Tracing the Use of the Family Management Framework and Measure: A Scoping Review

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Abstract
This article reports the results of a scoping review of research applications of the Family Management Style Framework (FMSF) and the Family Management Measure (FaMM). We identified 32 studies based on the FMSF and 41 studies in which the FaMM was used, 17 of which were based on the FMSF. Both the framework and measure have been used by investigators in multiple countries, with most applications of the FaMM outside the United States. Although the FMSF and FaMM were originally developed for use with families in which there was a child with a chronic physical condition, both have been applied to a broader range of health conditions and to studies focusing on families with an adult member facing a health challenge. Based on our findings, we make recommendations for how researchers can more fully address all aspects of the FMSF.

Keywords
family research, family management, scoping review

Published three decades ago (Knafl & Deatrick, 1990), the Family Management Style Framework (FMSF) conceptualized how families with a child with a chronic condition incorporated condition management into daily family life. The FMSF described key elements of family management related to how family members defined their situation, their management behaviors, and the consequences of condition management for family life. Recognizing that these elements might differ across family members, we also pointed to the need to explicate further the elements of family management and identify overarching family management patterns. Research aimed at further developing the framework and identifying patterns of family management was first published in 1996 by Knafl and colleagues.

Building on research on family response to childhood conditions, we continued to refine the framework, publishing two updated versions (Knafl & Deatrick, 2003; Knafl et al., 2012). Based on research evidence, the updated versions of the FMSF added family and family member functioning as outcomes of family management. The most recent version of the framework is displayed in Figure 1, which also highlights the changes made as the framework was developed. These initial conceptualizations of family management were grounded in studies of predominantly North American families in which a child had a chronic physical condition. In 2010 Janice Bell, the editor of the Journal of Family Nursing (JFN), invited the submission of manuscripts for a special issue addressing ”New Directions for the Family Management Style Framework” that extended the framework to conditions and/or sociocultural contexts not included in the initial conceptualization. Published in May 2012, the special issue reported studies focusing on family management of serious and life-threatening conditions in both children (Bousso et al., 2012; Rempel et al., 2012) and adults (Beeber & Zimmerman, 2012; Wiegand, 2012), studies completed outside North America (Bousso et al., 2012), and a study of adolescents’ perspectives of family management of chronic conditions (Wollenhaupt et al., 2012).

In the absence of a measure of family management, early studies applying the FMSF were largely qualitative. We recognized that to examine the association between family

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management and family and family member functioning, a measure of family management was needed. Funding from the National Institute of Nursing Research supported the work to develop a family management measure. A questionnaire was created with items based on the FMSF; the measure’s psychometric properties were assessed from a study of more than 500 parents with children with varied non-life-threatening chronic physical conditions. Publication of the Family Management Measure (FaMM) included its methodological development and provided evidence of its reliability and validity (Knafl et al., 2011). The measure comprised six separately scored scales (Child Daily Life, Condition Management Ability, Condition Management Effort, Family Life Difficulty, Parental Mutuality, and View of Family Impact) with a total of 53 Likert-type items. Researchers have the option of using all or a subset of the scales. There is no summary score because each scale measures a different aspect of family management. The instructions to the FaMM define family as “those living in your household that you think of as family.” The publication of the FaMM set the stage for subsequent quantitative studies, including investigations directed to examining the relationship between family management and child and family outcomes, as well as identification of patterns of family management.

Although we were aware of ongoing applications of the FMSF and FaMM, we had not systematically tracked the extent of their use. We recognized that such tracking would be useful in evaluating the applicability of both, thereby informing study design and decision-making of future investigators. Our intent in this review was to determine how the FMSF and FaMM have been used in research by examining the aims, sample, and design of published research reports.

We conducted a scoping review of published studies to assess the extent and ways in which the FMSF and FaMM had been used. Following guidelines recommended by Arksey and O’Malley (2005), we identified and screened research reports for inclusion in the sample, extracted the information from the reports needed to address the purpose of the review, and collated and summarized the results. With support from a research librarian based at the first author’s university, we identified articles citing one or more versions of the FMSF and/or the FaMM published through June 30, 2019. Articles were identified through citation searches of the Scopus, Web of Science, and Google Scholar databases. Following identification of all articles citing the FMSF and/or the FaMM, the first author reviewed articles to differentiate research from nonresearch applications of the FMSF and FaMM. Research applications were defined as those in which the FMSF provided the conceptual underpinnings of a research study or secondary analysis or the FaMM was used in the study. In some articles, the framework or measure was cited in a background or discussion section but was not applied in the research being reported. Other nonresearch applications included citations in a review article or publications focusing on theory or methods. Other than tallying the number of such citations, these reports were excluded from further analysis. The co-authors reviewed the research versus nonresearch categorization, with any disagreements resolved through discussion to reach consensus.

The following information was extracted from each study: country where data were collected, study aims, sample (number of families; family members participating), condition(s) included in the sample, and design. For studies based on the FMSF, which aspects of the FMSF (contextual influences, components/dimensions, management style, outcomes) were addressed in the research were noted. For studies using the FaMM, we also noted the conceptual underpinnings and summarized how the measure was used in the study (e.g., independent versus dependent variable) and any data provided on the reliability of the six FaMM scales. Four
summaries were completed, one for each of the three versions of the FMSF and one for the FaMM.

The first three authors divided the work of extracting the data from the research reports. As a quality check, the fourth author independently extracted the same information from every fifth article. These checks revealed we were thorough and accurate in the data extractions and only minor corrections were made to the initial extractions.

The analysis was straightforward and included simple listings and counts (e.g., countries where data were collected, conditions studied) and categorization of certain aspects of the study (e.g., aims, design, use of FaMM). The first author did the initial categorizations, which were then reviewed by the co-authors. Any disagreements were resolved through discussion to reach consensus. If more than one version of FMSF was cited in the research report, only the most recent version was counted in the tally.

Results

Final Sample

In Table 1, the breakdown of the 262 published articles citing one or more versions of the FMSF or citing the FaMM is summarized. The FMSF was named as the conceptual grounding in 32 studies and the FaMM was used in 41 studies, 17 of which were based on the FMSF. Each study was counted in one tally only to avoid artificially inflating the number of studies based on the FMSF. Studies using the FaMM and citing the FMSF were tallied under the FaMM. Both the FMSF and the FaMM also were cited in nonresearch articles and research reports where they were not applied but were referenced in the background or discussion sections of the article. These were categorized as “Other Citations.” Eight reports citing the FaMM addressed efforts to assess or adapt it for use with non-English samples. In contrast to the tally for “Published Research Based on FMSF or FaMM,” when reports in the “Other” category included citations to multiple versions of the FMSF, each of these citations was tallied. The rationale for this was that authors were using the citations to support their work, and thought it necessary, in some cases, to cite multiple versions.

