

Reading Scientific and Practice Literature for Family Life Education Applications

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## **Abstract**

Over the past two decades there has been much growth in the development of family life education and prevention programs to address significant issues facing children and families. Likewise, much has been learned about the strategies and tactics that are necessary to translate basic science into practical programs to help people. Nevertheless, too often there is limited use of behavioral and social science research in the development and evaluation of family life education programs. In part, this is due to a lack of careful attention to how to systematically read the scientific literature in order to identify the useful educational ideas and strategies to inform program development. In this paper practical ideas are presented to help students and family life educators read the literature to inform program design. These methods are illustrated with family life education examples and recommendations are offered to strengthen program development.

Keywords: family life education, program development, program evaluation, prevention

Over the past two decades there has been tremendous growth in our understanding and articulation of the need for evidence-based prevention programs to address the mental and physical health issues affecting people. This work has led to increased specification of the tools and strategies for developing effective programs (see Sussman, 2001).

There has been increasing emphasis on evidence-based practice as the foundation of programs, but many commentators have noted that most practice is not based on these types of programs. Kumpfer and Alvarado (2003) estimated that only about 10% of family program practitioners were using an evidence-based program. Similarly, Spoth (2008) notes that despite the demonstrated benefits of evidence-based programs, “If a pie chart represented the sum total of family-focused preventive intervention in the United States, it would show that, by far, the largest slice consists of interventions that have not been rigorously tested” (p. 416).

One of the central themes in the development of robust prevention programs is to base these programs on theory and research. In their summary of the characteristics of effective prevention programs Bond and Hauf (2004) list the connection of programs to research as the first factor to consider. They write, “A primary reason that certain programs fail is their lack of connection and adherence to a sound theoretical and research base” (Bond & Hauf, 2004, p. 202).

One of the most common phrases used by program developers is the statement—“you must translate research into practice.” Hughes (1994) writes, “A well-grounded family life education program needs a clearly articulated theoretical perspective and a demonstrated research basis...” (p. 75). However, there has been little discussion about how to analyze and synthesize research literature in order to extract information that can be used in program development. “Although the importance of linking research with practice has been emphasized in family science over the last several decades, there is little, if any, description of the process of translating research into practice (i. e., educational programs),” writes, Adler-Baeder, Higginbotham and Lamke (2004).

### **Lack of Guidance on Translating Research**

Although there is widespread agreement that in order to create effective family life education programs it is essential to rely on theory and research to create programs, there is remarkably little attention to the process of reading and translating research into practice. At least in part a significant aspect of the problem is that there has been little specific guidance about the practical steps necessary to use theory and research in program development. Most of the emphasis has been on the steps necessary to test the effectiveness of programs and much less emphasis has been placed on the early stages of developing content and designing instructional materials.

Hughes (1994), for example, argues for the need to base family life education on theory and research, but provides almost no guidance about how to do this other than to remind family life educators that should be able to cite the evidence. This does not seem sufficient. Two widely used textbooks about family life education (Duncan & Goddard, 2011; Darling, Cassidy, &

Powell, 2014) mention the idea of basing family life education programs on theory and research, but neither of these books treats this process very thoroughly.

Duncan and Goddard (2011) devote a chapter to the issue of designing programs. They state, “A strong scholarly base forms the foundation of the content, goals, objectives, and learning activities of FLE materials” (p. 33). However, in the following paragraphs they only provide advice such as “extract the ‘teachable’ ideas and principles from theories and research, those ideas that can be summarized from a wide array of well-conducted studies that are practical, useful, and theoretically and empirically sound” (p. 33). Few would disagree with this general idea, but there is no guidance about what a “teachable” idea is or how to go about summarizing ideas. Likewise, there is no specification of how to identify studies that are “practical, useful and theoretically and empirically sound.” Later in the chapter, the authors suggest that FLEs base their instruction on their own values suggesting that they ask “does the information or research recommendation fit with my own values and instincts? Do the ideas ring true?” (p. 36). Do Duncan and Goddard mean to suggest that the basis for the research that underlies the program must be filtered through the “values” of the educator? If so, how is this done? If research does not “ring true,” what does this mean? On controversial topics such as marriage equality or sexuality education, how is the research evidence to be used? Again at best there are about 10 pages in this book about using research and theory as a basis for FLE. There are complete chapters devoted to program evaluation, effective instruction, teaching skills, working with diverse audiences. In short, the basic process of summarizing and/or translating research into practice is only given minimal attention.

