is a standardised score which reflects how the child is functioning, compared to others of the same age with respect to this combination of variables.

Reliability of the CBCL

The CBCL has been used widely in research and clinical practice. Fombonne (1989) reported a high test retest reliability correlation coefficient of the CBCL scores ($p=0.91$). Achenbach (1991) computed the test-retest correlation coefficient of the differences between mothers' ratings of 80 non referred 4 to 16 year olds at a mean interval of 7 days. The test-retest coefficient was high ($r = .89$, $p = .01$, Towle & Schwarz, 1987). Jensen, Xenakis, Davis and Degroot, (1988) found a significant difference between the ratings of behavioural problems of children

between mothers and fathers, with the mothers reporting more difficulties than fathers. While differences in reporting behavioural problems in the same child have been reported by different observers, the CBCL is regarded as having high reliability,

Validity of the CBCL

Significant relationships have been demonstrated between disorders listed in the American Psychiatric Association's Diagnostic and Statistical Manual (DSM) and the CBCL scores (Achenbach, 1991). The CBCL therefore demonstrates high validity

Three separate Cultural Similarity studies compared the results of administering the CBCL to Dutch and American boys, (Achenbach, Verhulst, Baron & Althaus, 1987). Dutch and American girls (Verhulst, Achenbach, Althaus & Akkerhuis, 1988); and, in the third study, Australian children and American children (Achenbach, Hensley, Pharse & Grayson, 1990). The three studies obtained similar responses across cultures ($r = .80$, $r = .84$, $r = .89$ respectively) indicating no strong cultural influence on CBCL scores.

The CBCL is used widely and is currently in use by all Child and Adolescent Mental Health Services in Perth as part of the quality assurance programme and outcome studies. The CBCL is also one of the tools being used in a large study being conducted by the Professor of Child and Adolescent Mental Health.

Procedure

This study used a CBCL questionnaire to measure parents' perceptions of their child's behaviour at three points in time (at the time of discharge, 6 weeks later, and again 12 weeks after discharge). For consistency, one of the parents was requested to complete the CBCL (the respondent was always the mother).

Allocation of a family to one or other of the groups was made, once the decision to discharge the child was made, (usually two weeks in advance of discharge). Children were not discharged earlier on the basis that they were going to be allocated to the home visiting programme. Once the researcher was aware of which group the family been allocated to, he was able to approach the parent/s to explain the nature of the study and invite them to become participants.

Intervention

The parents who agreed to be members of the Experimental Group were advised to confer with their case manager to identify which member of the nursing staff would visit them and to arrange mutually satisfactory times and days to visit. The home visiting nurse was in all cases the person who had formed the best relationship with the child. This was easy to determine from just "listening" to the child! The visits were usually weekly, after school at the child's home and varied in length of time according to what was required. There was no set format on how to conduct a home visit, however, it was accepted practise that some time would be spent talking and also playing with the child and listening to what they had to say. The nurse always spent some time talking with the parents and reviewing any events, positive and negative which had

occurred since the last visit. New management techniques or refinement of existing strategies were discussed with the parent. As the family progressed through their rehabilitation the process of terminating the relationship was commenced by lengthening the time between visits and shortening the amount of time spent on each visit until termination was complete.

Data Collection

The parents were requested to complete the CBCL at the appointed six weekly intervals. The forms for discharge were completed by parents in the week prior to their child's discharge. At week 6 and week 12 following discharge, forms (for the Control Group only) were forwarded to them at these times by mail along with a stamped addressed return envelope. The parent/s of the subjects in the Experimental Group were requested to complete the Child Behaviour Checklist at the same times as the Control Group. The visiting nurse delivered the form along with a stamped addressed envelope for return by mail to the investigator.

Ethical Considerations

Approval was given by Edith Cowan University Ethics Committee (see Appendix E for the Conduct of Ethical Research) and the Selby Child and Adolescent Mental Health Service Management Team

All participants in this study were invited to be involved in the study, and were provided with information of the purpose of the study, the participant's rights and what was required of them (see Appendix A). Emphasis was placed on confidentiality. The participants were assured

that they and their child would not be identifiable in the report in any way. They were also informed of their right to withdraw from the study at any time without penalty and were required to sign a written consent form (see Appendix B). For those families in the Control Group it was made clear that if they desired a nurse to visit them in their home the service would not be denied but they would have to be excluded from the study.

The data collected for the study is kept secure in a locked confidential file room in a filing cabinet which can only be accessed by the researcher. This material will be kept for five years and then destroyed by incineration.

Data Analysis

It was intended to analyse the data produced for the frequency of outpatient appointments, hospital visits, telephone consultations, the difference between the two groups on their CBCL scores and the difference in the CBCL scores for individuals to determine the changes.

The frequency of outpatient appointments, hospital visits and telephone consultations were compared between groups to determine which group was the largest consumer of these services. The results were analysed by simple arithmetic and the Mann-Whitney U test.

It was intended to analyse the data by a mixed model analysis of variance (ANOVA) which would analyse one between groups factor, home visiting (2 levels: home visiting or no home visiting) and repeated measures factor, time (3 levels: 0 weeks, 6 weeks and 12 weeks).

However this parametric was not used because assumptions underlying this analysis were violated (distributions were not normal, N was small).

The small number of subjects in the sample was due in part to the above exclusion criteria. Other factors which contributed to the rather small number of subjects include a lower than average number of discharges for the year from the hospital and the unusually high number of siblings treated in the hospital that year. These factors were unforeseen and were also unavoidable as a time limitation had been placed on the data collection period.

As there is no single non-parametric test equivalent to the mixed model ANOVA analysis by the non-parametric Mann-Whitney U test (to test for differences between groups) and the non-parametric Friedman Two-Way Analysis of Variance by Ranks was considered for the repeated measures component (analysing the groups separately). However this later test requires a minimum of 10 subjects matched for all other variables except the one being analysed (the repeated measures variable) and there were only 6 in each group (Heiman, 1996). The Friedman analysis was therefore not used.

Possible differences between groups on family situation and length of stay may indicate the two groups and individual subjects were qualitatively different at discharge from hospital (prior to the home visiting intervention) and this needs to be taken into account in the Mann-Whitney U test analyses. Therefore, to control for any prior differences between groups in any independent variable measured, difference scores (score at 6 and 12 weeks, minus the score at discharge) were used to reflect the movement of the CBCL scores.

Whilst the repeated measures component could not be analysed using inferential statistics, graphs are presented to examine the patterns in the CBCL scores across time. The groups are differentiated in the graphs. To control for the abnormal distribution, all of the subjects began at a baseline of zero and then the score for the difference between discharge and week 6 and the difference between discharge and week 12 were plotted.

CHAPTER 5

Results

Chapter Overview

This Chapter commences with the Demographic data of age, gender, length of stay in hospital and ICD 9 diagnosis. This is followed by the findings for Research Question 1 where the tables of the standard scores and a table presenting the Mann-Whitney U test results are given.

Research Question 2 follows and the non-inferential analysis by graphs are displayed. Research Questions 3 and 4 follow and the Chapter concludes with a summary.

Demographic and Background Characteristics

The ages of the children in the sample ranged from 7-11 yrs which approximates the population normally treated in the hospital.

Half ($n = 6$) of the children in the sample were living with their natural parents and of the remaining six children, one half ($n = 3$) were living in blended families. The other half ($n = 3$) lived with a sole parent. The Control Group was over represented with five of the six children living in families not of their origin.

Table 1

Control Group: Age, Gender, Family Structure and Length of Stay in Hospital.

Control Group	Age	Gender	Family structure	Length Stay
1	7	female	divorced	75 days
2	10	male	intact	96 days
3	11	female	stepfather	149 days
4	7	male	stepfather	61 days
5	10	male	divorced	106 days
6	11	female	stepmother	102 days
				mean = 98 days

Table 2

Experimental Group: Age, Gender, Family Structure and Length of Stay in Hospital.

Experimental Group	Age	Gender	Family structure	Length of stay
1	7	female	intact	100 days
2	7	male	intact	95 days
3	7	female	intact	91 days
4	10	female	intact	84 days
5	11	male	divorced	38 days
6	7	female	intact	88 days
				mean = 82 days

Diagnostic Categories of the Subjects

The following Table 3 shows the International Classification of Diseases 9th Revision, Clinical Modification (Commission on Professional and Hospital Activities, 1993) the classification system used by the hospital to code the disorders of the children admitted for treatment. A description of these codes is given in Appendix D. Table 3 shows that nine of the twelve children (75%) included in the sample had a primary diagnosis of “disturbance of emotion specific to childhood and adolescence”, 313.

Table 3

I. C. D. 9 Diagnosis for the Sample

Diagnosis	313. 1	313. 3	313. 0	309. 3	309. 1	307. 1	n
Control	2	2	1	1	0	0	6
Experimental	3	1	0	0	1	1	6
Total	5	3	1	1	1	1	12

Standardised t Scores for the Control Group and the Experimental Group at Discharge, Week 6 and Week 12

The standardised t scores for the Control Group and the Experimental Group at Discharge, Week 6 and Week 12 are intended to provide an overview of each child in the study. Theses were included in the findings given their potential clinical interest. their inclusion was also felt appropriate given the small sample size.

This analysis of the CBCL at the time of discharge, at week six and at week twelve provides the researcher with a descriptive measure of the individual child's psychosocial functioning following discharge from the hospital.

The following section reports the raw Mean t Scores for the twelve individuals comprising the sample. Each table reports the scores for Activities, School, Withdrawn, Somatic, Anxious\Depressed, Social, Thought and Attention Problem Scores. The second level analysis scores of Social Competence score, Total t score, Internal t score and External t score are also reported.