FMSF

As summarized in Table 2, study participants for most (n = 26/81%) of the 32 studies based on the FMSF were recruited in the United States, although investigators from Brazil, Thailand, and Canada also published study results. The research aims of the studies citing the FMSF were most often descriptive or exploratory such as an early study by Williams (1995) describing the problems and management behaviors used by mothers of daughters with precocious puberty or Turner syndrome. More recently, Estrem and colleagues (2017) applied the FMSF to a study of family management of children’s feeding problems and SanGiacomo and colleagues (2019) described the management challenges reported by mothers of childhood brain tumor survivors. In four studies (Conlon et al., 2008; Knafl et al., 1996; McCarthy & Gallo, 1992; Obrecht et al., 1992), investigators described changes in family management over time. One investigator (Johnson et al., 2014) used the framework to support development of a social script iPad application for children with autism.

Beginning with the 1990 version of the FMSF, investigators were extending the framework to the study of health challenges not included in its original development. For example, Krouse (2002) applied it in a study of family management of feeding low birthweight infants; Van Riper (2005) explored the family experience of genetic testing; and Raymond and colleagues (2017) described parents’ perspectives on managing the care of their adult child with serious mental illness.

Consistent with their descriptive or exploratory intent, most investigators described their study design as qualitative, with six being longitudinal. In most studies (n = 25/78%), investigators addressed a single condition (e.g., Type 2 diabetes, end-stage renal disease) or group of related conditions (e.g., cancer, serious mental illness). In eight studies, researchers focused on a health-related challenge not linked to a specific condition (e.g., technology dependence, feeding problem). The number of families included in the samples ranged from case studies of one or two families to (Gallo, 1990; McCarthy & Gallo, 1992; Obrecht et al., 1992; Van Riper, 2005) to Toly and colleagues’ (Toly et al., 2012a, 2012b; Toly & Musil, 2015) study of more than 100 families of children with technology dependence. About one half (51%) of studies enrolled 20 families or less and only four studies enrolled participants from 50 or more families.

Family members included in the sample varied across studies. In nine studies, sample inclusion criteria required participation by multiple family members, with five focusing on dyads within the family. For example, both Beacham and

| Citation     | Published research based on FMSF or FaMM | Other citations to FMSF or FaMM |
|--------------|------------------------------------------|---------------------------------|
| FMSF 1990    | 8/8                                      | 59                              |
| FMSF 2003    | 16/23                                    | 46                              |
| FMSF 2012    | 8/10                                     | 34                              |
| FaMM         | 41/44                                    | 38                              |
| Total        | 73/85                                    | 177                             |

Note. Each study was counted in one tally only. If more than one version of FMSF was cited, only the most recent version was counted in the tally. Studies using the FaMM and citing the FMSF were tallied under the FaMM. FMSF = Family Management Style Framework; FaMM = Family Management Measure.
| Study | Country where data were collected | Aims | Sample (families/family members) | Condition(s) studied | Design | Aspects of FMSF addressed in study
|---|---|---|---|---|---|---|
| 1990 Version of FMSF | USA | To describe parents' perception contextual influences and their level of supportiveness | 30 families (30 mothers, 27 fathers) | Myelomeningocele | Qualitative description | • Contextual influences (derived from data)
| Edwards-Beckett & Cedargren (1995) | USA | To describe a family with a child with a family's point of view | 1 family (mother, father, child, sibling) | Type I diabetes | Qualitative case study | • Contextual influences (resources)
| Gallo (1990) | USA | To describe a family with a child with diabetes from the individual members' and family's point of view | 63 (62 mothers, 53 fathers, 66 children 7–14 y/o [three families with two ill children], 28 siblings) | Multiple, non-life-threatening chronic conditions | Longitudinal qualitative description | • Components/dimensions of family management
| Knafl et al. (1996) | USA | To identify styles of family response to childhood chronic illness and explore their relationship to family and family member functioning | 13 families (13 mothers) | Low birth weight | Longitudinal qualitative description | • Management styles
| Krouse (2002) | USA | To identify, describe, and provide a theoretical analysis family management of breastfeeding a low birth weight infant | One family (mother, father, child with condition, two siblings) | Type I diabetes | Longitudinal qualitative case study | • Components/dimensions of family management
| McCarthy & Gallo (1992) | USA | To describe family management of Type I diabetes and compare responses from the individual family members | 20 families (20 mothers, 20 fathers) | High-risk infants | Grounded theory | • Management styles
| Murphy (1990) | USA | To illustrate three management styles adopted by couples following the birth of a high-risk infant | One family (mother, father, child with condition, two siblings) | End-stage renal disease | Longitudinal case study | • Components/dimensions of family management
| Obrecht et al. (1992) | USA | To describe a family with a child with end-stage renal disease defined and managed their situation | 12 families (12 mothers) | Precocious puberty and Turner syndrome | Qualitative description | • Components/dimensions of family management
| Williams (1995) | USA | To identify the problems and management behaviors used by mothers in attempting to solve problems in school, peer, and family life for their daughters with precocious puberty or Turner syndrome | | | | • Components/dimensions of family management
| (continued) | | | | | | |
| Study                                      | Country where data were collected | Aims                                                                 | Sample (families/family members) | Condition(s) studied | Design                                      | Aspects of FMSF addressed in study¹ |
|-------------------------------------------|----------------------------------|----------------------------------------------------------------------|----------------------------------|---------------------|---------------------------------------------|-------------------------------------|
| 2003 Version of the FMSF                  | Thailand                         | To describe (a) definition, (b) management behaviors, and (c) perceived consequences of having a child with Type 1 Diabetes. | 22 families (22 mothers)          | Type 1 diabetes     | Qualitative descriptive                      | • Components/dimensions of family management |
| Athaseri et al. (2008)                    |                                  |                                                                      |                                  |                     |                                             |                                     |
| Bingham & Haberman (2006)                 | USA                              | To describe how spirituality assists people with Parkinson’s Disease and their families in defining and managing the day-to-day experience of the disease | 27 dyads—24 husband/wife; three parent/child | Parkinson’s disease | Qualitative descriptive                      | • Contextual influences (spirituality) |
| Bouso et al. (2012)                       | Brazil                           | To explore how families define and manage their life when they have a child or adolescent undergoing palliative home care | 14 family members (11 mothers, one father, one aunt, one grandmother) | Children attending an outpatient palliative care unit | Qualitative descriptive                      | • Components/dimensions of family management |
| Conlon et al. (2008)                      | USA                              | To describe changes in family management following treatment         | 71 families (51 mothers, 20 fathers) | Attention deficit hyperactivity disorder | Secondary analysis of archival data comparing family management before and after treatment | • Management styles |
| Gallo et al. (2005, 2009)                 | USA                              | To identify patterns of information management and explore their relationship to individual and family characteristics and functioning | 86 families (83 mothers, 53 fathers, six others) | Varied single gene conditions | Mixed methods                                | • Contextual influences (resources) • Components/dimensions of family management • Family information management styles • Outcomes (parent, family) • Contextual influences (care providers and systems) • Components/dimensions of family management |
| Hopkins & Gallo (2012)                    | USA                              | To describe mothers’ perception of their children’s school life within the context of overall family management | 41 families (41 mothers)           | Sickle cell anemia, cystic fibrosis | Qualitative descriptive; secondary analysis |                                     |
| Johnson et al. (2014)                     | USA                              | To examine the effectiveness of the social script intervention, “Going to Imaging” application (iPad app) | 32 parent–child dyads             | Autism spectrum disorder | Pilot feasibility study for randomized control trial | Not specified |
| Knafl et al. (2010)                       | USA                              | To identify the parents’ perceptions of normalization and the meaning attributed to its presence or absence | 28 families (28 mothers, 20 fathers) | Varied single gene conditions | Qualitative description; secondary analysis | • Components/dimensions of family management |

