Canadian Journal of Nursing Research, 1998, Vol. 30, No. 1, 45–59

Classification Systems for Health Concerns, Nursing Strategies, and Client Outcomes: Nursing Practice with Families Who Have a Child with a Chronic Illness

Nancy Feeley and Laurie N. Gottlieb

Cet article décrit trois systèmes de classification élaborés à partir d'une étude visant à analyser l'efficacité des interventions infirmières auprès d'enfants atteints d'une maladie chronique, en ce qui a trait à l'amélioration du degré d'adaptation psychosociale de ces derniers. On a effectué une analyse de contenu portant sur les comptes rendus documentant les soins fournis aux 163 familles ayant participé à l'étude. Les systèmes de classification mis au point visaient à classer les éléments suivants : (a) les types de préoccupations ou de questions liées à la santé qui ont fait l'objet des interventions infirmières; (b) les types de gestes posés par les infirmières pour aider les familles à atteindre les buts souhaités; et (c) les résultats observés par les infirmières. Les systèmes de classification ainsi élaborés nous ont permis d'approfondir notre compréhension du modèle d'intervention infirmière de McGill, tout en illustrant l'étendue de la pratique infirmière dérivée de cette perspective et s'appliquant à une population spécifique (en l'occurrence, les familles ayant un enfant atteint d'une maladie chronique). Ces systèmes de classification pourraient servir à décrire la pratique infirmière et à la mesurer, soit dans des interventions comme celles-ci ou auprès d'autres groupes de clients.

This paper describes 3 classification systems developed from a study of the effectiveness of a nursing intervention in improving the psychosocial adjustment of children with a chronic illness. The study nurses' documentation of the nursing care provided to the 163 participating families was content analyzed. Systems were developed to classify the types of: (a) health concerns or issues that were the focus of the nursing, (b) actions the nurses used to help families achieve their goals, and (c) outcomes observed by the nurses. These classification systems have furthered our understanding of the McGill Model of Nursing, and they describe the scope of nursing practice based on this nursing perspective with a particular population (families who have a child with a chronic illness). These systems could be used to describe and measure nursing practice with this and other groups of clients.

Nancy Feeley, R.N., M.Sc.(A), Ph.D. (Cand.), is Consultant, Department of Nursing, Montreal Children's Hospital, Montreal, Quebec. Laurie N. Gottlieb, R.N., Ph.D., is Director, School of Nursing, McGill University, Montreal.

Introduction

The practice-based McGill Model of Nursing (Gottlieb & Rowat, 1987; Kravitz & Frey, 1989), which has been developed over the past 25 years at McGill University in Montreal, has served as a framework for practice, research, and education. By the mid-1970s the rudimentary elements of this perspective had been identified, and it was believed that further elaboration and clarification would best be accomplished by examining nursing practice. In the late 1970's, two projects were established to demonstrate and describe practice and to further the development of this perspective.

An important aim of the first demonstration project was to develop classification systems to describe and measure nursing practice. Four systems were developed from the first demonstration project to classify elements of the nursing process: health-related concerns, goals, interventions, and outcomes (Frasure-Smith, Allen, & Gottlieb, 1997; Gottlieb, 1980). Classification systems were constructed through analysis of nurses' actual work in three family-medicine units providing care to adults, and were used to compare nursing practice across the three settings (Allen, Frasure-Smith, & Gottlieb, 1982; Gottlieb & Allen, 1997).

A second demonstration was conducted at The Workshop, a unique uni-disciplinary community nursing service established in a suburban community. Content analysis of observations of nurse-client interactions and interviews with nurses from this autonomous service resulted in a major reformulation of one of the classification systems (i.e., nursing interventions) (Gottlieb, 1982, 1997).