Maladaptive behaviour is indicated by **High** scores on the problem scores for Withdrawn, Somatic complaints, Anxiety and Depression, Socialisation, Thought disorder, Attention span, Delinquent and Aggressive behaviours, Total t score, Internal t score and the External t score.

Maladaptive behaviour is indicated by **LOW** scores on the Social Competence score.

The section reporting on the Total t score, the Internal t score and External t score indicate maladaptive behaviour with a **High** score. These scores represent a second factor analysis of the problem scores and provides a profile of the child indicating how the child presents as either acting out their problems or turning inwards and internalising their problems.

In the original design of this research it was intended to analyse data for the individual subjects with ANOVA to determine over time their CBCL scores improved or deteriorated. This test was not used because the assumptions underlying this analysis were violated (distribution were not normal, N was too small).

The appropriate non-parametric Mann-Whitney U test was used to determine if the mean rank of each dependent variable was significantly different between groups. Burns and Grove (1987, p. 494) describe the Mann-Whitney U test as the most powerful non-parametric test, with 95 per cent of the power of the t test to detect differences between groups.

The data shown in Table 4 shows that overall there was an improvement in the individual's psychosocial functioning between the time of discharge and the administration of the CBCL at week 12. The data for week 6 showed that the individual was not functioning as well when the results of the data at discharge and week 12 are compared.

Table 4
 Control Group Subject 1, Standardised Scores for a Female, Aged 7, in
 Hospital for 75 days.

Item	Discharge	6 weeks	12 weeks
Activities	38	31	49
School	55	55	55
Withdrawn	57	76	64
Somatic	50	50	50
Anxious\Dep	66	68	61
Social	82	66	66
Thought	50	68	50
Attention	58	66	54
Delinquent	57	57	51
Aggressive	57	62	57
Social Competence	31	37	43
Total t score	64	69	58
Internal t score	62	69	59
External t score	57	62	56

The following Table showed that this child’s psychosocial functioning deteriorated following discharge showing a greater deterioration at week 6 an a slight improvement at week 12.

Table 5

Control Group Subject 2, Standardised Scores for Male Aged 11, in Hospital for 96 days.

Item	Discharge	6 weeks	12 weeks
Activities	53	46	42
School	39	39	39
Withdrawn	61	73	61
Somatic	50	56	61
Anxious\Dep	58	79	68
Social	52	56	60
Thought	57	73	67
Attention	67	67	75
Delinquent	50	50	50
Aggressive	56	72	60
Social Competence	28	23	25
Total t score	56	71	66
Internal t score	59	74	68
External t score	53	68	56

Table 6 is interesting as the Total t scales indicates that the individual has shown an improvement. Yet closer examination shows the improvement is mainly in the area of the exhibition of somatic complaints, a drop of 25 points between discharge and week 12.

Table 6
Control Group Subject 3, Standardised Scores for Female, Aged 11, in Hospital for 149 days.

Item	Discharg	6 weeks	12 weeks
Activities	36	25	38
School	30	37	37
Withdrawn	68	73	73
Somatic	75	62	50
Anxious\Dep	69	66	64
Social	70	66	76
Thought	58	58	58
Attention	70	66	68
Delinquent	71	76	74
Aggressive	79	85	75
Social Competence	33	31	31
Total t score	75	74	72
Internal t score	73	70	66
External t score	76	80	75

The next Table shows that the child has made a general improvement in all areas of his psychosocial functioning. The mother who scored the checklist felt unable to report on her child's social functioning on the first two occasions. The CBCL computer analysis of the data will accept missing data and gives a mean score for that item. However, if the score has a disparity with the normative score, the programme will issue a warning not to trust the data if there are any scoring errors. (Arnold and Jacobowitz, 1993). No such warning was issued.

Table 7

Control Group Subject 4, Standardised Scores Male, Aged 7, in Hospital for 61 days.

Item	Discharge	6 weeks	12 weeks
Activities	40	48	42
School	48	48	48
Withdrawn	64	61	58
Somatic	56	50	50
Anxious\Dep	68	58	52
Social	68	52	52
Thought	57	64	50
Attention	60	51	50
Delinquent	76	54	72
Aggressive	63	51	53
Social Competence	missing	missing	36
Total t score	71	55	55
Internal t score	68	57	51
External t score	69	52	59

This following Table indicates that the child’s rehabilitation was not as good as one would have hoped. The scores for the social competence scale dropped indicating an increase in difficulties in this area. The scores for the problem scales also dropped for anxiety and depression, Thought problems and attention problems, indicating an improvement. However there was no improvement in the other 5 problem scales.

Table 8
Control Group Subject 5, Standardised Scores for Male, Aged 10, in Hospital for 106 days.

Item	Discharge	6 weeks	12 weeks
Activities	55	55	48
School	48	48	39
Withdrawn	50	50	50
Somatic	56	56	56
Anxious\Dep	58	50	50
Social	50	50	50
Thought	57	57	50
Attention	63	57	51
Delinquent	50	50	50
Aggressive	50	50	50
Social Competence	54	54	45
Total t score	49	42	40
Internal t score	55	49	43
External t score	44	35	41

Table 9 is the last of the CBCL data for the Control Group and demonstrates an over-all deterioration in the child's psychosocial functioning. The only improvement shown was her functioning at school.

Table 9
Control Group Subject 6, Standardised Scores for Female, Aged 11, in hospital for 102 days.

Item	Discharge	6 weeks	12 weeks
Activities	49	53	48
School	33	33	39
Withdrawn	57	64	63
Somatic	50	58	56
Anxious\Dep	50	54	60
Social	52	62	69
Thought	50	50	57
Attention	61	63	60
Delinquent	62	67	72
Aggressive	50	50	53
Social Competence	33	34	25
Total t score	51	57	64
Internal t score	51	58	60
External t score	52	53	62

The following six Tables, Tables 10 to 15 set presents the data for the scores of the CBCL for the Experimental Group. Table 10 demonstrates a mixed result with improvements in some areas such as at school and in the problem areas of somatic, attention, delinquent and aggressive problems. The missing data for school at week 12 has not affected the profile.

Table 10

Experimental Group Subject 1, Standardised Scores, Female, Aged 8, in Hospital for 100 days.

Item	Discharge	6 weeks	12 weeks
Activities	46	46	51
School	33	30	27
Withdrawn	53	57	61
Somatic	58	58	54
Anxious\Dep	50	50	50
Social	76	85	76
Thought	65	58	68
Attention	82	84	77
Delinquent	62	62	57
Aggressive	67	67	64
Social Competence	22	22	missing
Total t score	65	68	65
Internal t score	52	52	54
External t score	67	67	63

The results of the data for Table 11 are mostly unremarkable showing a slight general improvement in the child’s psychosocial functioning.

Table 11
Experimental Group Subject 2, Standardised Scores, Male, Aged 7, in
Hospital for 95 days.

Item	Discharge	6 weeks	12 weeks
Activities	35	35	44
School	43	43	43
Withdrawn	50	50	50
Somatic	56	56	50
Anxious\Dep	50	50	50
Social	60	60	60
Thought	50	50	50
Attention	50	50	50
Delinquent	70	63	67
Aggressive	50	50	50
Social Competence	39	39	45
Total t score	49	48	47
Internal t score	40	40	40
External t score	55	55	52

Table 12 shows that this child experienced more difficulties at week 6 in some areas than she did at the time of discharge, but made substantial improvements by week 12.

Table 12

Experimental Group Subject 3, Standardised t Scores, for Female, Aged 7, in Hospital for 91 days.

Item	Discharge	6 weeks	12 weeks
Activities	53	51	49
School	37	33	34
Withdrawn	68	73	61
Somatic	75	64	62
Anxious\Dep	88	82	70
Social	79	79	62
Thought	68	68	58
Attention	61	63	51
Delinquent	73	67	67
Aggressive	72	72	69
Social Competence	37	33	34
Total t score	79	74	67
Internal t score	80	77	68
External t score	73	71	70

Like the previous example the data for Table 13 shows that the individual experienced an increase in difficulties at week 6 when compared to the reported results at discharge. However, there was not the recovery the previous sample demonstrated but a substantial deterioration in the child’s function in most areas, except for school and with delinquent, attention and withdrawn problems.

Table 13
Experimental Group Subject 4, Standardised Scores for Female, Aged 10, in Hospital for 84 days.

Item	Discharge	6 weeks	12 weeks
Activities	49	42	48
School	37	33	48
Withdrawn	53	61	50
Somatic	62	73	70
Anxious\Dep	52	72	77
Social	73	76	90
Thought	50	73	67
Attention	70	68	65
Delinquent	62	70	54
Aggressive	62	68	73
Social Competence	43	51	36
Total t score	63	73	74
Internal t score	55	72	72
External t score	63	70	69

Table 14 also shows a mixed result with improvements in some areas and deterioration in others. Generally, it can be judged that this boy's psychosocial status improved.

Table 14
Experimental Group Subject 5, Standardised t Scores for Male, Aged 11, in Hospital for 38 days.

Item	Discharge	6 weeks	12 weeks
Activities	48	40	48
School	56	63	68
Withdrawn	54	62	50
Somatic	79	70	67
Anxious\Dep	72	67	62
Social	56	63	68
Thought	70	73	67
Attention	63	65	70
Delinquent	50	50	54
Aggressive	60	63	50
Social Competence	50	48	48
Total t score	68	67	61
Internal t score	73	69	61
External t score	58	60	50

The data shown in table 15 shows that overall there was an improvement in the individuals psychosocial functioning between the time of discharge and the administration of the CBCL at week 12. The data for week 6 showed that the individual was not functioning as well when the results of the data at discharge and week 12 are compared.

Table 15
Experimental Group Subject 6, Standardised t Scores for Female, Aged 7, in Hospital for 88 days.