(continued)
| Study                                      | Country where data were collected | Aims                                                                 | Sample (families/family members) | Condition(s) studied          | Design                  | Aspects of FMSF addressed in study* |
|--------------------------------------------|-----------------------------------|----------------------------------------------------------------------|----------------------------------|-------------------------------|--------------------------|---------------------------------|
| Mendes-Castillo et al. (2012); Mendes-Castillo, Bousso, & Silva, 2014; Mendes-Castillo, Bousso, Ichikawa, et al., 2014 | Brazil                            | To understand the family management of childhood liver transplantation | Eight families (eight mothers, one father) | Liver transplantation          | Qualitative description           | Component/dimensions of family management |
| Misko & Bousso (2007)                       | Brazil                            | To understand family management of cancer at home and decision-making related to seeking emergency care | Six families (six mothers) | Cancer                          | Qualitative description           | Components/dimensions of family management |
| Rempel et al. (2012)                        | Canada                            | To examine family management of hypoplastic left heart syndrome from diagnosis through the early period of home care | 24 families (24 mothers, 17 fathers) | Hypoplastic left heart | Qualitative description; secondary analysis | Not specified |
| Toly et al. (2012a, 2012b); Toly & Musil (2015) | USA                               | To examine the interrelationships between normalization, maternal depression, level of child’s technological dependence and illness severity, family functioning, and sociodemographic characteristics | 102 families (102 mothers) | Technology dependent children living at home | Hypothesis testing; longitudinal | Family management styles |
| Van Riper (2005)                            | USA                               | To explore the family experience of genetic testing                  | Two families (Case 1—husband, two daughters; Case 2—three adult sisters) | Huntington disease (Case 1); Breast cancer gene (Case 2) | Case study               | Components/dimensions of family management |
| Wiegand et al. (2008); Wiegand (2012)        | USA                               | To describe family management after the death of a family member who had life-sustaining therapy withdrawn | 19 families (56 family members) | Unexpected life-threatening illness of injury | Phenomenology | Components/dimensions of family management; Family management styles; Contextual influences (social support, resources); Components/dimensions of family management |
| Wiratanapokin et al. (2013)                 | Thailand                          | To explore patterns of self-management among adolescents with prediabetes or Type 2 diabetes | 16 families (16 adolescents) | Prediabetes and Type 2 diabetes | Grounded theory | Components/dimensions of family management |
| Wollenhaupt et al. (2012)                    | USA                               | To uncover the family management perspectives of adolescents with spina bifida | 25 families (25 adolescents 12–21 y/o) | Spina bifida | Qualitative descriptive; secondary analysis | Components/dimensions of family management |
| Young (2013)                                | USA                               | To explore how families with children at home manage 4–12 months after an adult family member had been discharged from the hospital following a bone marrow transplantation | 15 families (15 patients, 14 adult significant others) | Bone marrow transplant | Qualitative description | Components/dimensions of family management |

(continued)
| Study                                      | Country where data were collected | Aims                                                                 | Sample (families/family members) | Condition(s) studied                                      | Design                                      | Aspects of FMSF addressed in study*a |
|------------------------------------------|----------------------------------|----------------------------------------------------------------------|---------------------------------|--------------------------------------------------------|---------------------------------------------|----------------------------------------|
| 2012 Version of FMSF                     | USA                              | To describe children’s perceptions of family management              | 32 families (32 children, 32 parents) | Multiple non-life-threatening chronic conditions         | Qualitative description                   | Components/dimensions of family management |
| Beacham & Deatrick (2015)                | USA                              | To describe the perspectives (view of the illness, role in future management, and long-term consequences on individual and family functioning) of family members of patients in the intensive care unit who participated in family bedside rounds versus those who did not | 19 families (19 family members—unspecified) | Adult hospitalized on Intensive care unit | Qualitative description                   | Components/dimensions of family management |
| Cody et al. (2018)                       | USA                              | To describe parents' perspectives of their child's eating and of feeding management and to identify themes of feeding management in the context of everyday family life | Nine families (nine mothers, three fathers) | Feeding problem | Qualitative description | Components/dimensions of family management |
| Estrem et al. (2017)                     | USA                              | To describe parents' perspectives of their child's eating and of feeding management and to identify themes of feeding management in the context of everyday family life | Nine families (nine mothers, three fathers) | Congenital adrenal hyperplasia | Mixed methods analysis based on qualitative interviews | Components/dimensions of family management |
| Fleming, Knafl, & Van Riper (2017)       | USA                              | To examine, based on the gender of the child, the varying family experiences of having a child with congenital adrenal hyperplasia | Nine families (nine mothers, seven fathers) | Older family member in a nursing home | Longitudinal qualitative description | Components/dimensions of family management |
| Koplow et al. (2015a, 2015b)             | USA                              | To examine the experiences of family members in the nursing home placement and care of an older family member | 10 families (10 primary caregivers; varied family relationships) | Serious mental illness | Qualitative description | Components/dimensions of family management |
| Raymond et al. (2017)                    | USA                              | To describe parents' perspectives on managing the care of their adult child with serious mental illness; functioning | 30 families (30 parents; predominantly mothers) | Serious mental illness | Qualitative description | Components/dimensions of family management |
| SanGiacomo et al. (2019)                 | USA                              | To describe the family management challenges facing families of childhood brain tumors | 45 families (45 mothers) | Brain tumor survivor | Mixed methods; secondary analysis data from qualitative interviews | Components/dimensions of family management |

Note. FMSF = Family Management Style Framework.
*aSociocultural context listed only if included in the analysis beyond describing demographic characteristics of sample. bResearch study was the unit of analysis.
Deatrick (2015) and Johnson and colleagues (2014) recruited child–parent dyads; Murphy (1990) included mother–father dyads; and Young (2013) recruited adult patients who had received a transplant and an adult family member. Investigators reporting family case studies included data from an even broader range of family members. McCarthy and Gallo (1992) purposely selected a family for their case study of family management that included interview data from the mother, father, child with the chronic condition, and one sibling. Investigators in nine studies offered family members the option of participation by multiple family members, but this was not a requirement for inclusion in the sample. In other studies, a family member fulfilling a specified family role (e.g., primary caregiver) was recruited and the family designated who would represent them in the sample. When families were given the option of participation by multiple family members or asked to designate a family participant, the final sample predominately comprised mothers. In seven studies, inclusion criteria specified mothers.