In the family life education textbook by Darling and colleagues (2014), they devote even less attention to the role of research in program development. Their chapter on program design covers such topics as settings, delivery modes, timing, teaching space and developing useful goals and objectives for the programs. These are all useful, practical factors in effective program delivery, but there is no discussion of the need to use research to build the foundation for a curriculum. In various other places in the textbook, they mention the importance of theory and research as a basis for family life education, but there is no explanation about “how” that is done.

Another example of the lack of attention to the use of scholarly research in the development of family life education programs is evident in the edited book, *Family Life Education: Integrating Theory and Practice* (Bredehoft & Walcheski, 2009) that provides an overview of the state of the art in developing effective family life education programs. There is a chapter titled, “Family Life Education Methodology” in which Clarke and Bredehoft (2009) describe the program development process. Although there are hints at the need for building programs based on research most of the process is based on the family life educators’ values, beliefs and intuitions about what the target audience needs. There are reminders to consult the evaluation literature to assess the effectiveness of the program, but most the focus is on how to conduct programs and how to manage people in groups. The authors provide no guidance to family life educators about the need to read the scientific literature as a basis for developing a program.

Mental health prevention program design books do not fare much better. Conyne (2010) describes the process of developing prevention programs to address a variety of issues. In this

165-page book he includes the need to “explore related professional literature,” but provides little guidance except that someone needs to be assigned to collecting this information. Most of the program design process focuses on how to involve community members. In the “design the prevention program plan” there is no mention of using scientific information to decide what to teach or what instructional methods might be most effective with a particular target audience. In examples which draw on research information, there is no connection as to where this information was derived. In most cases, there are no citations or anything to suggest that these particular approaches to preventing a problem are based on scientific research.

In many instances in all of these textbooks and publications, there is use of research knowledge in the creation of specific family life education programs. The problem is that there is no explicit attention to how research information is found or how teachable ideas are extracted and synthesized into family life education programs from the research literature. This process is generally invisible. In order for students learning to develop family life education programs or for practicing family life educators to improve their programs based on scientific research, there needs to be a more explicit process outlined to guide program development.

### **The Challenge of Synthesizing Literature for Program Development**

A key process in the application of theory and research to program development is the systematic synthesis of information and scientific literature. To advance program development, there needs to be a robust system of synthesis that addresses the key program development issues and questions. Synthesizing the information and literature for program development has some unique problems. On the one hand, program developers do not always conduct a thorough synthesis process. Sussman and Wills (2001) write, “There are several challenges for maintaining progress in a science of health behavior program development. One possible barrier is that some researchers and practitioners may assume that the mere mention of a theory or a vaguely described use of one development technique suffices as a means to justify program contents and means of delivery” (p. 23). Another challenge faced by program developers is described by Wandersman (2008) who writes, “...gathering and integrating information on innovations has its own challenges, particularly given the interdisciplinary nature of the research on prevention. The information often exists in a variety of unconnected sources (e.g., different journals, different disciplines, and different government agencies)” (p. 175). Despite these challenges family life program development will not advance without systematic methods for synthesizing theory and research and applying this to practical programs. We need a framework that describes the types of literature that are relevant to family life education program development and we need to provide direction about what aspects of the scientific literature are relevant to each step in developing a program.

### **A Framework for Organizing Scientific and Practical Literature for Program Development**

The steps in program development for family life educators have been identified by a number of scholars (e.g., Dumka, Roosa, Michaels, & Suh, 1995; Hughes, 1994; IOM/NRC, 2009; Sussman, 2001). Hughes and colleagues (Hughes, Bowers, Mitchell, Curtiss, & Ebata, 2012) have organized these steps around five major questions that guide the program development process. These are:

- **Problem Analysis:** What problem/issue needs to be solved?
- **Program Content:** What theory, research and practice are critical to solving the problem?
- **Instructional Design:** What educational activities will teach the skills, knowledge and/or behaviors to solve the problem?
- **Program Implementation:** What needs to be done to make programs operational?
- **Program Evaluation:** What works and how can programs be improved?