Item	Discharge	6 Weeks	12 weeks
Activities	38	55	53
School	43	43	43
Withdrawn	76	68	61
Somatic	50	58	50
Anxious\Dep	76	68	69
Social	79	70	50
Thought	70	70	65
Attention	68	68	61
Delinquent	51	57	62
Aggressive	50	62	52
Social Competence	48	53	43
Total t score	68	70	59
Internal t score	73	68	65
External t score	46	62	54

Research Question 1

Research Question One investigated whether Children in the home visiting group would make significantly greater gains by 12 weeks following discharge, as measured by CBCL scores of Social Problem, Thought Problem, Attention Problem, Social Competence, Total t Score, Internal t Score and External t Score compared to the group of children who did not receive home visiting.

As previously discussed in was originally intended to analyse data for the individual subjects with ANOVA to determine over time their CBCL scores improved or deteriorated. This test was not used because the assumptions underlying this analysis were violated (distribution were not normal, N was to small).

The appropriate non-parametric Mann-Whitney U test was used to determine if the mean rank of each dependent variable was significantly different between groups. Burns and Grove (1987, p. 494) describe the Mann-Whitney U test as the most powerful non-parametric test, with 95 per cent of the power of the t test to detect differences between groups.

The prediction made in relation for Research Question 1 was unfounded as there was no statistical difference between the two groups. None of the below reported P values are below .05, there was no difference between the Control and Experimental Groups.

Table 16

The Mann-Whitney U Scores for the CBCL at Week 6 and Week 12.

Item	Week 6	Week 6	Week 12	Week 12
	U Score	P Value	U Score	P Value
Social Problem	11. 5	. 3095	15. 5	. 6991
Thought Problem	12. 5	. 3939	17. 5	. 9372
Attention Problem	13. 5	. 4848	14. 5	. 5887
Social Competence	10. 0	. 4286	9. 5	. 3290
Total t Score	18. 0	1. 0	17. 5	. 9372
Internal t Score	15. 5	. 6991	17. 0	. 9372
External t Score	12. 5	. 3939	16. 5	. 8182

Research Question 2

Research Question Two asked if any gains made by children in the Experimental Group as measured by CBCL scores of Social Problem, Thought Problem, Attention Problem, Social Competence, Total t Score, Internal t Score and External t Score compared to the gains made by of children of the Control Group who did not receive home visiting. It was predicted that the Experimental Group would be greater at 12 weeks, compared to 6 weeks, following discharge. The Control Group would not show improvement over time.

As previously discussed it was intended to analyse the data by a mixed model analysis of variance (ANOVA) which would analyse the repeated measures factor, time (3 levels: 0 weeks,[discharge] 6 weeks and 12

weeks). However this parametric was not used because an assumption underlying this analysis were violated (distributions were not normal as N was small).

As there is no single non-parametric test equivalent to the mixed model ANOVA, and consideration was given to test for variance using a non-parametric Friedman Two-Way Analysis of Variance by Ranks. However this test requires a minimum of 10 subjects (Heiman, 1996) matched on all other variables except the one being analysed (the repeated measures variable) and there only 6 subjects in each group. The Friedman analysis was therefore not used. As the information provided by the CBCL scores for each dependent variable may be of clinical interest these scores were graphed for the Control and Experimental groups at Discharge, and Weeks 6 and 12. The individual graphs present the median difference scores for the dependent variables of Social Problem, Thought Problem, Attention Problem, Social Competence, Total t Score, Internal t Score and External t Score (the raw scores may be found in Appendix C).

Figure 2 (Social Problems Score) shows that the Experimental Group made a small loss at week 6 and and a small gain by week 12. The Control Group made a gain at week 6 and a loss in the scores by week 12.

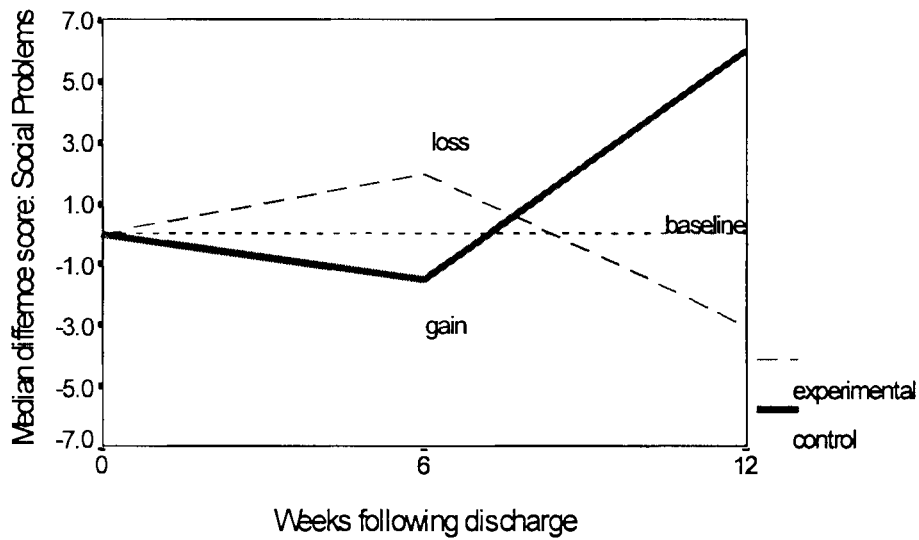


Figure 2. Median Difference Scores for CBCL Social Problems across Time according to Group.

Figure 3 (Thought Problems) shows that the Experimental Group made a loss at week 6 and a small gain at week 12 but, overall made a small loss in the scores. The Control Group score remained steady at week 6 and was followed by a gain at week 12.

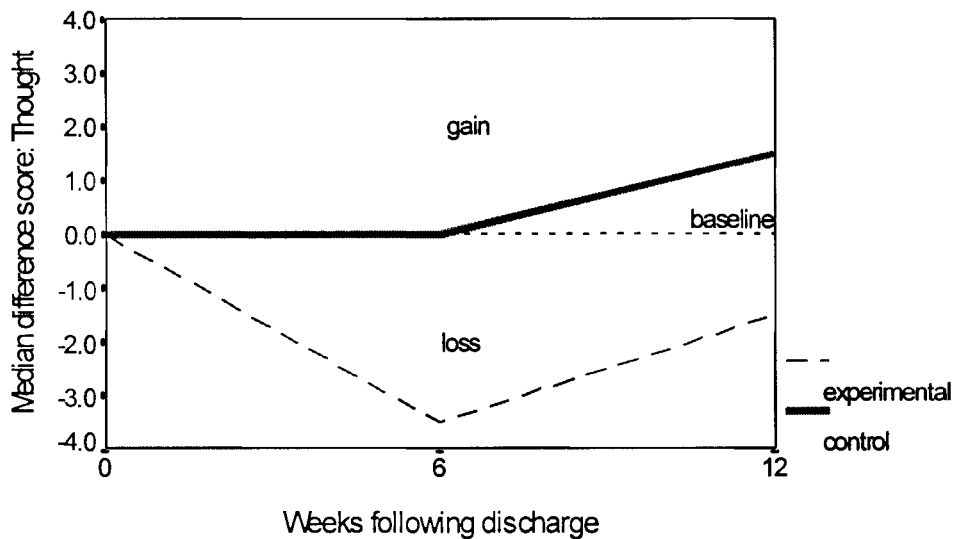


Figure 3. Median Difference Scores for CBCL Thought Problems across Time according to Group.

Figure 4 (Attention Problems) shows that the Experimental Group made a slight gain at week 6 and a further small gain at week 12. The Control Group on the other hand made a small loss at week 6 to be followed at week 12 with again so the over the 12 weeks the net result of the scores was a small gain.

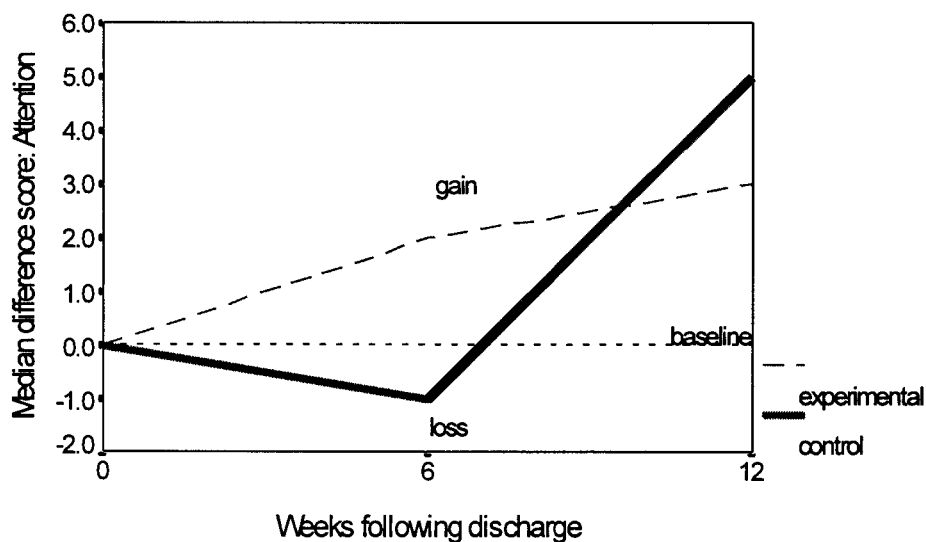


Figure 4. Median Difference Scores for CBCL Attention across Time according to Group.

Figure 5 (Social Competence Score) shows that the control and Experimental groups both groups there scores at week 6 did not change and demonstrated a gain at at week 12. (Groups perform exactly the same over time).