We also examined the extent to which investigators studied all or selected aspects of the framework. Across the 32 studies based on the FMSF, Gallo and colleagues’ (2005, 2009) study of family information management was the only one that addressed all four aspects of the framework (Contextual Influences, Major Components, Management Styles, and Outcomes). More often researchers studied selected aspects of the framework. Investigators addressed a single aspect of the FMSF in 14 studies and two or three aspects in 15 studies. Of the 14 studies focusing on a single aspect of the framework, most (n = 11) focused on describing how the six dimensions of family management were reflected in their sample. For example, Estrem and colleagues (2017) used the dimensions of the framework to describe parents’ efforts to manage a child’s feeding problems and Misko and Bouso (2007) used them to describe family management of a child’s cancer at home. In 12 of the 32 studies, investigators went beyond describing how the FMSF dimensions were reflected in their sample to identify styles of family management based on the FMSF dimensions, with the styles varying across samples. For example, Rempel and colleagues (2012) described changing patterns of family management in parents of children who were surgically treated for a life-threatening cardiac condition. Investigators in nine studies examined parents’ perceptions of the link between the contextual influences included in the framework and family management.

**FaMM**

In Table 3, the characteristics of studies using the FaMM are summarized, and in Tables 4 and 5, reports of the internal consistency reliability (ICR) for FaMM scales are presented. Researchers from 11 countries have reported using the FaMM. In contrast to the FMSF where U.S.-based samples predominated, the majority (n = 25/61%) of studies using the FaMM were conducted outside the United States. Seventeen of the 41 studies using the FaMM were based on the FMSF, eight of which were conducted outside the United States. Eighteen studies were based on other frameworks, providing evidence that the FaMM is suitable for use in studies with diverse theoretical underpinnings. Authors of six studies did not report using a framework. Five studies of families of children with Down syndrome undertaken in Ireland (Caples et al., 2018), Korea (Choi, 2015; Choi & Van Riper, 2014), Taiwan (Hsiao, 2014; Hsiao & Van Riper, 2011), and the United States (Van Riper et al., 2018) were based on the Resiliency Model of Family Stress, Adjustment, and Adaptation (McCubbin & McCubbin, 1993). Other examples of using the FaMM in studies not based in the FMSF include Muscara and colleagues’ (2015; Rayner et al., 2016) use of Kazak’s Pediatric Medical Traumatic Stress Model (Kazak et al., 2006) in their study of parents of children with a life-threatening condition and Son, Kim, and colleagues’ (2018) use of Bandera’s Self-Efficacy Theory (Bandura, 1997) to examine factors influencing family management in the context of having a child with atopic dermatitis. In two studies, investigators reported using two frameworks, one of which was the FMSF (Salvador et al., 2019a, 2019b; Van Riper et al., 2018). In 30 studies, investigators used all FaMM scales. In the remaining 11 studies, investigators used selected scales.

For the 17 studies based on the FMSF and using the FaMM, we also examined what aspects of the framework investigators studied. Because the FaMM scales were grounded in the FMSF dimensions, all studies addressed this aspect of the framework. Except for Lindsey’s (2016) study of family management following parents’ participation in a respite program and Im and colleagues’ (2019) study of the mediating effect of family management on the relationship between parental stress and child quality of life, all other studies addressed multiple aspects of the framework. Researchers in 11 studies measured outcomes of family management for the person with the condition, parents, and/or the family system and investigators in eight studies examined contextual influences on family management, with most addressing resources.

Across studies, investigators incorporated the FaMM in varying ways. Using correlation or regression analyses, 28 studies focused on examining the relationship between family management as measured by one or more FaMM scales and other family or family member variables. For example, Gibson-Young and colleagues (2014) examined the relationship between maternal perceptions of Condition Management Ability and Condition Management Effort and asthma morbidity in 101 children in the United States. Lohan and colleagues (2017) studied the relationship between parents’ Condition Management Effort and their perceptions of their diabetes self-efficacy. In other studies, investigators examined variables such as parental age (Close et al., 2016) or family functioning (Zhang et al., 2015) as predictors of family management. In seven studies, investigators examined the
| Article                      | Country where data collected | Aims (as stated by authors)                                                                 | Conceptual framework                                                                 | Sample design and no. of families and family members | Sample—condition | Design | How family management scales used | Aspects of FMSF addressed in study    |
|-----------------------------|-------------------------------|---------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|-----------------------------------------------------|------------------|--------|----------------------------------|--------------------------------------|
| Caples et al. (2018)        | Ireland                       | To examine families of children with Down syndrome residing in Ireland adapt to their child's diagnosis | Resiliency Model of Family Stress, Adjustment, and Adaptation                        | 95 families (79 mothers, 16 fathers) Down syndrome | Mixed methods | Predictor—FaMM scales as predictor of family adaptation | Not applicable                       |
| Choi (2015)                 | Korea                         | To examine factors influencing family adaptation in Korean families with a child with Down syndrome | Resiliency Model of Family Stress, Adjustment, and Adaptation                        | 147 families (147 parents—unspecified) Down syndrome | Mixed methods | Predictor—FaMM scales as predictor of family adaptation | Not applicable                       |
| Choi & Van Riper (2014)     | Korea                         | To explore Korean mothers' perceptions of their typically developing children when there is a child with Down syndrome in the family | Resiliency Model of Family Stress, Adjustment, and Adaptation                        | 105 families (105 mothers) Down syndrome Descriptive cross-sectional survey |                   | Predictor—FaMM scales as predictor of sibling adaptation | Not applicable                       |
| Close et al. (2016)         | USA                           | To describe family management challenges for parents who have sons with Klinefelter Syndrome | FMSF                                                                                | 40 families (33 mothers, seven fathers) Klinefelter syndrome | Mixed method | Outcome—Influence of parents' age on family management | Contextual influence (care providers and systems) Components/dimensions of family management Outcomes (parent and family) |
| Deatrick et al. (2014)      | USA                           | To test a hypothesized model of caregiver competence                                          | Model based on literature and Raina et al., theoretical stress process model          | 186 families (186 mothers) Brain tumor survivors | Cross-sectional telephone survey | Predictor—Management Ability scale as predictor caregiver competence | Not applicable                       |
| Deatrick et al. (2018)      | USA                           | To develop a typology of family management patterns of brain tumor survivors and examine the relationship between pattern membership and family functioning and health-related quality of life | FMSF                                                                                | 186 families (186 mothers, 134 survivors) Brain tumor survivors | Mixed methods | Descriptive—patterns of family management based on scales Correlate—patterns and family function and mother and survivor health-related quality of life | Contextual influences (resources) Components/dimensions of family management Family management styles Outcome (survivor, mother, and family functioning) |
| Duangdech et al. (2017)     | Thailand                      | To validate a causal model of factors contributing to the health status of children with cerebral palsy in Thailand | Resiliency Model of Family Stress, Adjustment, and Adaptation and the literature       | 208 families (131 mothers; identity of other family members unspecified) Cerebral palsy | Cross-sectional correlational | Mediator—Family management as a mediator of the relationship between social support, family hardness, access to care, illness severity and child's health status | Not applicable                       |
| Fleming, Knoll, Knoll & Van Riper (2017) | USA                        | To describe adrenal crisis events in children with congenital adrenal hyperplasia and examine the relationship between parents' perceived management ability and the impact of the condition on family life | FMSF                                                                                | 68 families (60 mother; 15 fathers, two grandmothers) Congenital adrenal hyperplasia | Mixed methods | Correlate—relationship between Management Ability and View Family Impact | Components/dimensions of family management Outcome (family functioning) |
| Geense et al. (2018)        | Netherlands                   | To identify outcome measures and assess potential effectiveness, and design issues for a web-based intervention for parents of children with kidney disease | Not reported                                                                       | 85 families (83 mothers, 50 fathers) Chronic kidney disease | Randomized controlled trial feasibility study | Outcome—Family management outcome of intervention | Not applicable                       |
| Gibson-Young et al. (2014)  | USA                           | To examine the relationships between maternal caregiver perceptions of family management and asthma morbidity | FMSF                                                                                | 101 families (101 mothers) Asthma Cross-sectional survey |                   | Correlate—Management Ability and Effort scales and asthma morbidity | Components/dimensions of family management Outcome (ill child) |
| Hadworth et al. (2013)      | Australia                     | To describe the protocol for a study evaluating the efficacy of an online adolescent and parenting intervention | Not reported                                                                       | 120 families (120 adolescents, 120 parents or guardians) Type 1 diabetes Randomized control trial |                   | Outcome—Family Management outcome of intervention | Not applicable                       |