An opportunity arose to reformulate some of the original classification systems (i.e., health concerns, interventions and outcomes) to reflect nursing practice with a particular population, families with a child with a chronic illness. Between 1989 and 1991, a randomized controlled trial was conducted to test the effectiveness of a nursing intervention, based on the McGill Model, in preventing or reducing psychosocial maladjustment among children with a chronic illness (Pless et al., 1994). A two-group pre-test/post-test randomized trial design was used to assess the effectiveness of the 12-month intervention. Families in the intervention group received nursing care guided by the McGill Model of Nursing, in addition to their usual care, while families in the control group continued to receive the usual care provided by the specialty clinics they attended.

The purpose of this paper is to describe three classification systems that were developed in the course of conducting this intervention

study. The classification systems were developed from the analysis of the nursing provided to the families who received the intervention. A classification system was developed to describe each of the following: (a) the types of health concerns that were the focus of the nursing, (b) the types of strategies that were used by the nurses to help families attain their goals, and (c) the types of outcomes that were observed by the nurses.

The decision to develop new classification systems, rather than utilize existing systems, was prompted by the observation that the features of most existing classification systems were not compatible with the basic tenets of the McGill Model. Many classification systems of nursing problems (or diagnosis) and outcomes focus primarily on illness rather than health or well being. Thus, these systems fail to capture the types of health issues and outcomes (i.e., those related to the client's coping and development) that are the focus of nursing practice guided by a health-oriented perspective, such as the McGill Model. Furthermore, most classification systems continue to adopt a problem orientation that is reflected by an emphasis on client deficits, rather than goals and the development of competencies or strengths. Although some of the health issues that clients present to nurses with a health focus are problems, many are not. Moreover, the McGill Model emphasizes the collaborative nature of the nurse-client relationship (Gottlieb & Rowat, 1987); therefore, our interest was in classifying those issues that clients bring to the nurse that become the focus of nursing care, and these are referred to as the client's health concerns. Health concerns emerge from the collaborative process whereby the client and the nurse identify the focus of their work together. This process differs from nursing diagnosis, which is viewed as a professional judgement made by the nurse (Carroll-Johnson, 1990).

The existing classification systems of nursing interventions did not describe the psychological and family types of nurse-initiated strategies frequently used by nurses helping individuals and families to cope with life events and develop competencies. However, the recent Nursing Interventions Classification (NIC) from the Iowa Intervention Project (McCloskey & Bulechek,1992) (which was developed after this study was conducted) does include some similar strategies.

Proposed Intervention

The McGill Model of Nursing provides direction in both content and method (Allen, 1983). The major features of this nursing perspective are: a focus on overall well-being rather than illness, the health of

family members as well as of the patient, the goals of the client rather than of the nurse, and the client's strengths rather than deficits. According to this model, nursing is a process that takes place within a collaborative relationship wherein the nurse and the client assume responsibility for determining the focus and direction of their work together. Client readiness to engage in collaborative goal attainment is an important consideration for the nurse (Gottlieb & Rowat, 1987). Moreover, when deciding whether and when to implement a plan of action the nurse must consider the issue of timing; work on health concerns sometimes requires a period of waiting for conditions that are conducive to action and change (Allen, 1977).

The study protocol called for an initial assessment in the home, at least one telephone contact per month, and a final contact at the end of the 12-month intervention period (Pless et al., 1994). Additional nursing contacts were provided as indicated by each family's need and readiness to work on issues of concern to them. Three nurses provided care to families in the intervention group. They were selected on the basis of their ability to use the McGill Model in their nursing and their experience in nursing families who have a child with a chronic illness. Two nurses had a master's degree in nursing, the third a baccalaureate degree. The nurses worked autonomously, providing care to families independent of clinic services.

A major belief underlying this model was that the child's psychosocial adjustment is a reflection of the child's environment, and that the family is the primary environment for the developing child. It was proposed that helping parents and the family unit to function optimally would have a positive effect on the psychosocial adjustment of the chronically ill child. Given these considerations, it was anticipated that the study nurses would help families deal with a wide range of health concerns.