At different steps of the program development process, there is a need to integrate different bodies of research. The framework illustrated in Table 1 identifies the broad types of information arising from research and practice literature that needs to be synthesized at each step of the program development process. The horizontal axis details the types of literature that need to be examined and the vertical axis outlines the major steps in the program development process. Within the body of Table 1, the types of literature that are relevant to each step in program development are identified. Examining the Table horizontally helps the family life educator understand that in order to consider the first program development question, “What problem needs to be solved?” requires consulting five different research and practice literatures from demographic/epidemiological literature to “programs/practice/...evaluation of programs.” At this step it is also important to understand more about the potential audience or target population for an intervention. The context or settings within which the problem occurs is also helpful in understanding the problem. Some problems or issues may vary in urban or rural communities. There may also be differences in approaching an issue from a school perspective, an agency perspective or other context. Additionally, the literature about the problem and programs related to the problem should be consulted in the initial steps of analyzing the problem. This process continues throughout each step in the program development process. At each step a cluster of various types of literature need to be examined to create an instructional design, to implement a program and evaluating a program’s effectiveness.

Although this framework is a good step in clarifying what “literature” needs to be consulted at each step of the program development process, additional guidance about what family life educators should be looking for when they read this literature is needed. The section below examines each literature type and provides a list of questions to guide the reading, analysis and synthesis of this literature.

**Table 1. Program Development Information and Literature Synthesis**

Program Development Step	Types of Literature							
	Demographic/ Epidemiologica l	Audien ce/ Target Group	Context (Community, settings, etc.)	Theory & Research about the Problem	Programs/ Practice/ Clinical Literature/ Evaluation of programs	Instructional methods	Implementation	Evaluation Methodology
1. Problem Analysis	XX	XX	XX	X	X			
2. Program Content		XX	XX	XX	XX			
3. Instructional Design		X	X	X	XX	XX	X	X
4. Program Implementation			X	X	XX		XX	X
5. Program Evaluation				X	XX		X	XX

Note: The “x” in the table indicates how important a particular type of scholarly literature is at that step in the program development process. No “x” indicates this literature is less important, one “x” means it is somewhat important and two “x” indicates that this literature is very important.

## Reading the Literature for Application to Family Life Education

In order to provide students and family life educators with some guidance about what types of information may be relevant to program development, this section reviews all eight types of literature that were outlined in Table 1, then provides a set of question for those studies and reports for each program development step. Most of the literatures only apply to a portion of the program development process so only the relevant program development steps are included. Additionally, a family life program example will be used to illustrate the process. The example program used to illustrate the use of this method for synthesizing research information is the creation of an online program for adolescents whose parents have recently divorced. The goal of the example program is to help adolescents adjust to their parents' divorce.

**Demography/Epidemiology Literature.** A basic foundation for understanding family life issues is a general description of the scope of the problem and trends over time. Basic demographic and epidemiology information about many of the issues of interest to family life educators such as child abuse, teen pregnancy, divorce, domestic violence are gathered by federal agencies and non-profit organizations. This demographic and epidemiological literature is often the first literature to consider in analyzing the problem in program development. This literature could include census data, government and non-profit center reports on the extent of the issue, the patterns of the issue such as which children or families may be more at-risk. These reports may be local, regional or national depending on the scope of the program to be designed. Questions such as the following will allow educators to summarize this literature:

### *Problem Analysis Questions*

- What are the trends in regards to the family life issue? Increasing? Decreasing?
- What specific demographic group(s) is more at-risk in dealing with this issue?
- Are the parts of the community or state that are experiencing more challenges as a result of his family life issue?

**Applying Demographic/Epidemiological Literature to an Example Program.** The demographic or epidemiological literature that would be relevant to the example “adolescence and parental divorce” program is US Census data (2008) on the number of 12-17 years whose parents' are divorced each year. Sometimes this data is available at the state level and may be provided by county so that family life educators can analyze the trends in their community. This information can be used to examine the extent of divorce and the trends over time.