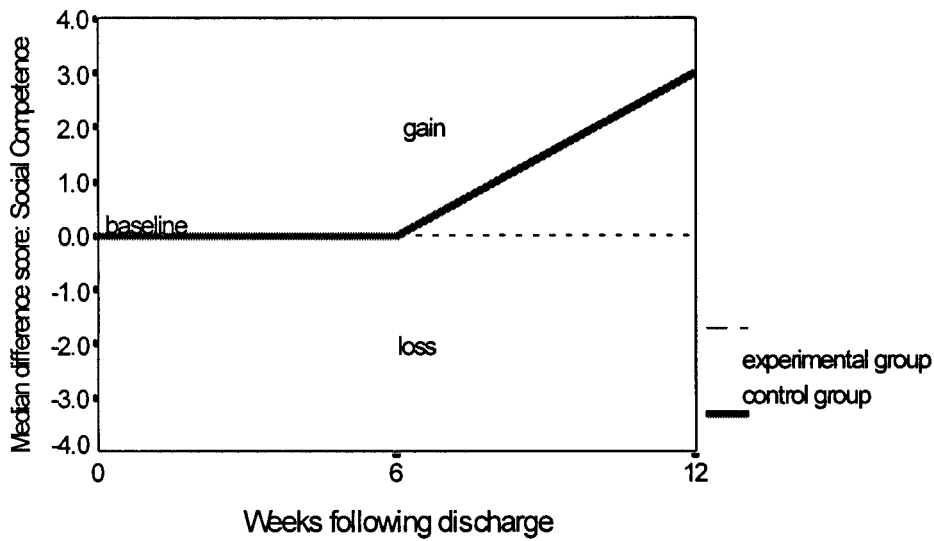


Figure 5. Median Difference Scores for CBCL Social Competence across Time according to Group.

Figure 6 (Total t Score) Shows the Experimental Group had a small gain at week 6 but lost that at week 12. The Control Group had a loss at both weeks 6 and 12

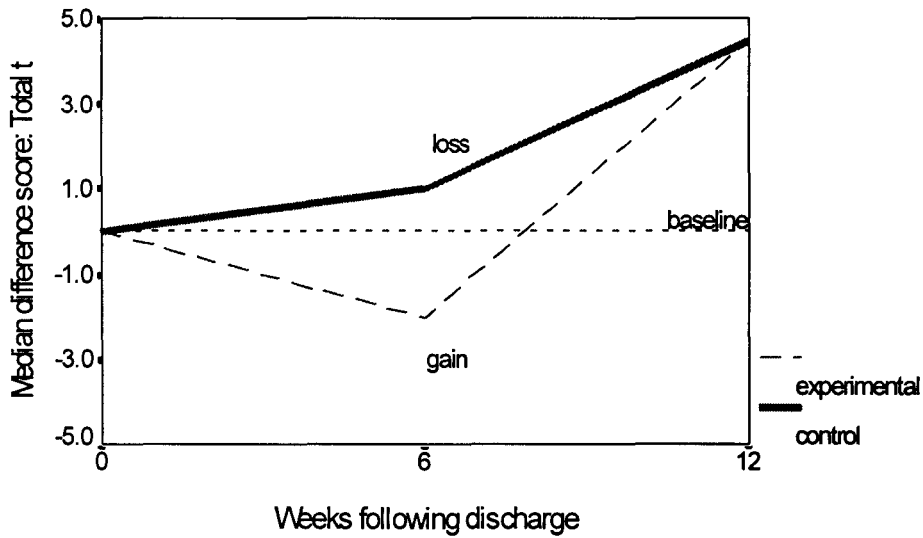


Figure 6. Median Difference Scores for CBCL Total t score across Time according to Group.

Figure 7 (Internal t Score) shows that the Experimental Group made a small gain at week 6 and lost that by week 12. The Control Group shows the opposite pattern over time.

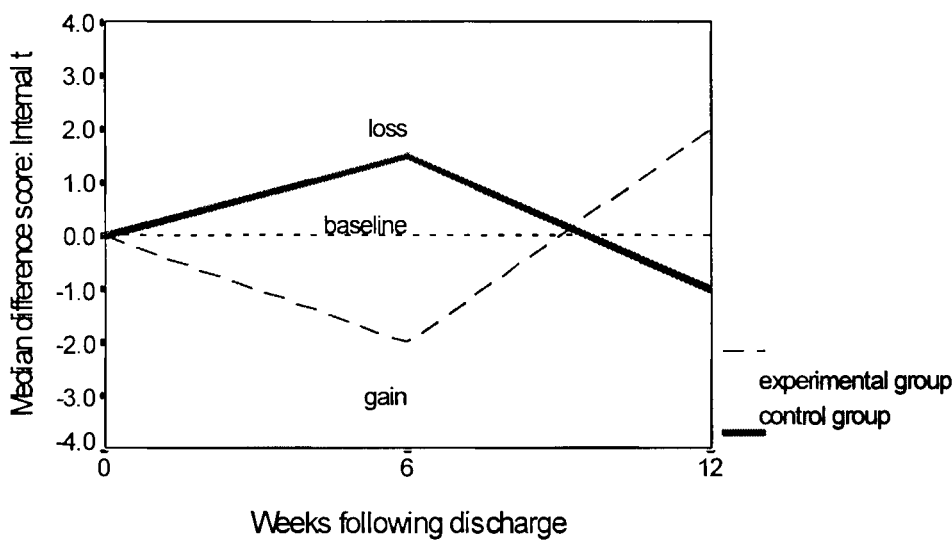


Figure 7. Median Difference Scores for CBCL Internal t score across Time according to group.

Figure 8 (External t Score) shows that both groups made small gains at week 6 but, these gains were lost by week 12. Although the differences were minimal at week 12 both groups were not functioning as well as at discharge.

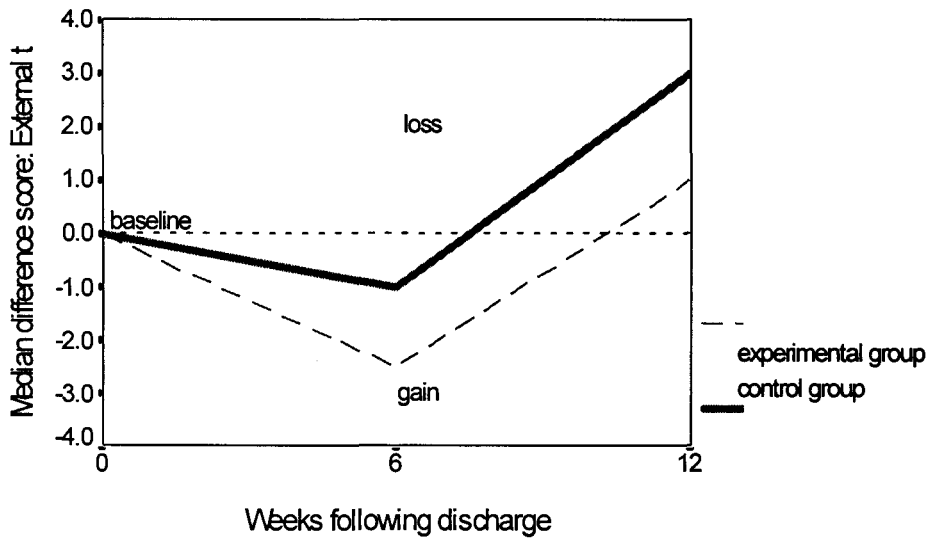


Figure 8. Median Difference Scores for CBCL External t score across Time according to Group.

Summary

The graphs of the data show a slight deterioration in the subjects scores at week 12 for both groups. Some improvement is noted at week 6 however these small gains were lost by week 12.

Research Question 3

Research Question 3 posed the question: Did the children in the home visiting group require significantly less outpatient appointments in the 12 weeks following discharge from hospital, compared to the group who did not receive home visiting.

The frequency of outpatient consultations, hospital based consultations and telephone consultations were compared between groups to determine which group was the largest consumer of these services.

The following table illustrates the number of contacts the member of the sample made with hospital staff and shows that the subjects in the Experimental Group had more outpatient than did subjects in the Control Group.

Outpatient appointments for the Experimental Group number 17. One child required six appointments, another seven appointments and the third four appointments with the child psychiatrist. Three children in the Experimental Group did not require any outpatient appointments and only two children in the Control Group did not require outpatient appointments.

Table 17

Total Outpatient Contacts for the Sample and Mann-Whitney U Test
Results

Group	Telephone	Hospital Visits	Outpatient Appointments
Control	7	0	10
Experimental	28	10	17
Total	35	10	27

The unexpected result was the Experimental group had more Outpatient Appointments than did the Control group. It was Thought that home visiting would reduce the requirement for Outpatient Appointments.

Research Question Four

Research Question Four asked if the children in the home visiting group would require less readmissions to hospital, compared to the group of children who did not receive home visiting.

During the time of data collection from March 1993 to February 1994 no children were readmitted to hospital. This was unusual, and has not occurred for several years.

Individual case study analysis was also undertaken to capture qualitative elements in the resolution of the nurse-patient relationship that would go undetected by the quantitative instrument. The case studies provide descriptive and qualitative accounts of how the home visits were conducted and received from the families’ and nurses’ perceptions.

Summary

This chapter presented the results of the analysis of the data collected in this study. This study sought to investigate the effect a nurse home visiting programme had on the rehabilitation of children following their inpatient treatment for emotional and/or behavioral problems. In addition, the study sought to ascertain if the home visiting programme reduced the need for follow-up outpatient appointments with a consultant psychiatrist.

The statistical comparison of the CBCL scores between the control and Experimental Groups by the application of the Mann-Whitney U test did not produce evidence of statistical, significant difference between the groups at week 12 after discharge.