Method

Sample

The sample comprised families who had a child (4 to 16 years of age) with a chronic illness. The participants were recruited from nine specialty clinics at a pediatric teaching hospital (allergy, arthritis, asymmetry, cleft lip and palate, cardiology, neurology, orthopedics, renal clinic, speech clinic) (Pless et al., 1994). The 332 families who consented to participate in the study were randomly assigned to either the intervention group (n = 171) or a control group (n = 161). Slightly more than half

(52%) of the children in the intervention group were boys. More than half (57%) of the children were between 6 and 11 years of age when the study began. The mean age of mothers was 36.7 years, of fathers 39.4 years. The mean level of education for mothers was 11.76 years, for fathers 12.16 years.

Documentation of the Nursing

Several tools were developed by the investigators and study nurses to facilitate documentation. These included nurses' notes and a summary note. The content of every nurse-family contact (e.g., office meetings, telephone calls) was documented in a semi-structured format in the nurses' notes. Each entry included a description of the family's current situation, the nurse's assessment, strategies for intervention, and any changes or outcomes noted. Data were recorded as soon as possible after each contact. At the end of the intervention, the nurses completed a brief questionnaire summarizing the major features of their work with each family, including the most significant outcomes or changes noted.

Data Analysis

The purpose of the analysis was to develop classification systems for: (a) health concerns, (b) nursing strategies employed to help families, and (c) outcomes observed by the nurses. A health concern was defined as any health issue, situation, life event, or problem currently confronting the client and presented by the client to the nurse as a possible focus of their work together. A nursing strategy was defined as a deliberate action, activity, or statement intended to help the client reach his or her goals and health potential. An outcome was defined as a change — whether positive or negative — in the client or in their situation, related to both their concerns and their work with the nurse.

Content analysis was used to develop the classification systems. This is a method of textual analysis in which data are reviewed for words or phrases representative of the phenomenon under study (Catanzaro, 1988). Meaningful portions of the text are identified, categorized, and eventually quantified according to established rules or category schemes. The nurses' notes and summary note for each family were transcribed by a typist. The data from all 163 families that received the nursing intervention were included. The transcripts ranged from 8 to 25 pages. Every word or phrase written in the transcripts represented a unit of analysis. Transcripts were systematically reviewed by the first author to identify health concerns. Concerns were listed and

similar types of concerns were grouped and eventually assigned a descriptive label. Major categories were then subdivided. Each major category was operationally defined, examples were listed, and rules were established to guide the coder in categorizing the data. An inductive approach was used to generate categories; however, category development was also influenced by the classification systems developed by Gottlieb (1980) from the earlier demonstration projects. The same process was used to develop classification systems for nursing strategies and outcomes.

Table 1 *Demographic Characteristics of Sample* (n = *600)*

01. The child's chronic illness

.01 Coping with the responses of the child or family member to the child's chronic illness
.02 Coping with the responses of others to the child's illness
.03 Understanding the chronic illness
.04 Decision-making concerning the illness or treatment
.05 Coping with the consequences of the chronic illness
.06 Coping with long-range fears and worries
.07 Coping with the health-care system and professionals
.08 Coping with the child's response to the chronic illness
.09 Other

02. Family relationships

.01 Coping with the entry of a new family member
.02 Coping with the exit of a family member
.03 Maintaining and managing family relationships
.04 Maintaining and managing relationships with extended family
.05 Coping with the problems of extended family members
.09 Other

03. Parenting

.01 Being a competent parent
.02 Managing child behaviour
.03 Fostering child development
.09 Other

04. Child-related

.01 Behaviours
.02 Social relationships
.03 Academic performance and functioning at school
.04 Self-concept
.09 Other

Table 1 (cont'd)

05. Biophysiological concerns and changes
- .01 Sexuality
- .02 Puberty
- .03 Pregnancy
- .04 Menopause
- .05 Aging
- .09 Other