(continued)
| Article                          | Country where data collected | Aims (as stated by authors)                                                                 | Conceptual framework                  | Sample design and no. of families and family members | Sample—condition | Design                  | How family management scales used | Aspects of FMSF addressed in study** |
|--------------------------------|-----------------------------|-------------------------------------------------------------------------------------------|--------------------------------------|-----------------------------------------------------|------------------|-------------------------|----------------------------------|-----------------------------------|
| Hickey et al. (2018) Australia | To test the efficacy of a family intervention in promoting early adaptation to a child’s acquired brain injury | Not reported                                                                          | 47 families (38 mothers, 29 fathers, four siblings, one grandmother) Baseline usual care (18 mothers, 11 fathers, one sibling) | Brain injury | Randomized control trial | Outcome—Family management outcome of intervention | Not applicable |
| Hobbie et al. (2010) USA       | To determine the educational needs of parents as their children completed cancer treatment and assess the feasibility of measuring parental needs, anxiety, and family management at treatment ends | Not reported                                                                          | 15 families (13 caregivers unspecified) | Cancer      | Descriptive, cross-sectional   | Descriptive—Family management following treatment | Not applicable |
| Hsiao (2014); Hsiao & Van Riper (2011) Taiwan | To explore the relationships among family demographics, family demands family appraisal, and individual and family adaptation | Resiliency Model of Family Stress, Adjustment, and Adaptation | 83 families (80 mothers, 75 fathers) | Down syndrome | Cross-sectional survey | Correlate—Family Management scales and family adaptation | Not applicable |
| Im et al. (2019) Korea         | To examine the relationship between parenting stress and quality of life in children with epilepsy and the mediating effect of family management | FMSF | 93 families (90 mothers, three fathers) | Epilepsy | Cross-sectional survey design | Mediator—Family Management as mediator of relationship of parental stress and child quality of life | • Components/dimension of family management |
| D. H. Kim & Im (2015) Korea    | To examine the influence of family management on psychosocial problems of childhood cancer survivors in Korea | FMSF | 158 families (149 mothers, five fathers, four grandparents) | Cancer | Cross-sectional survey | Correlate—Family Management scales and child’s psychosocial problems | • Contextual influences (resources) • Components/dimensions of family management • Outcomes (survivor functioning) |
| I. Kim et al. (2016) USA       | To examine the relationships between child behavior problems and mothers’ depressive symptoms | FMSF | 234 families (234 mothers) | Autism | Cross-sectional survey | Mediator—Family Management as a mediator of relationship between child’s behavior problems and mother’s depressive symptoms | • Components/dimensions of family management • Outcomes (maternal functioning) |
| Knott et al. (2013) USA        | Identify patterns of family management and examine their relationship to child and family functioning | FMSF | 414 families (414 mothers, 161 fathers) | Multiple chronic physical conditions | Cross-sectional survey | Descriptive—Patterns comprised Family Management scales | • Components/dimensions of family management • Family management styles • Outcomes (child and family functioning) |
| Lerret et al. (2015) USA       | To examine parents’ readiness of hospital discharge and its relationship to postdischarge coping, family impact, adherence to medications, and follow-up, and utilization of following hospital discharge | Meleis Transitions Theory | 51 families (44 females, seven males) | Solid organ transplant | Prospective, longitudinal, correlational design | Outcome—Influence of discharge readiness Condition Management Effort scale | Not applicable |
| Lindsey (2016) USA             | To examine in families that have a child with a special health care needs, what are the effects of respite care through a therapeutic summer day camp program on family management | FMSF | 22 families (20 mothers, one father, one grandmother) | Children with special health care needs | Mixed method | Outcome—respite camp program leading to better family Management | • Components/dimensions of family management |
| Lohan et al. (2017) Australia  | To compare family functioning and parents’ and children’s adaptation to chronic conditions | Literature-based model | 186 families (178 mothers, eight fathers) | Type 1 diabetes | Cross-sectional survey | Correlate—Relationship of Management Effort to parents’ diabetes self-efficacy | Not applicable |
| Mendes et al. (2016) Portugal  | To compare family functioning and parents’ and children’s adaptation to chronic conditions | Socioecological framework of adaptation | 263 families (227 mothers, 36 fathers) | Asthma, obesity, epilepsy, diabetes | Cross-sectional survey | Mediator—Family Life Difficulty and Parental Mutuality as mediator of relationship between family cohesion and family member adaptation | Not applicable |

