

Advancing Family Science Through Synthesis Research (Editorial)

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Journal of Family Nursing

Guest Editorial

Advancing Family Science through Synthesis Research

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Kathleen Knafl, PhD, FAAN, is a professor, School of Nursing, University of North Carolina at Chapel Hill, Chapel Hill, North Carolina, USA. Her program of research addresses family management of childhood chronic conditions, including development of the Family Management Style Framework and the Family Management Measure (FaMM). She is a member of editorial board of the *Journal of Family Nursing* and a founding member of the International Family Nursing Association. Between 2011 and 2016 she was a lead investigator on a National Institutes of Health study *Mixed-Methods Synthesis of Research on Childhood Chronic Conditions and Family*. Recent publications include:

Knafl, K. A., Deatrick, J. A., Gallo, A. M., & Skelton B. (2021). Tracing the use of the Family Management Framework and Measure: A scoping review. *Journal of Family Nursing*, 27(2), 87-106. <https://doi.org/10.1177/1074840721994331>

Lee, A., Knafl, K., & Van Riper, M. (2021). Family variables and quality of life in children with Down syndrome: A scoping review. *International Journal of Environmental Research and Public Health*, 18(2), 419. <https://doi.org/10.3390/ijerph18020419>

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Orpin, J., Rodriguez, A., Harrop, D., Mills, E., Campbell, F., Martin-Kerry, J.,...Swallow, V. (2023). Supportive use of digital technologies during transition to adult healthcare for young people with long-term conditions, focusing on Type 1 diabetes mellitus: A scoping review. *Journal of Child Health Care*. Advance online publication. <https://doi.org/10.1177/13674935231184919>

Blower, S., Swallow, V., Maturana, C., Stones, S., Phillips, B., Dimitri, P.,...Martin-Kerry, J. (2020). Children and young people's concerns and needs relating to their use of health technology to self-manage long-term conditions: A scoping review. *Archives of Disease in Childhood*, 105(11), 1093-1104. <http://doi.org/10.1136/archdischild-2020-319103>

Over the past 40 years there has been growing recognition of the contribution of synthesis research to advancing knowledge and tremendous progress in developing synthesis methods and guidelines. In 1990, Boyer published the highly influential book, *Scholarship Reconsidered: Priorities for the Professoriate* in which he proposed an expanded view of scholarship that included discovery, integration, application, and teaching. Arguing that universities should recognize and reward all forms of scholarship, Boyer conceptualized the scholarship of integration as entailing the synthesis of information across disciplines, topics within a discipline, and across time.

Efforts by those engaged in synthesis research to delimit guidelines and expand available approaches furthered the potential of the scholarship of integration to advance knowledge. For example, Jackson (1980) proposed the following synthesis steps, which he described as analogous to what is done in a primary research study: (1) selecting the questions or hypotheses for the review, (2) sampling the research studies that are to be reviewed, (3) representing the characteristics of the studies and their findings, (4) analyzing the findings, (5) interpreting the results, and (6) reporting the review. Others developed different synthesis approaches, including meta-analysis (Glass, McGaw, & Smith, 1981), integrative reviews (Cooper, 1982), qualitative metasummary and metasynthesis (Sandelowski & Barroso, 2007), scoping reviews (Arksey & O'Malley, 2005), and realist synthesis (Pawson, 2006) and differentiated the purpose and methods used across approaches (Conn, 2014; Conn & Coon Sells, 2014a, 2014b; McGaghie, 2015; Whitemore, et al., 2014). Across approaches, the goal of synthesis research is “bringing together what is known from the research literature using explicit and accountable methods” (Gough, Thomas, & Oliver, 2012, p. 1).

Synthesis Research in Nursing

In the late 1900s, with the introduction of the concept of evidence-based practice in healthcare, knowledge synthesis started to gain greater significance (Whittemore et al., 2014); this is consistent with previous studies regarding the growth of scientific output in nursing (Kokol et al., 2019). Within nursing, Lawrence Ganong and Vicki Conn have been especially influential in advancing synthesis work. In his 1987 article in *Research in Nursing & Health* Ganong advocated for the application of rigorous quality standards in reviews, urging “editors, reviewers, and researchers to expect and demand more rigorous methodology for integrative reviews in nursing” (p. 11). As editor of the *Western Journal of Nursing Research*, Conn published a series of editorials encouraging submissions of review work and discussing various types of reviews (Conn, 2014; Conn & Coon Sells, 2014a, 2014b).