06. The social system and resources
- .01 Employment/work/finances
- .02 Support resources
- .03 Legal and government agencies
- .04 Educational institutions and child care
- .05 Health-care system
- .09 Other

07. The environment
- .01 Housing
- .02 Neighbourhood and community
- .09 Other

08. Lifestyles and habits
- .01 Drugs and alcohol
- .02 Nutrition
- .03 Activity and rest
- .04 Hygiene
- .09 Other

09. General distress indicators
- .01 Emotional
- .02 Personality
- .03 Problem-solving
- .09 Other

Results

Classification System for Health Concerns

The classification system for health concerns that emerged from this analysis contained 10 major categories, each of which was subdivided (Table 1). The relative frequencies of each health concern, nursing strategy, and outcome category are reported elsewhere (Feeley, 1997).

The category "coping with chronic illness" encompassed numerous issues arising from living with the child's chronic illness, as more than 30% of the total number of concerns extracted from nurses' notes related to the family's efforts to cope with the child's chronic illness. This category was divided into eight sub-categories, covering such issues as: the response of the child or another family member to the illness, reactions of others to the illness, decisions about managing the illness, the consequences of living with the illness, and worries about the child's future.

Three major categories of health concerns related to issues of child, parent, and family functioning. The category "child-related concerns" incorporated concerns about behaviour, self-esteem, social competence, and school performance. Although these concerns were expressed about a particular child in the family, it was *not necessarily* the child with the chronic illness.

Concerns related to parenting issues constituted a major category, which was divided into: (a) parenting competence, (b) approaches to child discipline, and (c) approaches to promoting healthy child development. The first sub-category refers to parents' concerns about their parenting abilities, while the other two refer to their concerns about effective parenting.

The major category "family relationships" captured a diverse range of issues. Five sub-categories were identified: (a) dealing with the entry of a family member, (b) dealing with the exit of a family member, (c) managing relationships within the family, (d) managing relationships with members of the extended family, and (e) the well-being of the extended family.

Other major categories pertained to dealing with biophysiological changes (e.g., menopause), social systems and resources (e.g., dealing with unemployment or schools), the environment (e.g., finding adequate housing), and lifestyle issues (e.g., alcohol abuse).

A major category labelled "general distress indicators" encompassed concerns about general behavioural distress (e.g., anxiety, sadness) and difficulty coping when the precise issue causing the distress was not yet known.

Classification System for Nursing Strategies

Eight major categories of nursing strategies emerged from analysis of the nurses' notes (Table 2). Each was divided into sub-categories that

Table 2 *Classification System for Nursing Strategies*

01. Develops and maintains the working relationship

- 01.01 Defines roles, responsibilities, nursing or client mandate
- 01.02 Makes self available (includes monthly telephone contact)

02. Family relationships

- 02.01 Assess and explore
- 02.02 Follows up on concern
- 02.03 Physical assessment

03. Restructures cognitions

- 03.01 Reframing
- 03.02 Awareness-raising
- 03.03 Integrating
- 03.04 Anticipates the future
- 03.05 Normalizes
- 03.06 Structures release of new information
- 03.09 Other, non-specific

04. Develops problem-solving or coping

- 04.01 Assists with problem-solving process
- 04.02 Tries out new behaviour
- 04.03 Role-plays, models, rehearses
- 04.04 Develops resource use
- 04.09 Other, non-specific

05. Creates a supportive environment

- 05.01 Supportive presence
- 05.02 Listens, encourages ventilation
- 05.03 Agrees, gives positive feedback
- 05.04 Acknowledges, empathizes
- 05.05 Clarifies
- 05.06 Offers hope
- 05.07 Celebrates
- 05.09 Other, non-specific

06. Provides information

- 06.01 Makes suggestions
- 06.02 Gives information
- 06.09 Other, non-specific

07. Works the system

- 07.01 Arranges appointment or referral
- 07.02 Seeks/conveys information to/from others
- 07.03 Advocates

08 Intentionally does nothing/Wait and see

33 Other/non-classifiable

reflected specific techniques with the same goal. "Developing and maintaining the working relationship" included nursing actions such as explaining the nurse's role to the client and making statements to let the client know the nurse was available for assistance. The goal of these actions was to develop a relationship with and actively engage the client in health work. Deliberate nursing actions aimed at exploring and obtaining further information about a specific health concern, as well as efforts to monitor changes in the client's situation once the nurse and family had begun to work together, were grouped under "explores and gathers information."

