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Research Foundations of Human Development and Family Science: Science Versus Nonsense

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Abstract

Research Foundations of Human Development and Family Science: Science versus Nonsense is a work written by Kathleen D. Dyer and published by Routledge in 2022. This book comprehensively explains the latest theory, methodology, and research findings in human development and family science. The book explores the conceptual foundations of human development and family science, introduces readers to relevant theoretical approaches and research methodologies, and addresses essential topics such as child development, family interactions, family dynamics, and factors influencing human development in the family context. This book is an essential resource for students, researchers, and professionals interested in understanding the complexities of human development and family interactions in a changing society.

Keywords

research foundations, human development, family science, pseudoscience

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Research Foundations of Human Development and Family Science: Science Versus Nonsense

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Introduction

Through the book *Research Foundations of Human Development and Family Science: Science versus Nonsense*, Dyer tries to help readers understand all the methods that need to be used in all disciplines, including qualitatively in sociology. The author lays out the basis for choosing research fields, planning, conducting research, and compiling reports. Human development and family science relations are the topics raised in the book because they can contain various approaches that give this book many advantages. The author includes a category of questions that can guide readers in conducting research following the qualitative field, namely insight. In addition, the authors state that the types of research can also be differentiated based on the need to complete research questions with true-false answers or just an opinion. By combining theoretical foundations and the latest research, this book encourages readers to adopt a sceptical and critical attitude in viewing phenomena and to increase understanding and development of this field more broadly.

Book Content

Instead of discussing human development and family science through the lens of art, literature, philosophy, or religion, Dyer wisely took this opportunity to discuss it through the lens of science. This HDFS book consists of four parts, and each part is divided into several chapters, which are discussed using different research methods. We have focused on discussing chapters that contain only those related to qualitative research to suit readers in the qualitative field.

Human Development and Family Science or HDFS is explained by Dyer in Part 1. HDFS study how individuals develop throughout their life cycle and how family dynamics

influence that development. This field involves research, theory, and practice related to individuals' physical, social, emotional, and cognitive development, as well as family interactions and the factors that influence them. Through multidisciplinary approaches, including sociology and anthropology, HDFS studies various aspects of human life, such as child, adolescent, and adult development, family interaction, individual development in cultural and environmental contexts, as well as the role of parenting and other factors that affect human development.

Chapter 1 of the book introduces the scientific method and the research process. The chapter explains the importance of using systematic and empirical methods to study HDFS. It also discusses the different types of research questions that HDFS scholars ask, including descriptive questions. The chapter concludes by discussing the importance of ethical considerations in research, including informed consent, confidentiality, and debriefing.

Chapter 2 in HDFS is a field of study that focuses on understanding human development and the role of families based on research and empirical evidence. Personal experiences, according to the author, may provide interesting insights and observations, but they do not constitute scientific evidence. Then, personal experiences can be subjective and influenced by individual biases, limited perspectives, and unique circumstances. While they may offer valuable narratives and personal viewpoints, they are not generalizable or representative of broader patterns in human development and family science. The author states to obtain credible knowledge in this field, relying on evidence-based research, large-scale studies, and scholarly publications that have undergone rigorous peer-review processes is essential.

The discussion about systematic empiricism through sampling and measurement is Part II. The authors state that HDFS experts use various measurement tools, including interviews, questionnaires, self-assessment tasks, observations (participant, naturalistic, and structured), objective tests, physiological measurements, and various archival records.

In Chapter 4, The author explains pseudoscience, comes from the word "Pseudo," which means wrong or pretend so it can be said that it is false science. Pseudoscience seeks to imitate the superficial features of science to present itself as a science while failing to live up to the most basic definition of science. Pseudoscientists use several strategies to make their claims seem legitimate, such as manipulating language, relying on confirmatory anecdotes and testimonials, avoiding falsification, and using fake credentials in the scientific community. The author notices that we can distinguish between natural science and pseudoscience by looking for three defining features of science: systematic empiricism, falsifiability, and public verification. In addition, scientific literacy can help individuals recognize and reject pseudoscience. Pseudoscience in HDFS causes actual harm, and professionals must use their expertise to protect children and families.