**Audience/Target Group Literature.** As the potential audience or target group begins to be identified, there is often a literature about the characteristics, behavior and/or social patterns of this group. This information is relevant to the problem analysis, program content and instructional design aspects of program development.

### ***Problem Analysis Questions***

- What are the characteristics of the audience? Describe their demographic characteristics.
- Describe lifestyle characteristics that are relevant to the topic (e.g., for parenting include values about parenting, parenting style, and so forth).

### ***Program Content Questions***

- Are there characteristics and/or behavioral patterns that increase or decrease the vulnerability of this audience in regards to the family life issue?
- Are there characteristics/behavioral patterns that protect this audience in regards to the family life issue?

### ***Instructional Design Questions***

- How does this audience find information?
- What are the settings in which this audience participates that may serve as a point of intervention for this family life issue?
- Are there informal or formal professionals that have more or less opportunity to work with this audience?
- Is there evidence that self-help strategies may or may not be effective with this audience?
- Describe how this audience participates in settings that may be potential educational settings (e.g., if schools are a likely place to teach parenting describe how the particular target parents are involved in school settings).

***Applying Audience/Target Literature to an Example Program.*** In the example program for adolescents, understanding the social and emotional developmental tasks of adolescent development would be an especially important literature for the program developer to consider (See for example, Steinberg, 2013). Understanding these developmental tasks could provide a foundation for understanding how adolescents may respond to family changes and their concerns. This information could inform which issues to emphasize with the program (problem analysis and program content). Additionally, since the program designers are already considering an online delivery format, understanding how adolescents use the Internet in general would inform instructional design.

***Context Literature.*** Programs may be delivered in various settings (e.g., schools, religious centers, neighborhood centers, online) and in various types of communities (e.g., urban neighborhoods, rural communities, etc.). In order to develop effective programs it is important to understand features of the setting and/or community that may be relevant to the approach to the problem. Contexts should be explored that are relevant to engaging the audience and potential places for program activities. For example, religious participation may lead to an exploration of specific church contexts. Program developers who are exploring online educational activities will need to explore the types of online activities that the audience

participates in and understand the “online contexts” that may be relevant. Context may also include some broader factors such as the neighborhood in which the audience lives or other community-level characteristics that may be relevant. For example, if the potential audience for parenting program lives in a neighborhood in which there is a lot of gang violence it may be important to understand about gangs or dangerous neighborhoods. Another example would be teaching parenting on a military base in which it would be important to understand the military context.

### *Program Analysis Questions*

- What are the general characteristics of this setting?
- What are the particular characteristics of this setting that may be relevant to the family life issue and the target audience?

### *Program Content Questions*

- Are there characteristics of the setting/context that increases the risks to the audience?
- Are there characteristics of the setting/context that provides protective factors for the audience?

### *Instructional Design Questions*

- What characteristics of the setting/context would enhance or detract from the success of the program?
- Are there informal or formal professionals in the setting that would enhance the success of the program? How?
- Are there best practices for working this particular setting or context (e.g., effective family life education in rural settings)?

### *Program Implementation Questions*

- Are there personnel and/or organizational features of the setting/context that will facilitate recruitment and retention?
- Are there organizational aspects to the setting/context that will assist in providing training or support to staff implementing the program?

***Applying Context Literature to an Example Program.*** In the adolescence and parental divorce example, the family life educator is planning to deliver the program online. In the case, the “context” would be the online environment that adolescents are engaged in. Reports on teens and social media (e.g., Madden, et al., 2013) would be helpful in getting a more complex understanding of how teens are using social media (problem analysis). These social media information patterns could inform program content, provide ideas for instructional design and provide some insights into how to engage young people (program implementation).

**Theory and Research about the Problem Literature.** There is a body of theory and research about the specific problem or issue that is the focus of a family life education program.

Most family life educators would expect to consult this literature. This would include studies that provide insight into effective parenting, or developing healthy relationships, and so forth. This body of knowledge is critical to all aspects of the program development process from problem analysis to evaluation. There are also some general questions that may inform the overall program development process.