(continued)
| Article | Country where data collected | Aims (as stated by authors) | Conceptual framework | Sample design and no. of families and family members | Sample—condition | Design | How family management scales used | Aspects of FMSF addressed in study<sup>a,b</sup> |
|---|---|---|---|---|---|---|---|---|
| Mendes et al. (2017) | Portugal | To examine the moderating role of parents’ social comparison orientation in the associations between family management and children’s health-related quality of life and perceived stigma | Social Comparison Orientation | 201 families (201 primary caregivers, 201 children) | Epilepsy | Cross-sectional survey | Predictor—Child Daily Life and Family Life Difficulty as predictor of child’s health-related quality of life and perceived stigma | Not applicable |
| Muscara et al. | Australia | To examine the prevalence and trajectory of parent psychosocial distress, identify demographic, psychosocial and illness-related predictors of parent psychosocial distress over time, and examine the relationship between parent psychosocial distress and child psychological well-being | Kazak’s Pediatric Medical Traumatic Stress Model | 192 families (180 mothers, 76 fathers) | Child with a life-threatening illness or injury | Prospective longitudinal survey | Moderator—FaMM used as a measure of the illness experience, which was described as a moderator parents’ psychosocial distress | Not applicable |
| Quast et al. (2018) | USA | To examine the prospective influence of family functioning on survivor quality of life months later | Paterson and Droter’s theoretical model of childhood cancer survivorship | 35 families (35 mothers) | Brain tumor survivors | Longitudinal survey | Correlate—Family Life Difficulty and survivor quality of life | Not applicable |
| Quast et al. (2016) | USA | To describe the physical and psychosocial health-related quality of life of parents of brain tumor survivors and variables associated with parents’ quality of life | Raina’s conceptual model of caregiving | 50 families (48 mothers, two fathers) | Brain tumor survivors | Longitudinal survey | Correlate—Relationship of Condition Management Effort and Condition Management Ability to parents’ quality of life | Not applicable |
| Rearick et al. (2011) | USA | To explore the experiences of parents and children newly diagnosed with Type 2 diabetes with peer social support following an intervention to enhance support | Adapted version of Inyes et al’s (2001) Social Support Framework | 11 families (8 mothers, 3 fathers) | Type 1 diabetes | Mixed methods | Descriptive—FaMM scales used to describe parents’ experiences | Not applicable |
| Salvador et al. (2019a, 2019b) | Portugal | To examine the contribution of individual and family factors to psychological well-being of parents of children and adolescents diagnosed with cancer. | FMSF Social ecological Theory | 255 families (177 mothers, 28 fathers) | Cancer—in treatment or completed treatment in past 5 years | Cross-sectional survey | Correlate—Relationship of Family Life Difficulty, Parental Mutuality to parenting satisfaction, parental anxiety and depression | Not applicable |
| Sannareangsak et al. (2012) | Thailand | To examine variables contributing to parents’ medical, role, and psychosocial management behaviors | FMSF | 88 families (69 mothers, 16 fathers, three unknown) | Thalassemia | Cross-sectional survey | Predictor—FaMM scales as predictor of medical management, role management, and psychosocial management | Component/dimensions of family management, Outcome (family functioning) |
| Sheng et al. (2018) | China | To explore the relationships between family management, self-management, and transition readiness | Hypothesized model based on the literature | 268 families (268 youth, 181 mothers, 44 fathers, 41 grandparents) | Diabetes, rheumatic disease, renal disease | Cross-sectional survey | Predictor—family management as a predictor of youth self-management, transition readiness, and quality of life | Not applicable |
| Son, Kim, et al. (2018) | Korea | To identify the variables that affect family management of childhood atopic dermatitis | Bandura’s Self-Efficacy Theory | 168 families (168 mothers) | Atopic dermatitis | Cross-sectional survey | Outcome—Influence of disease severity on Condition Management Effort | Not applicable |
| Son, Song, et al. (2018) | Korea | This study aimed to identify the effects of the mother-medical staff partnership on mothers’ condition management ability | None reported | 109 families (109 mothers) | Chronic allergic diseases | Cross-sectional survey | Outcome—Influence of mother-medical staff partnership on Condition Management Ability | Not applicable |

(continued)
Table 3. (continued)

| Article | Country where data collected | Aims (as stated by authors) | Conceptual framework | Sample design and no. of families and family members | Sample—condition | Design | How family management scales used | Aspects of FMSF addressed in study[a,b] |
|---------|-------------------------------|-----------------------------|----------------------|---------------------------------------------------|------------------|-------|-----------------------------------|------------------------------------------|
| Sullivan-Bolyai et al. (2016) | USA | To explore feasibility/ability to recruit and conduct a two-arm trial on reeducation, collaboration, and social support | FMSF | 22 families (22 mothers, 22 youth) | Type 2 diabetes | Randomized controlled trial Feasibility study | Outcome—Family management as an outcome of trial | • Contextual influences (resources) • Components/dimensions of family management |
| Swallow et al. (2012) | England | To describe the protocol for an online parent information and support package for home-based care | None reported | 80 families (80 primary caregivers—unspecified) | Kidney disease | Randomized controlled trial Feasibility study | Outcome—Family management as an outcome of trial | Not applicable |
| Van Riper et al. (2018) | USA | To compare family management of children with a chronic physical condition to family management of a child with Down syndrome using data from two studies | FMSF | Chronic physical conditions—412 families (233 mothers, 159 fathers) | Multiple chronic physical conditions | Secondary analysis of data from two cross-sectional surveys | Descriptive—Comparison of family management in two groups | • Contextual influences (resources) • Components/dimensions of family management |
| Varchota & Sawin (2016) | USA | To examine the relationship of key individual and family self-management theory, context, and process variables on proximal and distal outcomes in adolescents with Type 1 diabetes | Family Self-Management Theory | 108 families (103 parent-adolescent dyads) | Type 1 diabetes | Cross-sectional survey | Correlate—Relationship of Family Life Difficulty to self-management behaviors of adolescents | Not applicable |
| Weissheimer et al. (2018) | Brazil | To investigate the relationship of family management to socio-demographic and physical dependence aspects of children and adolescents with neurological disorders | FMSF | 141 families (117 mothers, 19 fathers, five other family members) | Neurologic conditions | Cross-sectional survey | Correlate—Relationship of all FaMM scales to child’s physical dependence and multiple socio-demographic variables | • Contextual influences (resources) • Components/dimensions of family management • Outcome (child) |
| Zhang et al. (2014) | China | To identify patterns and predictors of family management | FMSF | 38F (257 mothers; other family members not specified) | Multiple chronic physical conditions | Cross-sectional survey | Descriptive—Identified patterns of family management based on FaMM scales | • Contextual influences (resources) • Components/dimensions of family management • Family management styles |
| Zhang, Wei, Han, et al. (2013) | China | To determine the applicability of the Family Management Style Framework for Chinese families with a child who has a chronic condition | FMSF | 538 families (primary caregivers—unspecified) | Multiple chronic physical conditions | Cross-sectional survey | Outcome—Influence of contextual variables on family management (calculated as two composite scales—Easy Family Management; Difficult Family Management) Mediator—family management as a mediator of relationship between contextual variables and child and family functioning | • Contextual influences (resources) • Components of family management • Outcome (child and family functioning) |
| Zhang et al. (2015) | China | To determine the key predictors for each aspect of family management in families with children who have chronic condition | FMSF | 399 families (263 mothers, 89 fathers, 45 other family members—unspecified) | Multiple chronic conditions | Cross-sectional survey | Outcome—Child and family characteristics and functioning variables as predictors of FaMM scales | • Contextual influences (resources) • Components/dimensions of family management • Outcome (child and family functioning) |
| Zhang, Wei, Zhang, et al. (2013) | China | To investigate the impact of family management on family functioning of families with chronically ill children | FMSF | 618 families (618 primary caregivers—unspecified) | Multiple chronic physical conditions | Cross-sectional survey | Predictor—FaMM scales as predictor of family functioning | • Components/dimensions of family management • Outcome (family functioning) |

Note. FaMM = Family Management Measure; FMSF = Family Management Framework.