The major category "restructures cognitions" captured a wide range of nursing actions designed to help clients alter their cognitions — that is, how they feel or think. This category contained six different techniques: reframing, awareness-raising, integrating, anticipating the future, normalizing, and structuring the release of new information (by posing thought-provoking questions to the client). The overall goal of these various approaches is to help clients change their thoughts or feelings or to help them develop a different perspective on their own behaviour, the behaviour of others, or a situation.

The major category "creates a supportive environment" was subdivided into listening, providing positive feedback, being physically present when the client needed emotional support, acknowledging the client's feelings, offering hope that the situation could improve, and celebrating with the client when progress had been made.

An interesting category of nursing strategies was "wait and see." A nurse's conscious decision *not* to act in a particular situation was included in the classification system of deliberate nursing actions. This strategy was used when the nurse and/or the client had determined that the client was not ready to actively work on a health concern. Implementation of the plan of action will sometimes be postponed until the conditions are conducive to change.

Other major categories of nursing strategies were "providing information," "developing problem-solving," and "working the system." While "providing information" referred to the unidirectional passage of information from the nurse to the family, "developing problem-solving" referred to a bidirectional process whereby the nurse and client engaged in solving a problem together. "Works the system" was intended to capture nursing actions aimed at facilitating the family's involvement with social systems such as schools and health-care agencies as well as other professionals.

Classification System for Outcomes

The nurses' responses to the summary-note question concerning the most significant outcomes or changes observed in the client were content analyzed to generate a classification system for outcomes (n = 146). The process was identical to that undertaken for the nurses' notes. This system comprised 14 outcome categories, with no sub-categories (Table 3). "Changes in emotional strain" referred to any change in emotional well-being, such as feelings of anxiety, happiness, or anger. "Changes in feelings about self" captured any change in how clients felt about themselves (e.g., a child's increased self-esteem or a parent's increased confidence in their parenting ability).

Table 3 *Classification System for Outcomes*

1. Change in emotional strain
2. Change in feelings about "self"
3. Change in relationships with others
4. Change in developmental competency or role functioning
5. Change in view of situation
6. Change in involvement in or effectiveness of problem-solving
7. Change in coping
8. Change in use of resources or supports
9. Change in readiness
10. Change in physical condition
11. Change in compliance
12. Services obtained
13. Change in knowledge
14. Nurse-client relationship
33. Other
99. Unspecified

Changes in the client's view of a situation or a person were grouped under "change in view of the situation." This included changes in insight, awareness, or perceptions, but not changes in knowledge; it seems likely that this particular outcome may be linked to nurses' efforts to help clients restructure their cognitions.

Changes in relationships formed two outcome categories: "changes in relationships with others," referring to a relationship with either another family member or someone outside the family; and "nurse-client relationship." In those cases where the nurse had initially experienced difficulty developing a working relationship with the client, the development of a relationship with the nurse may be a significant outcome of nursing actions.

A change in a client's willingness to confront and tackle the health concerns he or she had identified constituted the category "change in readiness." Although a client may have presented concerns to the nurse, he or she may not have been prepared to begin working on them. In these situations, a successful outcome of nursing actions may be to help the client develop readiness for the work to come.

"Change in developmental competency or role functioning" described a change in a child's competencies or abilities, as well as a change in an adult family member's ability to function in a particular role, such as parenting. This category comprised a variety of changes in a child's social, emotional, and motor abilities, as well as academic performance.