### ***General Questions***

- What are the main findings in this article?
- How do these findings fit in with other research findings in this same area? Similar? Contradict? Add new information?
- Are the findings qualified/limited in any ways? (For example, by specific population characteristics, age group, setting, etc.)
- How would a hard-nosed service provider critique the content of this article? Do the findings support or challenge experiences with children and families? Why or why not?
- In general, what implications does each of these findings have for individuals or settings (types of families, schools, community agencies, etc.)?
- Who would be interested in these findings or who would benefit from learning about these findings?

### ***Problem Analysis Questions***

- Do these findings identify a new problem or issue that needs attention by practitioners?
- Does this article provide new insights about an audience or target group?
- Does this article provide new insight about the context or setting for a program?
- Does this article identify an especially at-risk target group?
- Does this article suggest any additional factors to consider in understanding a problem or issue?

### ***Program Content—Theoretical Model of the Problem Questions***

- Do these findings change your understanding of the major or minor causes or contributors to a problem or issue? How?
- How do these findings fit into a theory of change or into a logic model for a particular issue or problem?

### ***Program Content—Program Model Questions***

- How could these findings be taught or communicated?
- Are there any special/unique ways that these findings could be taught?
- Does the conceptual or theoretical perspective of the study have implications for program design?
- Do these findings modify the behaviors or conditions that are relevant to a program?

- Do these findings suggest additional conditions or contexts to consider in your program model?

### *Instructional Design Questions*

- Are there any data collection methods or other procedures that could be converted into a teaching tool?
- For quantitative studies, are there specific data, charts, or graphs that could be included in the teaching or presentation of the material?
- For qualitative studies, are there quotes, stories, or examples that could be included in teaching or presentation of the material?

### *Program Implementation Questions*

- Does this article provide ideas or tools for recruitment of program participants?
- Does this article provide ideas or tools for retention of program participants?
- Does this article provide ideas or tools for working with particular service providers, agencies, and so forth to implement the program?

### *Program Evaluation Questions*

- What variables from this research study might be used as outcome variables in evaluating a program?
- What measurement techniques or tools from this research might be used in evaluating a program?

### *Applying Theory and Research about the Problem Literature to an Example Program.*

To develop a program for adolescents dealing with their parents' divorce, there is a large body of scientific literature that can provide insight into program development. One relevant study would be Buchanan and colleagues (1996) which followed a sample of teens after their parents' divorce and looked at factors that facilitated their adjustment. This study provides insight into the specific challenges faced by teens whose parents' divorce including information about what types of family factors and custody arrangements that may put some teens more at risk than other situations. Information from teens themselves about feeling "caught between their parents" suggests an important topic for program content. There are example quotes from teens and some general patterns of adjustment that may also provide content and/or suggest the timing of delivery of this program as a part of instructional design and program implementation. Some of the data collection questionnaires in this study may also be useful in program evaluation.

**Programs/Practice/Clinical Literature and Evaluations of Programs.** In most cases there are already family life educational programs and/or professionals who are engaged in addressing similar topics. Therefore, there are often already a variety of published and unpublished programs, program evaluations and so forth about the issue. The questions in this section provide some general directions about how to read program reports and evaluation studies in order to identify information and ideas that may be useful in developing and evaluating

programs. Some program reports may not have evaluation data so some of the questions below would not be applicable to all types of reports.

### ***General Questions***

- What are the main findings in this article?
- How do these findings fit in with other research and/or evaluation findings in this same area? Similar? Contradict? Add new information?
- How would a hard-nosed service provider critique this study? Do the findings support or challenge practical experiences with children and families? Why or why not?
- Who would be interested in these findings or who would benefit from learning about these findings?
- How important is this program? Major new program or approach to an issue? Revised or updated effort?

### ***Problem Analysis Questions***

- Are the findings qualified/limited in any ways? (For example, by specific population characteristics, age group, setting, etc.)
- Do these findings identify a new problem or issue that needs attention by practitioners?
- What implications do each of these findings have for individuals or settings (types of families, schools, community agencies, etc.)?
- How well have the designers analyzed the problem? Appropriate target group? Understand the target group? Understand the setting/context of the program?