[a]Contextual influences limited to those included in the FMSF (social support, care providers and systems, and resources) that were included in the analysis beyond describing demographic characteristics of sample.

[b]FaMM scales measure components of Family Management Style Framework.
mediating or moderating effect of FaMM scales. For example, in a study of Korean families in which a child had epilepsy, Im and colleagues (2019) examined the mediating effect of family management on the relationship between parenting stress and the child’s quality of life. The FaMM scales also were used to compare family management of different types of conditions as in Van Riper and colleagues’ (2018) comparison of families of children with Down syndrome to those of children with a chronic physical condition. In three studies (Deatrick et al., 2018; Knafl et al., 2013; Zhang et al., 2014), investigators used cluster analysis of the six FaMM scales to identify patterns of family management.

Across studies, samples varied as to condition, size, and family member participants. The 18 different conditions studied included chronic physical conditions such as Type 1 diabetes and asthma, cancer and other life-threatening conditions, genetically based conditions, and conditions associated with intellectual or developmental disabilities. Most investigators studied a single condition or related conditions (e.g., cancer, neurologic disease), with only seven studies recruiting sample families in which children have a condition that is life-threatening or includes intellectual disability or developmental delay. The FaMM and described the frequency and range of research applications across conditions, age groups, and countries. The review also provides evidence to guide future research.

Table 4. Internal Consistency Reliability of Family Management Measure in Studies Reporting a Range of Scores Across Scales.

| Study                        | Scale range                  |
|------------------------------|-----------------------------|
| Caples et al. (2018)         | >.70 all scales             |
| Choi & Van Riper (2014)      | .63–.90 (View of Condition Impact not reported) |
| Close et al. (2016)          | >.68 all scales             |
| Deatrick et al. (2018)       | .72–.89                     |
| Im et al. (2019)             | .65–.89                     |
| D. H. Kim & Im (2015)        | .69–.90                     |
| I. Kim et al. (2016)         | .64–.91                     |
| Knafl et al. (2013)          | >.70 all scales             |
| Zhang, Wei, & Han (2013)     | .62–.84                     |

*Conducted multiple studies reporting same internal consistency reliability range, which was established in first study to determine applicability of the measure to families in China.

Through this scoping review, we traced the use of FMSF and FaMM and described the frequency and range of research applications across conditions, age groups, and countries. Our review provides evidence of the broad applicability of both the framework and measure and highlights areas of concentrated activity and areas of limited application. The review also provides evidence to guide future research.

Although the framework and measure were developed based on studies of families in the United States with children with non-life-threatening chronic physical conditions not associated with developmental delays, the review provides strong evidence of broader applicability, especially about the types of conditions studied and cultural context. The FMSF and the FaMM have been used in studies of families in which children have a condition that is life-threatening or includes intellectual disability or developmental delay. Both also have been used in studies of survivorship and the aftermath of serious injury, and the FMSF has been used in studies addressing family response to a health challenge facing an adult family member. The FaMM items reference “our child with the condition,” limiting the applicability of the measure for studies in which an adult is the family member reported a range of scores across scales (Table 4), with the ICR reaching .70, often considered the cut-off for acceptable reliability (DeVellis, 2003) in three studies and .62 or higher for all scales in the remaining studies. Investigators for 10 studies reported the ICR for each scale used in the study. Regarding individual FaMM scales, Table 5 provides evidence of the reliability of FaMM scales across multiple conditions and sociocultural contexts. The strongest evidence for ICR was for the Family Life Difficulty scale. In seven studies, investigators from different countries (Korea, Portugal, United States) studying different conditions (brain tumor survivorship, cancer, Down syndrome, epilepsy, solid organ transplant, multiple conditions) reported ICR scores ranging from .81 to .92 and no investigator reported an ICR value less than .70. Support for the ICR of Parental Mutuality also was strong with investigators from five studies based on samples representing different countries (Korea, Portugal, United States) and conditions (cancer, Down syndrome, solid organ transplant, multiple conditions) reporting ICR scores greater than .70. For the remaining four scales (Child Daily Life, Condition Management Ability, Condition Management Effort, View of Condition Impact), there were reports of ICR scores both exceeding and falling below .70, though those exceeding predominated and reflected samples representing different countries and conditions. The weakest evidence for support of ICR was for the View of Condition Impact scale. Investigators in two studies (Duangdech et al., 2017; Sananreangsak et al., 2012) incorrectly scored the FaMM by calculating a total single score rather than individual scales scores.

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### Table 5. Internal Consistency Reliability of Individual Family Management Scales.

| Scale                        | ICR .70 or better | ICR < 70 |
|-----------------------------|-------------------|----------|
| **Child Daily Life**        |                   |          |
| Condition                   |                   |          |
| Management Ability          |                   |          |
| Fleming, Knafl, Knafl, & Van Riper (2017) | .81               |          |
| Hsiao & Van Riper (2011)    | .73               |          |
| Van Riper et al. (2018)     | .73–.79           |          |
| Condition                   |                   |          |
| Management Effort           |                   |          |
| Hsiao & Van Riper (2011)    | .72               |          |
| Quast et al. (2016)         | .74               |          |
| Van Riper et al. (2018)     | .74–.78           |          |
| Family Life Difficulty      |                   |          |
| Hsiao & Van Riper (2011)    | .87               |          |
| Lerret et al. (2015)        | .87 (heart transplant subsample) |          |
| Mendes et al. (2016)        | .83               |          |
| Mendes et al. (2017)        | .86               |          |
| Quast et al. (2018)         | .81               |          |
| Salvador et al. (2019a, 2019b) | .87               |          |
| Van Riper et al. (2018)     | .91–.92           |          |
| Parental Mutuality          |                   |          |
| Hsiao & Van Riper (2011)    | .74               |          |
| Lerret et al. (2015)        | .74               |          |
| Mendes et al. (2016)        | .79               |          |
| Salvador et al. (2019a, 2019b) | .86               |          |
| Van Riper et al. (2018)     | .75–.88           |          |
| View Condition Impact       |                   |          |
| Hsiao & Van Riper (2011)    | .74               |          |
| Van Riper et al. (2018)     | .68–.77           |          |

Note. ICR = internal consistency reliability.