Changes in the client's ability to cope, use resources, or solve problems formed other categories of outcomes. The remaining categories — changes in access to services, physical condition, knowledge, and compliance with medical treatment — were noted infrequently by the study nurses.

Conclusion

In the process of conducting a randomized controlled trial to evaluate the effectiveness of a nursing intervention based on the McGill Model, classification systems were developed to describe health concerns, nursing strategies, and outcomes. These systems were constructed from the analysis of nurses' written descriptions of their work with a particular population of clients — families who had a 4- to 16-year-old child with a chronic illness. The health concern classification system described the diverse issues that families presented to a nurse with a health orientation. Many of the issues for which they sought assistance had arisen from living with childhood chronic illness, as well as the impact of the illness on the growing child and the family. Nonetheless, the classification system of health concerns also included the types of concerns (e.g., parenting) that would be prevalent among families with young children, whether healthy or chronically ill. Moreover, some cat-

egories included in this classification system would be relevant to nursing with any population. Categories such as biophysiological changes, dealing with social systems, and family relationships were borrowed from the health-related concern classification system developed from the first demonstration project of the McGill Model of Nursing with an adult population (Gottlieb, 1980). The diverse types of situations that emerged from this analysis suggest that the scope of nursing practice with families living with childhood chronic illness is broad and requires nurses with a comprehensive knowledge base.

Although the health concern classification system is to some extent population-specific, the systems developed to describe nursing strategies and outcomes could be used to describe and measure autonomous nursing practice with any population. The nursing strategy classification system incorporated an extensive range of independent actions that are relevant to the McGill Model of Nursing. If nurses are to help clients deal with many different types of health concerns, they will require many different tools and techniques. Some of the nursing strategies that appear in this classification were also present in the original classification of nursing actions developed from the first demonstration project (e.g., makes self available, listens). Other categories of nursing strategies (e.g., awareness-raising, integrating) were borrowed from and built upon the roles described earlier by Gottlieb (1982, 1997). This classification system has helped further our understanding of this nursing perspective by outlining some strategies that have not yet been described. The major category "developing problem-solving or coping," with the varied techniques included in it, is an important addition.

At a time when it is becoming increasingly important that the role of nurses in health care be made explicit, classification systems such as these are potentially valuable tools. They might help nurses define and describe the types of health situations with which nursing deals, the methods that nurses use, and the outcomes of nursing care. Classification systems can be used to qualitatively describe and analyze nursing practice, and to quantitatively differentiate between approaches to practice. Those developed from this project could be potentially useful for administrators, clinicians, and researchers who seek to capture and describe nursing practice in a variety of settings.

These three classification systems represent a beginning attempt to identify and describe the types of health concerns, nursing strategies, and outcomes that are characteristic of nursing practice based on a particular conceptual model of nursing. Further development of these classification systems is required, and research is needed to address issues

of validity and reliability. Given that these systems were developed from the practice of just three nurses, the categories of health concerns, strategies, and outcomes are probably not exhaustive. Further identification and description of categories of health concerns, strategies, and outcomes is clearly warranted, using not only nurse's reports of their practice but observations of nurse-client interactions as well. Testing of the classification systems with other samples in diverse settings would be useful. Work also needs to be undertaken to ensure that the systems can be used reliably by others.

References

Allen, M. (1977). Comparative theories of the expanded role in nursing and implications for nursing practice: A working paper. *Nursing Papers, 9*(2), 38–45.

Allen, M. (1983). Primary care nursing: Research in action. In L. Hockey (Ed.), *Primary care nursing* (pp. 157–183). Edinburgh: Churchill Livingston.

Allen, M., Frasure-Smith, N., & Gottlieb, L. (1982). What makes a "good nurse"? *Canadian Nurse, 78,* 42–45.

Carroll-Johnson, R.M. (1990). Reflections on the Ninth Biennial Conference. *Nursing Diagnosis, 1,* 50.