The graphs show some movements in the scores of the CBCL for the Experimental Group in the twelfth week which are of interest from a clinical view point. For example, at week 12 the Experimental Group showed an improvement in their scores for Social Problem Scores in comparison to the Control Group. However, the Experimental Group also showed a trend of having more problems at week 12 in the syndrome of Thought Problems. Overall there was no pattern nor was there an improvement in the two groups scores.

Data collected for outpatient follow-up appointments with a consultant psychiatrist for the two groups showed an increase in appointments for the Experimental Group (17 contacts) as compared to the Control Group (10 contacts). Three children in the Experimental Group did not require follow-up appointments and only two children in the Control Group did not require follow-up. The total number of outpatient contacts shows a

higher number of contacts for the Experimental Group (76 contacts) than the Control Group (17 contacts). There were no children readmitted to hospital during the time of data collection.

Given the limitations in the type of data analysis appropriate for this particular sample Individual case study analysis was also undertaken. The following case studies have been included to give the reader some insight into the individual differences amongst the children's responses across both groups. The intention was to capture qualitative elements in the resolution of the nurse-patient relationship that would go undetected by the quantitative instrument. The case studies provide descriptive and qualitative accounts of how home visits were conducted and received by the families' and nurses' perception.

Conclusion

The only conclusion that can be drawn is that the nurse home visiting programme did not have any effect on the rehabilitation of children following their discharge from an inpatient unit. This may be because the small sample was insufficient to show an effect or it maybe that the children differed widely across both groups in their progress.

CHAPTER 6

Case Studies

Introduction

The following case studies were selected from the sample as being typical of the individual families that participated in the study.

The identity and confidentiality of these children and their families has been protected by giving them pseudonyms and the subject number is not the same as the number given in the results section.

Case 1: A Subject of the Experimental Group

John, a 7 year old boy presented for admission for the management of Attention Deficit Disorder, difficulties with his peer group, sleeping difficulties, nightmares, and occasional enuresis. The Consultant Psychiatrist also considered that a contributing factor to the boy's difficulties was the father's absence from family life due to work commitments. The ICD 9 diagnosis was 313. 3 (Disturbance of emotion specific to childhood and adolescence with relationship problems).

During this child's stay in hospital the nursing staff noted that the father often could not visit the boy as he was committed to work and when he did come, the visits were frequently interrupted by him having to answer a mobile phone. Observations of the mother's interaction with John suggested that she was unable to set fair, firm and consistent limits on John's unacceptable behavior.

At the time of discharge, 12 weeks after admission, there was marked improvement John's behavior. The diurnal enuresis had ceased, his concentration at school had improved as had his ability to make and hold

peer group relationships. At the time of discharge the parents were offered home visiting as by chance they were allocated into the Experimental Group for the study. The parents were enthusiastic about receiving home visiting and stated that they found it helpful. The visiting nurse continued to see the family for four months following discharge. At first visits were weekly and then gradually less frequently as the child's behavior improved and the parents' skill and confidence in their parenting techniques grew. Home visiting ceased after four months but the parents asked to maintain contact if they felt the need. John did not require outpatient follow-up with the Child Psychiatrist.

Comments

At the time it was suggested that this child be admitted to hospital, the mother was desperate for any form of help and readily agreed to admission. Conversely, the father was reluctant to agree. Finally he submitted to his wife's demands that something needed to be done and allowed his son to be admitted.

Following admission, the father recognised improvements in his sons' behavior and a reduction in the stress levels at home. His reservations about his son's admission to hospital diminished and he became actively involved in the process. Together the parents adopted the techniques and strategies suggested by the staff. It seemed that once the father became committed to the treatment programme, the improvement in John's behavior appeared to accelerate. This suggests that the change in the father's commitment contributed to the positive changes the boy made.

The nurse conducting the home visits was always warmly welcomed by both parents for they used this time to discuss differences in their

respective parenting techniques, something they could not do previously without having serious differences of opinion. In time, the parents developed the skills and confidence to agree on parenting strategies without the assistance of another party.

Home visiting was welcomed by the family as it proved to be a positive experience for both the family and the nurse, and a source of satisfaction for all. This case demonstrates the need to include parents in the treatment strategy and to provide at least limited ongoing support in the home. Without of home visiting, it is doubtful that the parents would have agreed on the limits to set on the child's behavior.

Case 2: A Subject from the Control Group

Stewart, an 8 year old boy, presented for treatment of his antisocial acts, which included stealing, cruelty to animals, sibling rivalry, poor peer group relationships and being out of control at home. His ICD 9 diagnosis was 313. 3 (Disturbance of emotion specific to childhood and adolescence with relationship problems).

The social history describes the parents' own upbringing as being troubled, and the relationship between the parents as being tenuous. They had also experienced financial difficulties that forced the family to move into the maternal grandmother's house one month after Stewart was born. This provided the opportunity for the grandmother to dominate the boy's early upbringing. When the family moved out of the maternal grandmother's house some seven months later the grandmother continued to interfere in Stewart's management and at one stage kidnapped him. From that time, the parents' marriage was unstable and the family had moved many times.

After fourteen weeks of hospitalisation there were only minor improvements in Stewart's behaviors. More significant improvements were not achieved and it is hypothesised that a reason for this may have been because of the ongoing marital disharmony and the failure of the parents to follow through with fair, firm and consistent limit setting.

At the time of discharge the parents were invited to join the study as members of the Control Group. After completing the first form at discharge, the parents failed to complete subsequent forms and were irregular in their attendance for outpatient appointments. The family frequently failed to attend arranged outpatient appointments and a week or so later would telephone the hospital demanding an urgent appointment.

Comment

This case example supports the notion that the entire family should be the focus of any intervention on behalf of a child. If the other members of the family, particularly the parents, have needs that go unmet, then the child's needs will not be addressed. In this instance, the hospital staff were not permitted by the parents to work through the difficulties within the marriage, nor did they accept referrals to other agencies.

The fact that this family failed to complete all of the questionnaires and to attend outpatient appointments was of great concern. The psychiatrist considered that this reflected both a lack of commitment by the parents to their child and to a manifestation of their ongoing marital conflict.

Home visiting may have averted some of the many crises the parents experienced with this boy's behavior. The visiting nurse would have been able to assess, in the natural setting, the child's behavior and the parents' response to that behavior and thus be able to suggest appropriate measures to manage unwanted behavior. However, this would only be successful if the parents' wanted the service. Part of the treatment intervention would have included addressing the parents' marital difficulties.

This case is an example of the difficulties experienced by members of the helping profession who have identified a problem, but cannot deliver a service because the family is unwilling or unable to accept the service being offered.

Case 3: A subject from the Experimental Group

This case presents an 11 year old boy who was admitted because of the parent's clear history of their son's depression, not coping, academic deterioration, psychosomatic complaints, and threats of behavior suggesting suicide or self harm. His parents were alarmed and at a loss to explain their child's emotional state and felt they could not leave him alone. The Consultant Psychiatrist describe the parent's state as "Vigilant terror"

In the hospital setting the nursing staff reported that this boy could not say "no" to either adults or children, nor did he express emotions that one would expect in normal social interactions (being cross, sad, happy, home sick or jealous to name but a few).

As this boy began to form relationships and trust members of the nursing staff it became evident that he would not express his emotions and feeling for fear of ridicule or offending people. Role modeling, role play and the supportive environment allowed this boy to experiment, somewhat tentatively at first. As his worse fears were not realised he became bolder.

Discharge was agreed upon when he was expressing jealousy of his younger brother, was able to say “no” appropriately and was able to experience and show a range of emotions. Self harming behavior was no longer evident and his depression had lifted.

Comment

This family was invited to join the study and the parent’s agreed. In fact the parent’s were relieved to have the support as they feared the return of the boy’s depression and self harming behavior. Over a three month period following discharge a nurse visited the family at two weekly intervals and gradually tapered off until they were no longer required. The depression did not return and the parent’s confidence increased as, they put it their way “get on with life”.

The important point to make here is the degree of support the parent’s perceived. They were aware that they would have regular contact with staff and that at any time they could contact and if necessary extra home visits could be arranged. This reduced their fear, their “vigilant fear”, which would no doubt, have had consequences for their own health and welfare. The outcome for this family at the cessation of contact was evaluated as being very good.

Case 4: A Subject from the Control Group

Kate an 11 year old girl presented for admission for the management of depression, social withdrawal, poor self esteem, emotionally needy, deteriorating stepmother -child relationship, sibling rivalry, poor peer group relationships and Attention Deficit Disorder which was only evident at school.

The social history as given by Father and Stepmother was that Kate's mother had died from a malignant melanoma and after several years father and stepmother formed a blended family. Kate violently objected to this and was particularly jealous of her stepsister (1 year older than herself) who she perceived to be accomplished at "everything". She was also jealous of her 18 month old half- brother, a product of this recent union.

In hospital all of these symptoms were evident and it took some special effort to connect with Kate and form a trusting relationship. Over time Kate formed a relationship with one of the female nurses which allowed her to work through her grief for her mother and to have her emotional needs met by the staff and her new family. The outcome was successful as most of the symptoms disappeared.

Comment

This family was invited to join the study. As it turned out they were by chance allocated to the Control Group. The Stepmother would have preferred to have home visiting, but there was no perceived clinical need.

Case 5: A Subject from the Experimental Group

Jenny presented to the clinical team for the management of her Attention Deficit Hyperactive Disorder (ADHD), her inability to make and keep friends and her rivalry with her 4 year old brother. When admission to hospital was first proposed her mother was cautious, but interested, whilst the father did not want his daughter in an “institution”. After visiting the hospital and chatting with the nursing staff the father was agreeable to his daughter’s admission.