*Range of ICR scores for two groups of parents included in secondary analysis, those with a child with Down syndrome and those with a child with a chronic physical condition.

Facing a health challenge. Although most researchers using the FaMM focused on family management of childhood chronic conditions, we identified several that used the FaMM to study family life in the context of an adult family member who was living with their parents due to cognitive or physical deficits (see, for example, Deatrick et al., 2018; Van Riper et al., 2018).

The review also provides evidence of the cross-cultural applicability of the FMSF and FaMM with the first study based on a sample from outside the United States conducted in Thailand (Athaseri et al., 2008). Cross-cultural applications increased substantially after the publication of the FaMM and reports of its ICR support its applicability in multiple cultural contexts. Not all authors reported the ICR data for their sample. Doing so would help future investigators make informed decisions about the appropriateness of the measure for their intended sample. In addition to the ICR data summarized in Table 4, Van Riper and colleagues’ (2020) analysis of the use of the FaMM with samples of parents of individuals with Down syndrome from 11 countries spanning North and South America, Europe, and Asia provides additional support for the measure’s broad applicability.

The items comprising the FaMM were grounded in the FMSF, and the scales were identified using well-established techniques for instrument development (DeVellis, 2003; Knafl et al., 2011). The scales measure different aspects of family management, with each scale addressing a different underlying latent construct. Despite the FaMM being described as comprising six separate scales with no total score and scoring instructions available on the FaMM website (https://nursing.unc.edu/research/office-of-research-support-and-consultation/family-management-measure/), we found instances of investigators calculating a total score that was then used in their analyses. Such analyses are questionable, and we encourage anyone using the FaMM to adhere to scoring instructions.

Across conditions and cultural contexts, most investigators have focused on examining the FMSF components (Definition of the Situation, Management Behaviors, Perceived Consequences) and their underlying dimensions or the FaMM scales, with less attention directed to identifying patterns of family management, contextual influences, and outcomes. This focus is understandable given the design complexity and resources needed to incorporate multiple aspects of the framework into a single study. However, from the outset the developers maintained that a strength of the framework was the emphasis on identifying patterns of family management based on the configuration of the dimensions of family management across family members. Beginning with the first publication (Knafl & Deatrick, 1990), the framework included influences on family management, and in the
first revision (Knafl & Deatrick, 2003), family member and family system outcomes of family management were added.

Although recognizing it may not be feasible to include multiple aspects of the framework in a single study, we encourage investigators focusing on selected aspects of the framework to consider addressing those that have been less studied. For example, contextual influences such as health insurance, access to specialty care, and family income could be included in the demographic and family information respondents often are asked to provide and examined in the analysis as contextual influences on family management. Another possibility would be to add measures addressing social support or health care relationships to examine how these influence family management. The FMSF was based on syntheses of predominantly qualitative research addressing family response to childhood chronic conditions. The contextual influences included in the framework were based on study results reporting what family members identified as factors contributing to the ease or difficulty of family management. Although the contextual influences included in the FMSF reflect issues recognized as social determinants of health that are widely acknowledged as important to understanding structural impediments to families in managing health conditions, there are other factors that are recognized and could be included. Further attention to the social determinants of health also calls for recognition and study of issues such as racism that are now widely acknowledged as important to explaining health disparities (Deatrick, 2017). Although recommending that researchers consider extending their study aims beyond the current focus on the components and dimensions of family management, the body of research addressing these provides an opportunity for undertaking research syntheses of results reporting how the dimensions of family management are reflected across conditions and cultures.

Qualitative data related to the dimensions of family management and scores on the FaMM scales are the building blocks for identifying family management styles, and when investigators have these data, they can take the next step and extend their analysis to identifying different styles. By using analytic approaches such as matrix display of qualitative data reflecting family management dimensions across families and quantitative cluster analyses based on the FaMM scales, investigators can identify styles of family management that can be compared with those previously identified (Deatrick et al., 2018). Although full delineation of management styles requires a large enough sample to identify subgroups within the sample with similar patterns of family management, even with relatively small samples, investigators can undertake exploratory analyses to detect provisional management styles. By identifying management styles and examining their relationship to family and family member outcomes, investigators will have a better understanding of the management approaches that put families and family members at risk for poor outcomes. Understanding the implications of different management styles also will contribute to the development of tailored interventions aimed at buttressing family management strengths and mitigating problematic aspects.

Sample design presents another opportunity for taking full advantage of the FMSF by including multiple family members in the sample. Beginning with our initial conceptualization (Knafl & Deatrick, 1990), we have emphasized the value of including the perspectives of multiple family members in studies addressing family management. Nonetheless, most investigators applying the framework or using the measure have limited their sample to one family member, most often the mother. The inclusion of multiple family members in the sample provides researchers with the opportunity to undertake conceptually grounded, dyadic, or family system analyses examining the implications of family members having shared versus discrepant or conflicting views of family management (Deatrick et al., 2020).

The focus of both the FMSF and FaMM is family management within a single household and that focus is reflected in the research applications to date. The contribution to condition management of individuals outside the household is incorporated under the Social Network Contextual Influence. Yet to be addressed are those situations where members from multiple households are actively involved in condition management as might be the case when divorced parents have shared custody of a child or when extended family members assume major caregiving responsibilities. Additional studies are needed to examine the unique challenges of multi-household family management and factors supporting and hindering effective, well-coordinated management across households.

Like all scoping reviews, there were limitations to this one. We included only those studies published in English language journals. It is possible that our search missed relevant publications, but we believe we minimized that possibility by working closely with a research librarian to identify relevant citations. The review was limited to research applications because our initial screen of the reports revealed few clinical applications to date. Research reports often make recommendations related to practice applications and these provide a beginning point for clinicians to consider how the FMSF could guide practice or how the FaMM could be incorporated into clinical assessments.

Conclusion

When we began developing the FMSF in the late 1980s, our objective was to provide researchers with a framework that would guide efforts to advance knowledge of family response to childhood chronic conditions. Building on existing research, we aimed to devise a framework that was applicable to multiple conditions and family structures. We believe this review of research studies supports the conclusion that we achieved that goal. Over the years, others have applied the framework to a much broader spectrum of conditions, populations, and cultural contexts than we originally anticipated. We are grateful for their creative and innovative
applications, which have contributed in important ways to extending the scope of the FMSF.

In urging investigators to incorporate multiple aspects of the FMSF into their studies and focus on the less developed aspects of sociocultural context, management styles, and outcomes, we recognize this often requires design trade-offs, especially regarding sampling. Trade-offs typically entail balancing the ideal family research design with the reality of limited resources. For example, a decision to study dyads leads to a decision to study fewer families or a statistical technique requiring a large sample size leads to a decision to recruit only one family member. Considering all aspects of the FMSF when planning a study can help investigators evaluate various options related to their study aims and design and contribute to making well-reasoned decisions about their priorities for advancing knowledge of family management of health-related challenges.

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