### ***Program Content—Theoretical Model of the Problem Questions***

- Describe the theoretical model of the problem?
- How do these findings fit into a theory of change or into a theoretical model for a particular issue or problem?
- Do these findings change your understanding of the major or minor causes or contributors to a problem or issue?

### ***Program Content—Program Model Questions***

- What is the basic logic of the program?
- What new contexts or conditions in program design are suggested by this work?
- Are there any new ideas for alternative or new approaches to reach specific audiences (particularly underserved audiences) or to address unique needs of audiences?
- Does the program address a sufficient variety and number of processes, people and/or settings that the research identifies as important for producing the desired outcomes?
- Are the settings or processes addressed by this program similar to other programs of this type? Is there anything new?

- Do these findings suggest additional transitions or events that might motivate children or families to participate in the program?

### *Instructional Design Questions*

- What is the basic instructional model?
- What are the key activities or methods used for education or change?
- How does the program dosage compare to similar programs? Are the numbers of program contact hours and sessions sufficient for the outcomes they expect to achieve?
- What are the strengths and weaknesses of their use of text, audio and video to teach content?
- How well do they foster engagement, interaction, participation, and/or community-building?
- Does the program require more active than passive participation?
- If behavior change is a goal, are there opportunities to practice new skills and behaviors?
- Are there opportunities for participants to reflect on and apply knowledge and skills to their own situation?
- What methods are used to engage or interest the participants in the program? Is there evidence that participants want to attend/participate long enough for the desired learning and behavior changes to occur?
- Does the program include booster sessions or other follow-up with participants to help them maintain changes when the program is over? Describe.
- Are the program activities and materials designed to be consistent with the participants' culture?

### *Program Implementation Questions*

- How well is the program implemented?
- Do some participants experience obstacles that keep them from fully benefitting from the program? If so, are there other services/supports available to address these issues?
- Are staff members given adequate training before implementation of the program?
- Is the staff engaged and committed to the program? Is there a high rate of turnover among program staff?
- Is the program adequately documented so that others can implement or replicate the program?
- Is there evidence of program implementation monitoring procedures?
- If this program is implemented in a clinical or education setting, are there guidelines for implementing it in a community setting?

### *Program Evaluation Questions*

- How robust are the evaluation methods?

- Is the type of evaluation conducted appropriate for the step of the program?
- Are the changes addressed by the program likely to be sustained by participants after the program is over?
- What measurement techniques or tools from this study might be used in evaluating other programs?
- What evaluation design features (sampling, recruitment, retention, etc.) would be useful for evaluating programs?
- What variables from this study might be used in evaluating outcomes in other programs?

***Applying Programs/Practice/Clinical Literature and Evaluations of Programs to an Example Program.*** For the adolescence and parental divorce program example, one existing program may be helpful. Boring (2011) developed and tested an online program for young adolescents as a part of a dissertation. This particular report provides much insight into the design, development and evaluation of this program. He provides information that can be used to develop a new program that serves a similar audience. By examining the content and program logic, family life educators can compare these ideas with their own reading of the research literature on teens and parental divorce described in the previous section. Boring documents the challenges of engaging adolescents online and retaining them through the program which can inform program design and implementation. Lastly, he conducts a robust delayed treatment experimental design to test the program which provides insight into the efficacy of online programs for helping adolescents cope with their parents' divorce.

***Instructional Methods Literature.*** Whether a program is taught face-to-face, print, online, etc. there is a literature about best practices and effectiveness that will be useful in the program development process. Too often family life educators rely on familiar teaching techniques or their own experience rather than carefully examining the instruction design literature. The questions provided below are very general questions. Once a general delivery strategy has been selected (e.g., text, multimedia, online, etc.), then a much more refined synthesis can be conducted.