After admission all of the symptoms of the child described in the Admission Summary were confirmed. In addition the nursing staff began to question if the mother had adult Attention Deficit Hyperactive Disorder

During her hospitalisation Jenny was trialed without stimulant medication without success and was subsequently recommenced on Methalphenindate with a marked improvement in her concentration at school.

At the time of discharge Jenny was able to make and keep friendships and was able to get on with her sibling and her ADHD was under control.

Comment

The parent’s were invited to join the study and they agreed especially as they fell into the group that would have home visiting. In this instance Researcher was the home visiting nurse and over a 5 month period visited the family over a decreasing interval.

During that time the Mother decided independently to seek an assessment of herself. She was diagnosed as having adult ADHD and

accepted the appropriate treatment. This made the implementation of treatment strategies for Jenny easier to apply.

Case 6: A Subject from the Control Group.

Adrian, a 7 year old boy was admitted for a long history of Encopresis, poor self esteem, inconsistency of management at home, marital difficulties between parents and failure of outpatient treatment.

In the inpatient setting it quickly became apparent that to change the parent's management of this boy would be difficult, (because the parents could not agree on a consistent management plan) and this was the case. Adrian would deny soiling, would hide his dirty clothes and would flush soiled underwear down the toilet.

Adrian was the victim of teasing in the hospital and at school, mainly because of his failure to address his personal hygiene. He was called "stinky, smelly" and other antisocial names. Whilst this did not appear to affect him, he would do anything to please his peer group which often led to him being "set up" to get into trouble.

At the time of discharge Adrian had shown some improvement in his peer group skills and his soiling had stopped. However, as he had become very adept at hiding soiled clothes, there was doubt if he had stopped soiling completely.

Comment

Treatment of this boy was extremely difficult, for whilst his parents loved him they could not come to a common ground on his management. During a family therapy session his father disclosed that he also soiled his pants as

a child and grew out of that and could not see the problem. Another issue that had to be addressed in family therapy was the marital discord as in the past there had been multiple brief separations which contributed to the feeling of insecurity in the boy. The intensive milieu and family therapy produced minimal changes in the family during hospitalisation and as by chance the family fell into the Control Group. The researcher was surprised they agreed to be part of the study at all.

Summary

The case studies demonstrate the wide variation of family dynamics and the requirement to implement nursing strategies that address the needs of each of the individuals and their unique families. The studies also demonstrate how home visiting enables the visiting nurse to gather information about families that may not have been understood or known previously. The influence that the home visiting nurse may bring to bear by supporting the primary care-givers (the parents) is also highlighted. The child's behaviour and or emotional disturbance cannot be considered in isolation and is best observed in the home setting.

CHAPTER 7

Discussion

Introduction

The purpose of this study was to examine the effect of a nurse home visiting programme on the rehabilitation of children, over a twelve week period, following their discharge from a child psychiatry inpatient unit.

Chapter 7 commences with a discussion of Research Questions 1 to 4. The length of stay in hospital is also discussed as is the Relationship to the Theoretical Model, practical results of the study, conclusion and recommendations for further research.

Discussion

The research evaluated 12 children following their discharge from hospital. Six of the children received home visiting and the others did not. The results of the CBCL scores for each group were compared..

Further investigated was the CBCL scores for each of the members of the sample to examine if their CBCL scores over time showed improved psychosocial functioning.

Chapter 5 presented the standardised scores from the CBCL and these scores were analysed by using the non parametric Mann-Whitney U test.

Research Questions 1 and 2 essentially investigated the changes in the CBCL scores of the two groups. Research Question 1 looked at the

changes between the two groups, whilst research Question 2 examined the repeated measures for individuals in the two groups.

Research Question 1 asked whether children in the home visiting group would make significantly greater gains by 12 weeks following discharge, as measured by CBCL scores of Social Problem, Attention Problem, Thought Problem, Social Competence, Total t score, Internal t score and External t score compared to the group of children who did not receive home visiting. Lower scores for Social Problem, Attention Problem, Thought Problem, Total t score, Internal t score and External t score and higher scores for Social Competence indicate improvement

Research Question 2 also asked did the gains made by children (as reflected by changes in the CBCL scores) in the Experimental Group increase over time (ie, over the period of 12 weeks during which the intervention took place). It was predicted that gains made would therefore be greater at 12 weeks, compared to 6 weeks, following discharge for the Experimental Group. The Control Group were not expected to show improvement over time. Again lower scores for Social Problem, Attention Problem, Thought Problem, Total t score, Internal t score and External t score and higher scores for Social Competence indicate improvement

The results of the non-parametric Mann-Whitney U test of the CBCL did not show a finding of statistical significance between groups. The children in the Experimental Group did not have CBCL scores which indicated better functioning (or deterioration) on these measures compared to the Control Group.

However, it is probably the case that with a sample of 12 subjects, six in each group, the sample was too small to enable the intervention to demonstrate an effect.

With greater numbers in the sample (for example, twenty to thirty in each group) “t” tests and ANOVA may confirm statistically significant differences between the groups. However, greater breadth in the study was constrained by time and the pool of available subjects.

In contrast to the findings of the present study, other researchers have found nurse home visiting programmes provide many benefits to the children, their families and the community. (Robbins et al. 1991; Guterman et al. 1989; Brissette et al. 1988; Paykel et al. 1982; Falloon et al. 1993; Williams et al. 1993; and Martin et al. 1993). While the current study did not find any significant benefits for the children and their families, it is tentatively suggested that home visiting provides benefits. Whilst the present research did not measure client satisfaction, unsolicited feedback from parents suggested that client satisfaction was greater for the Experimental Group

The present study did provide some benefits to the families, for example, an increase in client satisfaction. All of the families who received home visiting, including those families excluded from the study, said the home visits were of benefit to them. However these reports are subjective.

A further potential benefit noted by nurses who participated in the present study was that of increased opportunity to obtain clinically relevant information about each family. These nurses reported that they

gained useful information from a home visit which could not be derived from any other source. This information greatly enhanced their ability to implement effective interventions. Home visiting allowed for the detection of potential or existing problems not previously identified for which therapeutic strategies could be implemented. The financial implications of follow-up, aftercare and home visiting are being considered by health care authorities in many places in an effort to reduce costs.

These tentative findings are consistent with those of researchers such as Paykel et al. (1982) who conducted a randomised control study on the follow-up of seventy-one neurotic patients in London. These researchers found that the patients seeing a community psychiatric nurse in their home reported a greater satisfaction with treatment and a marked reduction in outpatient contacts with the psychiatrist, than did patients receiving the usual follow-up.

Austad et al. (1986) conducted a review of patient post-discharge contacts from a psychiatric hospital in New Haven, Connecticut, USA. The conclusion of this review was that post-discharge contacts were clinical events which identified unique patient needs. Staff members should carefully analyse post-discharge contacts to determine what needs are being expressed by the patient. Factors such as incomplete termination of therapy, the need for reassurance, to reminiscence, or flight from current therapy should be considered. Austad et al. (1986) concluded that the appropriate handling of post-discharge contacts could contribute to the containment of treatment costs by reducing the need for patient readmission.

A nurse who was a participant in this study, observed during a home visit, the inappropriate use of time-out location where the child had access to a television or toys. This alerted the visiting nurse to the fact that the parent did not fully understand the concepts of time-out and was inadvertently reinforcing unwanted behaviours and the issue was addressed. It can be argued that during an outpatient appointment, a parent could have reported their use of time-out and queried why it didn't work. Unless the clinician made careful and specific enquiries about the nature and setting the parent's use of time-out, the reported failure could have been accepted at face value and the clinician left searching for another management strategy. Another parent complained to a visiting nurse that when her son was in trouble at school he was withdrawn from the class room. The mother felt that was appropriate but she did object to her son being withdrawn from the class only to be placed in a room where he was allowed to play games on a computer. "What a good way of getting out of lessons he did not like", she exclaimed! This reinforcement of bad behaviour was discussed and the home visiting nurse arranged for the hospital's clinical psychologist to visit the school and introduce appropriate management strategies.

Guterman et al. (1989) reported in their follow-up study of boys discharged from a residential facility in the USA, that they also found home visiting an important source of information. For example, the home visitor was able to make a more in-depth assessment of problematic behaviours, the stresses with which a family must cope and how parents manage these behaviours. The value of a home visit as a means of information gathering is also supported by Kates et al. (1991) in their review of house calls by staff of a Community Mental Health Centre, Ontario, Canada. Kates et al. (1991) also agree with Guterman et al.

(1989) that a home visit enabled the health professional to detect problems which could not be detected in an clinical setting.

The visiting nurse has to be flexible, creative, responsive and sensitive to the families needs and be able overcome the loss of tools of the profession found in a hospital setting. The home visit also can be a stimulating and satisfying part of nursing practice and contribute to best practice and staff retention (Kates, et al. 1991).

Length of Stay in Hospital

The study findings show the Experimental group had a shorter stay in hospital compared to the Control Group. This was a chance happening.

It was noted from the study findings that the Experimental Group differed from the Control Group in some characteristics (for example, abnormal distribution of family situation, socioeconomic status and severity of the child's disorder). This occurred despite a non-biased method of allocation to each group. Because groups may have differed on important characteristics, they may have been qualitatively different at the outset of the study.

However, should future research demonstrate positive effects of home visiting it may be possible to shorten the length of stay in hospital and resolve the therapeutic relationship via the home visiting programme.

Outpatient Contacts

Research Question 3 investigated whether children in the home visiting group would require less outpatient appointments in the 12 weeks following discharge from hospital, compared to the group who did not receive home visiting.

The number of outpatient appointments attended by members of the Experimental Group members was significantly greater than those attended by members of the Control Group. It would seem then, that the current data does not support the proposition that a home visiting programme reduced the requirement for follow-up by a child psychiatrist. However, it is important to note that three of the families in the Experimental Group did not require outpatient appointments, which compared favourably to the Control Group where only one of the families did not require outpatient appointments. These three families in the Experimental Group elected not to have outpatient appointments, expressing satisfaction with the home visiting programme.