Catanzaro, M. (1988). Using qualitative analytical techniques. In N.F. Woods & M. Catanzaro (Eds.), *Nursing research: Theory and practice* (pp. 437–456). St. Louis: Mosby.

Feeley, N. (1997). A test of the McGill Model of Nursing with families who have a child with a chronic illness. In L.N. Gottlieb & H. Ezer (Eds.), *A perspective on health, family and collaborative nursing: A collection of writings on the McGill Model of Nursing* (pp. 357–364). Montreal: McGill University School of Nursing.

Frasure-Smith, N., Allen, F.M., & Gottlieb, L. (1997). Models of nursing practice in a changing health care system: Overview of a comparative study in three ambulatory care settings. In L.N. Gottlieb & H. Ezer (Eds.), *A perspective on health, family and collaborative nursing: A collection of writings on the McGill Model of Nursing* (pp. 31–73). Montreal: McGill University School of Nursing.

Gottlieb, L. (1982). Styles of nursing as practiced at The Workshop: A health resource. Montreal: McGill University School of Nursing.

Gottlieb, L. (1997). Health promoters: Two contrasting styles in community nursing. In L.N. Gottlieb & H. Ezer (Eds.), *A perspective on health, family and collaborative nursing: A collection of writings on the McGill Model of Nursing* (pp. 87–100). Montreal: McGill University School of Nursing.

Gottlieb, L., & Rowat, K. (1987). The McGill model of nursing: A practice derived model. *Advances in Nursing Science, 9*(4), 51–61.

Gottlieb, L.N. (1980). Classification system for health-related problems. Classification system for actions. Classification system for success. In M. Allen, N. Frasure-Smith, & L. Gottlieb. *Models of nursing practice in a changing health care system: A comparative study in three ambulatory care settings: Part II. Appendices* (pp. 127–194). Montreal: McGill University School of Nursing.

Gottlieb, L.N., & Allen, F.M. (1997). Developing a classification system to examine a model of nursing in primary care settings. In L.N. Gottlieb & H. Ezer (Eds.), *A perspective on health, family and collaborative nursing: A collection of writings on the McGill Model of Nursing* (pp. 19–30). Montreal: McGill University School of Nursing.

Kravitz, M., & Frey, M.A. (1989). The Allen nursing model. In J.J. Fitzpatrick & A.L. Whall (Eds.), *Conceptual models of Nursing: Analysis and application* (pp. 313–329). Norwalk, CT: Appleton & Lange.

McCloskey, J.C., & Bulechek, G.M. (Eds.). (1992). *Nursing intervention classification (NIC).* St. Louis: Mosby.

Pless, I.B., Feeley, N., Gottlieb, L., Rowat, K., Dougherty, G., & Willard, B. (1994). A randomized control trial of a nursing intervention to promote the adjustment of children with chronic physical disorders. *Pediatrics, 94*(1), 70–75.

Acknowledgements

This research was supported in part by grants from the W.T. Grant Foundation (# 89129389), the National Health Research Development Program (# 6605-3047-57), the Montreal Children's Hospital Foundation, and the Graduate Faculty, McGill University.

The authors are indebted to Frances Murphy, N., M.Sc., Gillian Taylor, N., M.Sc.(A), and Jackie Townsend, N., M.Sc.(A), the three study nurses from the Montreal Children's Hospital, for their careful and thoughtful documentation of their nursing. Without their perseverance, the development of these classification systems would not have been possible.

The authors also acknowledge the competent assistance of John Begin, Caroline Bray, Deborah Fertuck, and Sarah Parry, who helped with the refinement of the category systems and coding of the nurses' notes. The authors are especially grateful to Evelyn Malowany, former Director of Nursing at the Montreal Children's Hospital, for the extraordinary support she provided throughout all phases of this project.

Requests for information should be addressed to Nancy Feeley, School of Nursing, McGill University, 3506 University Street, Montreal, QC H3A 1A7. Tel: 514-398-4166.