### ***Instructional Design Questions***

- What are the best practices in using this delivery method?
- What specific practices have been effective with this particular family life issue?
- What specific practices have been unsuccessful with this particular family life issue? Why?
- Is there evidence demonstrating effectiveness of these methods with the particular audience and/or in a particular setting or context?
- Within methods are there variations in effectiveness? For example, are some online programs more effective than others? Why?
- Is there evidence that particular types of instructors are more effective than other types?
- Are there combinations of instructional methods that are more effective (e.g., classroom instruction with homework practice and individual counseling)?
- What are the completion and/or drop-out rates for the instructional method?

***Applying Instructional Methods Literature to an Example Program.*** In the program example that has been used to illustrate this process, an online delivery method was selected. There is an emerging body of information about how to create effective online educational programs (Mayer, 2005) and also methods for developing online support communities (Kraut & Resnick, 2012) that would especially relevant to the instructional design aspects of this program.

**Implementation Literature.** This is a relatively new literature, but increasingly program developers have begun to publish reports recruitment, marketing, retention of participants, and so forth. This information can inform both instructional design and program implementation.

### ***Instructional Design Questions***

- Are there implementation issues that improve or impair particular instructional methods?

### ***Program Implementation Questions***

- What are the best practices in regards to implementing programs of this type at this level of scale (eg., one specific setting, community-wide, state-wide, etc.)?
- What the specific implementation practices that are effective with this family life issue?
- What specific implementation practices have been unsuccessful with this family life issue? Why?
- Are the variations in implementation based on specific audiences, types of instructors, and/or the specific setting/context for the program?

***Applying Implementation Literature to an Example Program.*** One of the unique challenges in online programs that would face a family life educator creating a program for teens about their parents' divorce is keeping the adolescents engaged in the program. From a careful reading of the Boring (2011) program mentioned earlier as a program example, the author had a substantial dropout rate. In an analysis of many online programs, Eysenbach (2005) described this issue as "the law of attrition" because it was such a common problem for family life educators. The success of an online program for teens about parental divorce will require some careful examination of this issue and development of strategies that can reduce attrition. Reading this literature is critical to the success of this program in reaching and engaging the target audience.

**Evaluation Methodology Literature.** In addition to specific evaluation reports on specific programs, the field of evaluation methodology continues to expand and develop new designs, methods and procedures for providing feedback about programs. This literature can inform instructional design, implementation and evaluation.

### ***Instructional Design Questions***

- Are there evaluation strategies that work especially well with particular instructional approaches?

### ***Program Implementation Questions***

- Are there evaluation methods that work at an appropriate scale of implementation?

### ***Program Evaluation Questions***

- What are the best practices in regards to evaluation of programs at this level of scale?
- What are the best practices in terms of evaluation of programs at this step of program maturity (e.g., Jacob's (2003) model of program evaluation)?
- What are the best practices in terms of evaluation of programs for this family life issue?

***Applying Evaluation Methodology Literature to an Example Program.*** For online delivery of programs as illustrated by the example of teens and parental divorce, there is a growing body of knowledge about how to use information provided by the Internet technology to monitor and understand program delivery and participant engagement. Hughes (2001) provides an example of how this “technical feedback” from how people use a website can inform website design and provide formative evaluation data. Hughes and colleagues (2012) provide a general description of how to use “technical feedback” from online programs for program improvement and other types of evaluation.

**Summary of reading the literature.** This paper cannot include an exhaustive list questions. Specific family life program topics may require the consultation of additional types of literature, but this general list is a good place to begin learning how to read the research and practice literature to develop family life education programs.

### **The Program Development Process Reprised**

In order to provide a guide to exploring each type of literature that is relevant to program development, the structure of the discussion of synthesizing the research literature was organized according to the type of literature (e.g., demographic literature, audience literature, etc.). As a result the reader may have lost the thread of the program development process itself. In the actual practice of developing a program, the synthesis process is rarely done by “literature type,” but rather the literature synthesis is conducted by program development step across the range of applicable literature types. For example, as suggested in Table 1, conducting a robust problem analysis will include consulting five different types of literature (demographic/epidemiological, audience/target group, context, theory and research about the problem and programs/practice). Each additional step in program development will also require the synthesis and integration of multiple types of literatures. Applying this approach to program development reminds us that at each step in program development, family life educators will need to read across multiple areas

of research and practice and use this information to guide the design, content and evaluation of their programs.