In addition to more outpatient appointments and contrary to what was expected, the Experimental Group had significantly higher post-discharge contacts with hospital staff when compared to the Control Group. This higher rate of contact may be explained as a manifestation of the home visiting programme, because the families became familiar with the home visiting nurse and were encouraged to maintain contact with the nursing staff whenever they thought they were having difficulties with their child.

That the Experimental Group had more outpatient appointments than the Control Group may also reflect greater client satisfaction and motivation than is present in the Control Group. However, it may be that

the Control Group found the service unhelpful or they required less help because their child's progress was seen as satisfactory.

Readmissions

Research Question 4 examined whether children in the home visiting group would require significantly less readmissions to hospital, compared to the group of children who did not receive home visiting.

No children were readmitted during the period of the data collection. Therefore it cannot be claimed that home visiting had an effect on this variable.

Limitations of the Study

This study was limited by the size of the sample and the time frame over which the measurements were taken. With the benefit of hindsight this study would have been better conducted over a longer period of time.

The sample for the study was atypical when compared to the population of previous years. There were more sibling admissions than had previously been encountered and a slightly higher non metropolitan admission rate. This cumulative effect reduced the sample size.

Because of the unusually high number of sibling admissions, it is useful to briefly examine this phenomenon. Clinical observations outside the study findings over the year of data collection saw a theme emerge. This was in the events that led to a sibling being admitted to hospital for

treatment. In all of the families, one of the children had been identified by the parent/s as the child who had a "problem" and the parent/s had sought for their child, help from health professionals which culminated in that child's admission to hospital. After several weeks of the "problem" child being in hospital the parent/s began to notice or realise that the child in hospital was not the only one in the family who was experiencing difficulties. Tensions within the family did not dissipate as the parent/s had expected and a common thread in all of the families was that the hospitalised child was still being blamed by their siblings for all of the wrong doings in the household. This caused some of the parent/s to question if the "correct" child was in hospital.

Concurrently, the nursing staff often noted that during family visits to the hospitalised child, a sibling was also exhibiting signs of emotional or behavioural disorder. Having identified that problems within the family extended to more than one of their children, the parent/s either requested or readily agreed to admit the sibling so that the difficulties within the family could be fully addressed. As discussed these admissions had a profound effect on the study as 37% of the potential sample was excluded because in the process of randomly allocating children to either group, one cannot provide home visiting to one sibling and not the other.

Relationship to the Theoretical Model

The nursing theory is described in the body of the text. The study has highlighted the importance of Peplau's theory especially the stages of exploitation and resolution and, therefore, merits further discussion.

The theoretical model for this study was based upon Peplau's theory of "Interpersonal Relations in Nursing" and consists of four phases, orientation, identification, exploitation and resolution. This theory has been criticised for not having a conceptual model or diagram to demonstrate the concepts and relations and yet it remains a common frame of reference for many nurses, particularly in the area of mental health (Forchuk, 1991). The theory is considered to be most appropriate for the nursing staff at the study hospital where the main treatment strategy is the formation and utilisation of interpersonal relations.

The nurse-patient relationship is unlike any other relationship formed between a patient and a professional. Nurses spend more time with patients than any other professional, and their focus is the holistic care of the patient. Nursing care involves emotional and physical care, and the physical care of the body produces an element of interpersonal intimacy not experienced by other professionals. In providing nursing care, the nurse's focus is on the patient and in providing that care, the nurse may have to assume a variety of roles. The role the nurse assumes may include the role of parent surrogate, technician, manager, socialising agent and therapist (O'Toole et al. , 1989). It is important to note that some roles, such as parent surrogate, cannot be assumed until the nurse-patient relationship has developed and that it is this relationship which must be carried through to be effective as a home visitor.

The Orientation stage is the crucial stage to be negotiated, as a relationship will not develop past this phase if, for some reason, the parties involved cannot engage or connect on some common ground. Establishing a therapeutic relationship with patients is not always easy. A study by Forchuk (1992) on the length of the Orientation phase between adult

patients and Community Mental Health Nurses in the USA raised more questions than it answered. The study found that a psychiatric diagnosis did not affect the length of the orientation phase which was thought would be the case. However, the research revealed that patients with multiple admissions required more time for the Orientation phase. A retrospective review of readmissions to the hospital under study showed that all of the adults readmitted took longer to form a meaningful relationship with a nurse. In all cases, that relationship was with a different nurse rather than with the nurse with whom they had initially formed a relationship. Forchuk (1992) concluded that unavoidable changes in the nursing staff prolonged the Orientation stage. For example, a nurse and patient may have begun the process of relationship building and the nurse takes leave, or is transferred to another workplace, which meant the patient must begin the process with another nurse all over again (Forchuk, 1992). From a professional view it is irresponsible to engage a patient in a nurse - patient relationship if the nurse is aware that they are about to take leave or to be transferred. Likewise it is damaging to the patients' treatment for nursing management to transfer staff from one clinical area to another without adequate forewarning. The salient point here is that the nurse who forms the therapeutic relationship is the one who should conduct home visits.

Most people do not like unpredictable changes in their life circumstances. Therefore, if a nurse-patient relationship is to flourish and to be therapeutic, there must be a continuum and consistency throughout the relationship and unplanned absences of the nurse should be avoided. Good communication between the nurse and the patient will allow the process of relationship formation to continue provided the patient is armed with the knowledge of the nurse's shift roster and days off duty.

Once the Orientation stage is complete, the relationship progresses through the stages of Identification, Exploitation and Resolution. In the process of discharge planning the decision to conduct home visiting or not is made. Resolution of the relationship is not pursued until home visiting is no longer required and this has the potential for early discharge. If, on the other hand, the child does not require home visiting the stage of Resolution must be reached by the time of the child's discharge, which is in keeping with the theoretical model. This presents the opportunity for earlier discharge.

The strength of the emotional attachment which forms between a nurse and a child must never be underrated. For example, there have been many instances where a former patient makes a casual visit to the hospital as a young adult just to renew their experiences. One young man who had been treated as a 12 year old for attempted suicide, visited the hospital just to say thank you. There are also many examples of children who have maintained contact with staff members over many years and so significant has the relationship been that staff members have been invited to attend former patients' wedding. This should not be construed as an indication of dependency by the child, rather a measure of the depth of the relationship between two parties. Conversely, there is a recorded instance of a child having to be readmitted because of the failure by the nursing staff to adequately resolve the relationship. Therein lies that absolute necessity of well constructed and implemented discharge planning.

Practical Results of the Study

The study findings appear to show clinical, if not statistical importance, as changes to the therapeutic programme have been established. The home

visiting programme instituted for the purposes of this study, has become an integral part of the hospital's treatment programme. Given the existing resources, it has been recommended that a home visit should also be instituted pre-admission. This latter strategy could also be a useful intervention for families waiting for their child to be admitted.

Conclusion

The statistical analysis produced no evidence to support the proposition that nurse home visiting does positively influence the outcome of a child's rehabilitation following inpatient treatment for emotional and /or behavioural problems. However there may have been clinically important benefits obtained by those in the home visiting group.

Recommendations for Further Research

Further research on the effect of a nurse a home visiting programme on the rehabilitation of children and their families following inpatient treatment would require a larger sample than this study. The study would benefit by random assignment of a larger group of subjects from to groups. The administration of additional tools such as client satisfaction surveys, the CBCL Teacher Report Form and the CBCL Direct Observation Form would further substantiate the findings. It is also recommended that the time frame for measuring change be at six monthly intervals.

Other areas of potential fruitful research include the evaluation of the effect of home visiting on children waiting to be admitted, and whether or not this is effective in delaying or preventing admission to hospital. One

question to be considered is whether the extra information gained from a home visit could shorten the child's length of stay in hospital. Could home visiting in itself prevent inpatient treatment? Does home visiting determine if a child's condition be best treated as an outpatients, day-patient, inpatient or by home visiting? Also the effect of home visiting for outpatients and day patients could add to the knowledge of nursing interventions and examine the cost effectiveness of early involvement with the children and their families.

Summary of Recommendations for Future Research

1. Replicate the study, incorporating additional tools and extending the time frame and sample size.
2. Develop and evaluate a tool to measure client satisfaction with home visiting.
3. Research into the effect of home visiting *prior* to a child's admission to hospital.

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Appendix A

Dear Mr and Mrs

I invite you to participate in a research project I am undertaking for my Master of Nursing Degree, from Edith Cowan University.

The study will examine the effects a home visiting programme by nurses on children once they have been discharged from the hospital.

I would like to know if having a nurse visit you in your home makes the transition after discharge easier for you and your child. Also I would like to know if this additional service helps children to maintain the improvements made whilst in hospital and reduce your need to seek further assistance from other professionals.

Should you agree to participate in this study, you can be assured that your child will not be identifiable in the report to be published. All information will be held in the strictest confidence.

There is no requirement to participate in the study, should you agree to be a participant, you should understand that you may withdraw from the study at any time. Should you decide to withdraw from the study you have a guarantee that all services provided will still be available to you.

For this study to have any credibility, families will be allocated into one group receiving home visiting and the other not receiving home visiting. It will be the luck of the draw to which group you are allocated. In either case I will request that you fill out a questionnaire during the week of your

child's discharge and again at six weeks and at twelve weeks following discharge. A reply paid envelope will be supplied. The questionnaire will take about twenty minutes of your time.

If the draw allocates you into the group not receiving home visiting, but you feel you would like this service, you will not be denied that service but will be excluded from the study.