The quality standards Ganong recommended are increasingly evident in reviews of family research. Although early reviews often included only cursory descriptions of the methods used in the review, more recently published reviews, including those in this special issue, adhere to current review standards. Although this is the first time *Journal of Family Nursing* (JFN) has published an entire issue focused on synthesis research, the journal has published reviews since its beginning in 1995, with the first review reporting a synthesis of nursing research focused on ischemic heart disease (Tapp, 1995). Since then, the journal has published 36 further review articles involving a range of review designs (critical analysis, conceptual analysis, dyadic analysis, integrative review, meta synthesis, narrative review, review of systematic reviews, scoping review, synthesis, and systematic review), with the number of reviews published in JFN increasing over time (1995-2004 n=4; 2005-2014 n=10; and 2015 to February 2023 n=23, Total 37). The international and disciplinary diversity of authors evident in prior reviews is impressive, with first authors representing a range of countries (Australia, Canada, Denmark, Finland, Italy,

South Africa, Spain, Sweden, Taiwan, New Zealand, Northern Ireland and the USA) and disciplines (e.g., Child Life, Nursing, Psychology, Social Work, and Sociology).

Furthermore, ten of the journal's most cited articles in the last 3 years are reviews, spanning a wide variety of topics and providing evidence of the scope, volume, and global reach of family research. Prior reviews in JFN provided evidence of efficacy of family nursing interventions, examined families' experiences with diverse health-related challenges, contributed to theory development, and assessed the effectiveness of family nursing education on clinical competence.

The Special Issue on Synthesis Research

The manuscripts in this special issue extend the contributions of synthesis research to advancing knowledge in the multifaceted field of family science. In the call for papers for this special issue we invited syntheses from investigators in multiple disciplines that integrate results from multiple primary studies. We are pleased to say that the reviews reflect the global importance of family research, with diverse review teams addressing a broad range of topics. Authors from five countries (Canada, Denmark, Japan, Korea, United States) contributed to the seven reviews. First authors include nursing faculty (Bally, Lee, Suksun, Yamaguchi, Van Riper) as well as PhD students, one in nursing (Rothhausen) and one in Speech and Hearing Sciences (Thompson). Two manuscripts include co-authors based in clinical settings and two include co-authors from other disciplines (Sociology, Library Science).

Authors synthesized results from studies of families managing the normative health challenge of transitioning an infant to solid foods as well as non-normative challenges related to parenting and caregiving in the context of a serious physical or mental health challenge. The reviews examined both the individual facing the health challenge, family members engaged in

their care, and family system adaptation. Two reviews focused on family nursing interventions and one on clarifying the concept of protective buffering.

In our call for submissions for this special issue we also noted that we were seeking high quality submissions and “a compelling discussion of how the synthesis extends knowledge in the area of inquiry is a central requirement”. The review teams have succeeded in developing quality reviews that reflect the varying ways synthesis research advances family science.

Exploring Family System Adaptation

Grounded in the concepts from Resiliency Model of Family Stress, Adjustment and Adaptation (McCubbin, et al. 1996), Van Riper et al. (2023) undertook a scoping review of research examining adaptation in families of individuals with Down syndrome with a focus on family adaptation rather than individual or dyadic adaptation. Across the 41 studies included in the review they found most addressed both positive and negative aspects of family response, providing a balanced view of family strengths and ongoing challenges, though only 13 studies were conceptually grounded in a family framework. Based on their review they recommended more longitudinal and cross-national studies and attention to a broader array of demographic variables, especially those addressing the social determinants of health. The review provided evidence of a sufficient body of literature for follow-up integrative or systematic reviews examining key findings related to family-level adaptation or examining the relationship between family adaptation variables and health and quality-of-life outcomes for family members.

Understanding Parenting in the Context of a Health-Related Challenge

Parenting in the context of a health-related challenge was the focus of three reviews (Lee, et al., 2023; Thompson, et al., 2023; Yamaguchi et al., 2013). Thompson, et al. completed an integrative review of parental decision-making related to the timing of the introduction of

complementary foods (i.e., solids), factors influencing decision making, and information sources. Grounding their analysis in a social ecological model, they reported a preponderance of studies focusing on individual factors (e.g., maternal beliefs and mental health), with few studies addressing the influence of interpersonal factors, including family. In the few studies reporting family influences, the authors found that parents often received advice that conflicted with professional input, with parents relying on input from family members because of their understanding of parents' beliefs and circumstances. Their review highlights the need for more studies addressing the interpersonal, community and societal influences on the introduction of solids and also points to the importance of clinicians recognizing the multiple sources of advice influencing parents' decision making as they guide them in transitioning to solid foods.

In contrast to the Thompson et al. (2023) review of a normative transition, Lee et al. (2023) and Yamaguchi et al. (2023) completed scoping reviews of parenting in the context of serious illness. Lee et al. examined sleep quality in parents of children with tracheostomies or home ventilators, providing evidence of poor sleep quality leading to negative consequences for parents' health, quality of life, and family relationships. Yamaguchi et al. (2023) reviewed studies of the effects of parental involvement on glycemic control in adolescents with type 1 diabetes and found that both positive (parental support for adherence) and negative (parental conflict) parenting behaviors were most often significantly linked to control. They concluded that more research is needed on family system variables influencing glycemic control. In addition to providing recommendations for additional research needed to further understanding of family variables associated with a health-related problem, both reviews provide important foundational knowledge on which to build family interventions by identifying potentially modifiable variables leading to improved health and quality of life outcomes.