### **Reading the Same Literature, but Coming to Different Conclusions**

Too often when there is a discussion of using “research” as a basis for developing family life education programs, this suggests that there is a straightforward and simple translation process. As noted earlier Duncan and Goddard (2011) suggest that family life educators filter this research through their values and whether the research findings “ring true.” Although most practitioners probably would agree with this statement, this seems problematic? The issue is that scientific research is always an incomplete foundation for practice. Despite efforts to move toward evidence-based programs, there are still limits and uncertainty in regards to the research foundation for programs and the effectiveness of programs (De Los Reyes & Kazdin, 2008). It is critical that we acknowledge the limits and uncertainties of the research so that we can improve programs by addressing these issues and knowing what needs to be improved. Nielsen (2014) raises another caution about the translation of research. She describes the “wozzle effect” which “is a definitive statement based on data that are very limited, flawed, ambiguous, or erroneous. Through a number of different ‘woozling’ techniques, these flawed, scanty, or inaccurate data become magnified and widely disseminated, overshadowing data that would challenge it. Certain aspects of the wozzle might be partially true in that some findings in a few studies can be interpreted in ways that lend some support to portions of the wozzle” (Nielsen, 2014, pp. 164-165).

Although it is important to consider whether research findings ring true or are “woozled,” there needs to be a critical analysis process for working through the synthesis of research. Just as scientists debate the research evidence in support of a theory or another conclusion it is important for similar debates among family life educators. Nielsen raises just such questions in her article about “woozles.” She notes that although there is general agreement that the research literature supports the view that continued father involvement postdivorce is beneficial to children development, there is dispute about how to interpret the findings regarding young children’s development when they are rotated between households for overnight stays. Some researchers have examined this evidence and suggested that this practice disrupts the development of attachment (McIntosh, 2011), others have suggested that when fathers are denied these opportunities to have their young children overnight undermines their developing relationship with their young children (Warshak, 2014). This ongoing debate highlights the complexity of translating research into practice and policy.

It should be expected that there will be some differences about how to interpret some research evidence and differences in how to translate some findings into practical recommendations. The important point is that these disputes need to be resolved with a discussion of the theory, empirical evidence and methodology, not a hunch about ideas that “ring true.” These disputes over translation and application need to be grounded in the critical analysis of theory and research.

## Summary and Conclusions

When encouraging students or family life educators to “read” or “consult” the literature on a topic, it may seem obvious what literature they should read, but this is a much more complicated. Should they read “evaluations” of programs that they are interested in? Should they read the theory and research literature on the issue they are interested in addressing such as teen pregnancy, child abuse, harsh parenting, and so forth? Should they read descriptions of other family life programs or the program materials themselves? The rough answer to these questions is “yes,” they should read all of these literatures and more. Throughout much of undergraduate and graduate school, there is considerable examination of research literature. There are often courses on research methodology and statistics that provide opportunities to students to develop the ability to critically analyze research literature and develop the ability to synthesize this literature for designing additional research studies and summarizing the knowledge to capture the state of the knowledge on particular topics.

When it comes to practice and application, there is rarely a similar set of courses or effort to teach students how to “read the literature for practice or application.” This is not the same as reading the literature for scientific analysis. The questions and issues that need to be considered go beyond an analysis of whether the methodology was adequate to test the hypotheses in the study and whether or not the statistical methods were appropriate for the question. Just as it is important for students to learn how to critically analyze the research literature for scientific merit, it is important for students interested in family life education and the application of scientific information for addressing child and family issues, to learn how to critically read the literature for practice.

By focusing on a general framework for synthesizing research practice literatures for program development this paper is a step in describing more explicit procedures for family life education application synthesis. The primary focus was to use a systematic method of extracting, organizing, and summarizing information and research studies to address the central issues facing program developers as they plan programs to address issues facing families and society. A central purpose of this paper is to bridge the gap between research and practice by providing specific ways to extract information and ideas that will be used to create effective programs. Using a more systematic and transparent process that clarifies the complexity of program development and the translation process will result in a stronger foundation for effective, evidence-based programs.

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