Should this study demonstrate that home visiting is helpful to parents and children it would serve as an argument to increase funding so that every family can receive home visiting if required.

Thank you for your time.

G. H. Peers
Investigator

Appendix B

Stubbs Terrace Hospital
233 Stubbs Terrace
Shenton Park 6008
Western Australia

I/We the parents' of

...

have read the information provided and any questions I/We have asked
have been answered to my/our satisfaction. I/We agree to participate in
this activity, realising I/We may withdraw at any time.

I agree that the research data gathered for this study may be published
provided that I/We am not identifiable.

Participant/s

..... Date

Investigator

..... Date

Appendix C

Table 1: The Difference between Standardised CBCL Scores for Subject 1 of the Control Group

Problem Items	Difference Score Week 6 - Discharge	Difference Score Week 12 - Week 6	Difference Score Week 12 - Discharge
Activities	7	-18	-11
School	0	0	0
Withdrawn	-19	12	-7
Somatic	0	0	0
Anxious\Dep	-2	7	5
Social	16	0	16
Thought	-18	18	0
Attention	-8	12	4
Delinquent	0	6	6
Aggressive	-5	5	0
Social Competence	-6	-6	-12
Tot score	-5	11	6
Internal t	-7	10	-3
External t	-5	6	1

Table 2: The Difference between Standardised CBCL Scores for Subject 2 of the Control Group

Problem Items	Difference Score Week 6 - Discharge	Difference Score Week 12 - Week 6	Difference Score Week 12 - Discharge
Activities	7	4	11
School	0	0	0
Withdrawn	-12	12	0
Somatic	-6	-5	-11
Anxious\Dep	-21	11	-10
Social	-4	-4	-8
Thought	-16	6	-10
Attention	0	-8	-8
Delinquent	0	0	0
Aggressive	-16	8	-4
Social Competence	5	-2	3
Tot score	-15	5	-10
Internal t	-15	6	-9
External t	-15	12	-3

Table 3: The Difference between Standardised CBCL Scores for Subject 3 of the Control Group

Problem Items	Difference Score Week 6 - Discharge	Difference Score Week 12 - Week 6	Difference Score Week 12 - Discharge
Activities	11	-13	-2
School	-7	0	-7
Withdrawn	-5	0	-5
Somatic	13	12	25
Anxious\Dep	3	2	5
Social	4	-10	-6
Thought	0	0	0
Attention	4	-2	2
Delinquent	-5	2	-3
Aggressive	-6	10	-4
Social Competence	2	0	2
Tot score	1	2	3
Internal t	3	4	7
External t	-4	5	1

Table 4: The Difference between Standardised CBCL Scores for Subject 4 of the Control Group

Problem Items	Difference Score Week 6 - Discharge	Difference Score Week 12 - Week 6	Difference Score Week 12 - Discharge
Activities	-8	6	-2
Withdrawn	3	3	6
Somatic	6	0	6
Anxious\Dep	10	6	16
Social	16	0	16
Thought	-7	14	-7
Attention	9	1	10
Delinquent	22	-18	4
Aggressive	12	-2	10
Social Competence	missing	no score	no score
Tot score	16	0	16
Internal t	11	6	17
External t	17	-7	10

Table 5: The Difference between Standardised CBCL Scores for Subject 5 of the Control Group

Problem Items	Difference Score Week 6 - Discharge	Difference Score Week 12 - Week 6	Difference Score Week 12 - Discharge
Activities	0	7	7
School	0	9	9
Withdrawn	0	0	0
Somatic	0	0	0
Anxious\Dep	0	0	0
Social	0	0	0
Thought	0	7	7
Attention	6	6	12
Delinquent	0	0	0
Aggressive	0	0	0
Social Competence	0	9	9
Tot score	7	2	9
Internal t	6	6	12
External t	9	-6	3

Table 6: The Difference between Standardised CBCL Scores for Subject 6 of the Control Group

Problem Items	Difference Score Week 6 - Discharge	Difference Score Week 12 - Week 6	Difference Score Week 12 - Discharge
Activities	-4	5	1
School	0	-6	-6
Withdrawn	-7	1	-6
Somatic	-8	2	-6
Anxious\Dep	-4	-6	-10
Social	-10	-7	-17
Thought	0	-7	-7
Attention	-2	3	1
Delinquent	-5	-5	-10
Aggressive	0	-3	-3
Social Competence	-1	9	8
Tot score	-6	-7	-13
Internal t	-7	-2	-9
External t	-1	-9	-10

Table 7: The Difference between Standardised CBCL Scores for Subject 1 of the Experimental Group

Problem Items	Difference Score Week 6 - Discharge	Difference Score Week 12 - Week 6	Difference Score Week 12 - Discharge
Activities	0	-5	-5
School	3	3	6
Withdrawn	-4	-4	-8
Somatic	0	4	4
Anxious\Dep	0	0	0
Social	-9	9	0
Thought	7	-10	-3
Attention	-2	7	5
Delinquent	0	5	5
Aggressive	0	3	3
Social Competence	0	no score	no score
Tot score	-3	3	0
Internal t	0	-2	-2
External t	0	4	4

Table 8: The Difference between Standardised CBCL Scores for Subject 2 of the Experimental Group

Problem Items	Difference Score Week 6 - Discharge	Difference Score Week 12 - Week 6	Difference Score Week 12 - Discharge
Activities	0	-9	-9
School	0	0	0
Withdrawn	0	0	0
Somatic	0	6	6
Anxious\Dep	0	0	0
Social	0	0	0
Thought	0	0	0
Attention	0	0	0
Delinquent	7	-4	3
Aggressive	0	0	0
Social Competence	0	-6	-6
Tot score	1	1	2
Internal t	0	0	0
External t	0	3	3

Table 9: The Difference between Standardised CBCL Scores for Subject 3 of the Experimental Group

Problem Items	Difference Score Week 6 - Discharge	Difference Score Week 12 - Week 6	Difference Score Week 12 - Discharge
Activities	2	2	4
School	-11	6	-5
Withdrawn	-5	12	7
Somatic	11	2	13
Anxious\Dep	6	12	18
Social	0	17	17
Thought	0	10	10
Attention	-2	12	10
Delinquent	6	0	6
Aggressive	0	3	3
Social Competence	4	-1	3
Tot score	5	7	12
Internal t	3	9	12
External t	2	1	3

Table 10: The Difference between Standardised CBCL Scores for Subject 4 of the Experimental Group

Problem Items	Difference Score	Difference	Difference
	Week 6 - Discharge	Score Week 12 - Week 6	Score Week 12 - Discharge
Activities	7	-6	1
School	4	-15	-11
Withdrawn	-8	11	3
Somatic	-11	3	-8
Anxious\Dep	-20	-5	-25
Social	-3	-14	-17
Thought	-23	6	-17
Attention	2	3	5
Delinquent	-8	16	8
Aggressive	-6	-5	-11
Social Competence	-8	15	7
Tot score	-10	-1	-11
Internal t	-17	0	-17
External t	-7	1	-6

Table 11: The Difference between Standardised CBCL Scores for Subject 5 of the Experimental Group

Problem Items	Difference Score Week 6 - Discharge	Difference Score Week 12 - Week 6	Difference Score Week 12 - Discharge
Activities	8	-8	0
Withdrawn	-8	12	4
Somatic	9	3	12
Anxious\Dep	5	5	10
Social	-7	-5	-12
Thought	-3	6	3
Attention	-2	-5	-7
Delinquent	0	-4	-4
Aggressive	-3	13	10
Social Competence	2	0	2
Tot score	1	6	7
Internal t	4	8	12
External t	-2	10	8

Table 12: The Difference between Standardised CBCL Scores for Subject 6 of the Experimental Group

Problem Items	Difference Score Week 6 - Discharge	Difference Score Week 12 - Week 6	Difference Score Week 12 - Discharge
Activities	-17	2	-15
Withdrawn	8	7	15
Somatic	-8	8	0
Anxious\Dep	8	-1	7
Social	9	20	29
Thought	0	5	5
Attention	0	7	7
Delinquent	-6	-5	-11
Aggressive	-12	10	-2
Social Competence	-5	10	5
Tot score	-2	11	9
Internal t	5	3	8
External t	-16	8	-8

Appendix D

The International Classification of Diseases 9th Revision, Clinical Modification is the classification system used by the hospital to describe the disorders of patients admitted to the hospital. The following section gives descriptions of the codes.

- 307 Special symptoms or syndromes, not elsewhere classified.
- 307. 1 Anorexia Nervosa
- 307. 7 Encopresis - (continuous) (discontinuous) of nonorganic origin.
- 309 Adjustment reaction.
- 309. 1 Prolonged depressive reaction
- 309. 3 Adjustment reaction with predominant disturbance of conduct.
- 309. 4 Adjustment reaction with mixed disturbance of emotion and conduct.
- 312 Disturbance of conduct, not elsewhere classified.
- 312. 3 Undersocialized conduct disorder, unaggressive type.
- 313 Disturbance of emotion specific to childhood and adolescence.
- 313. 0 Overanxious disorder (Anxiety and fearfulness, Overanxious disorder of childhood and adolescence).
- 313. 1 Misery and unhappiness disorder.
- 313. 3 Relationship problems (sibling jealousy).
- 314 Hyperkinetic syndrome of childhood.
- 314. 0 Attention Deficit disorder.

Commission on Professional and Hospital Activities, (1968).



Mr Gordon Peers

Dear Gordon

Thank you for your revised form of disclosure and consent.

I am pleased to advise you that the documentation now meets the standards required by the Committee and that approval is granted for you to proceed with your project.

Yours sincerely

Eric Graham
Executive Officer
Committee for the Conduct of Ethical Research

10 March 1993

cc A/P Anne McMurray
Mrs Gerrie Sherratt