Examining Family Interventions

Authors of two scoping reviews (Bally, et al., 2023; Suksun, et al., 2023) focused on the nature of family interventions. Bally et. al. examined the use of arts-based interventions and strategies with families of children facing life-limiting or life-threatening illnesses and families who were bereaved. Their review revealed that arts-based approaches have been used as a clinical intervention to support seriously ill children and families, as a data collection strategy to help children describe their experiences, and as an assessment tool for measuring wellbeing or an intervention outcome. The review provided some evidence of positive outcomes related to arts-based interventions, though only 7 of the 25 studies in the review were formal efficacy tests. In addition to the need for more formal efficacy testing, the authors recommended that more research be directed to examining arts-based interventions with children and families facing a wider range of health challenges.

Focusing on couple-oriented interventions for preventing mental disorders and promoting health, Suksun et al. (2023) differentiated health promotion and primary prevention interventions and documented the range of individual and couple relationship variables studied and measures used. Noting that only half of the studies included in their review were randomized clinical trials, the authors pointed to the need for formal intervention trials, studies grounded in couple or family theories, studies examining couple as well as individual intervention outcomes, and greater attention to examining mechanisms of change.

Expanding Conceptual Understanding

In their integrative review examining the concept of protective buffering and its implications for nurses' role in promoting communication between/among family members, Rothausen et al. (2023) took up the challenge of reviewing a concept that is called different

things across studies. Building on research reporting that family members often struggle to communicate openly about a cancer diagnosis and studies conceptualizing failure among family members to share concerns about the diagnosis as both protective buffering and over-protection, the authors reviewed studies addressing the nature of family communication across the cancer trajectory and factors that foster or inhibit nurses' efforts to encourage open communication. The review addresses a new but potentially highly relevant concept that could be the focus for interventions addressing how nurses and other health care professionals can alleviate protective buffering and the consequences of more open communication for patients and family members.

Conclusions

On behalf of all the authors in this special issue on *Multidisciplinary Health Related Family Synthesis Research*, we believe this compendium of papers provides family nurses and colleagues globally with important new knowledge to support families most effectively and inform family-focused practice, education, and research. We thank all the authors for their interest in this issue and for their extremely high-quality contributions. Overall, the new knowledge contained in this issue makes a valuable contribution to the literature and will inform the ways nurses and other professionals across the globe support family units and individual family members. In the introduction we cited Boyer (1990) who only five years before JFN was launched conceptualized the scholarship of integration as entailing the synthesis of information across disciplines, topics within a discipline, and across time; so, what lessons can we glean from this first special issue of JFN to advance synthesis research?

In this issue there is evidence of the many ways in which research synthesis can positively contribute to the discipline of family nursing and family science more generally. The growing trend for synthesis and the range of disciplines and global regions evident in this

special issue is testament to the fact that knowledge generation and synthesis in family science is highly valued and steadily growing.

The articles in this special issue are either integrative or scoping reviews, approaches that were well-suited to the authors' purpose. Nonetheless, we encourage anyone considering undertaking a synthesis study to consider the full range of synthesis approaches available. A recent article by Sutton and colleagues on “meeting the review family” provides an overview of 48 review types grouped into seven different review families (traditional, systematic, review of reviews, rapid, qualitative systematic, mixed method, and purpose specific), and Research Resources posted on the International Family Nursing Association website include a recently updated (12/22) bibliography of Family Synthesis Research Methods, including example reviews: <https://internationalfamilynursing.org/2023/01/22/family-synthesis-research/>. Focusing on nursing reviews published between 2009 and 2020 and characterized as “meta” approaches, Kokol (2021) identified 2065 publications reporting 34 different meta-approaches. Meta-synthesis, meta-analysis, and meta-ethnography were the most frequently used, with many of the other approaches being variants of these. Review authors spanned 71 countries. Despite this overall global diversity, Kokol also identified a regional concentration with the United States, United Kingdom, and China accounting for almost 60% of the publications. The phenomenon of regional concentration of research literature production normally occurs in economically large countries with already successful health systems, which could further widen the gap in knowledge development between more and less developed countries.

The global family nursing community has also demonstrated enthusiasm for transnational collaborations in research, practice, and education so it is timely for family nurses to use this special issue as a springboard to undertake further research syntheses, taking advantage of the

wide variety of review approaches to further extend family and family nursing science. Indeed, the diverse global community created by the International Family Nursing Association, with members from over 30 countries and all continents, can be a catalyst for new international collaborations aimed at narrowing the gap in knowledge development and translation between more and less developed countries.

We anticipate family nursing will become an increasingly well-established discipline in both developed and less developed countries, rooted in its own commitment to fostering optimal family and family member health. In addition, we believe that this special issue demonstrates how family nursing is responding to the call by authors such as Ganong and Conn et al. for the application of rigorous quality standards in synthesis research.

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