The importance of conceptualizing variables related to subjective concepts studied in the HDFS and how they are defined and measured, such as categorical variables, is discussed in Chapter 6. This chapter emphasizes the importance of clearly conceptualizing research to ensure meaningful results. Overall, this chapter highlights the importance of understanding the concepts involved in HDFS research and carefully defining and measuring them to ensure that the results are credible and accountable. Discrepancies in what people mean by a concept can cause problems in relationships or research because it can lead to misunderstandings and miscommunication.

Chapter 7 focuses on self-report measures. It measures can take many forms, including interviews, questionnaires, and self-report assignments. This variety allows researchers to gather information from multiple perspectives and sources. The author states that self-report measures are widely used in family science research, with around 85% of empirical research

articles published in family science journals in 2017 using self-report measures. While this is an overreliance on self-report measures, it reflects the usefulness of this type of measurement.

In Chapter 8, the author describes how the measurement uses the observation method. This measurement is divided into three: participant observation, naturalistic observation, and structured observation. The explanation is complemented by an analysis of observational data, the strengths of observational actions, and the limitations of observational actions.

Part III is designed to answer the questions raised in the previous section. The category of questions related to the focus of the discussion is insight. Research in HFDS aims to add insight into a particular topic and help organize knowledge about it. The questions that arise are generally about the subject's experience, which will broaden ways of thinking about the topic. This book advises readers to stay on the right track by answering the sample questions in each chapter.

Chapter 11 goes into detail regarding how qualitative research designs can generate insights on a topic. You will be presented with an explanation of the objectives of qualitative research, qualitative research design, characteristics of qualitative research design, results of qualitative studies, credibility of qualitative research, illustrative examples, and how to find qualitative study reports. It is essential to know all the information. There are two qualitative approaches presented by Dyer here, namely narrative and ethnographic research. The two approaches are compared based on study subjects, measurement methods, time orientation, study results, and internal credibility.

Part IV is prepared to verify evidence based on practice in the public domain. Evans and Stanovich (2013) states that public verification, which is the latest science, must be done to ensure systematic empiricism and falsifiability criteria. The author also realizes that professionals have limitations in criticizing individual studies due to their lack of skills in using methods such as measurement bias in social interest, such as subject reactivity and observer bias.

In chapter 15, the author outlines convergence and consensus. Convergence brings together various pieces of evidence on the same topic—like triangulation but on a large scale. At the same time, the scientific consensus is the agreement of evidence about certain conclusions produced by convergence. These two activities must be carried out to prevent findings of theories from being considered mere suggestions and eliminate opinions that research results are still influenced by bias. Literature reviews are discussed in detail, especially in traditional literature reviews. This type of literature allows researchers to fully understand the topic without being influenced by emotional bias and personal interests. Then, the author continues the limitations that must exist in this literature review.

In chapter 16, the author explains in detail about scientific literacy for professional practice in HDFS. There are three divisions of scientific literacy: evidence-based practice, community-based science, and evidence-based advocacy. In evidence-based practice, the author stated that there are apparent detrimental effects if the scientific process runs slowly, for example, when handling the spread of COVID-19. Even though there has yet to be a consensus, professionals must make direct policy decisions based on the results of this peer-reviewed study. If not, the delay in decision-making could result in more significant losses. The author also continues the discussion on community-based science with examples of its goal to gain insight into how to raise children. Gathering evidence of social phenomena can also be used to compile systematic changes in the formal organizational structure, which is part of evidence-based advocacy.

Overall, this book reiterates that there are no right or wrong answers in answering qualitative research design questions. This fundamental question only changes how people think to be more open to exploring information. Therefore, humans are increasingly skilled in organizing information which is the stage of theory development. In addition, each chapter in

the book also begins with unique phrases, terms, and proverbs that attract readers to take a deeper look at the information presented in the book.

Reviewers' Argumentation

Human Development and Family Science may not be familiar to some readers, especially those in developing countries. The HDFS concept provides a comprehensive understanding supported by research, theory, and methodology that does not only discuss the basic level. HDFS also investigates the complexities of human development, exploring factors such as environment, cultural influences, and interpersonal relationships that shape individuals over time. It helps readers critically analyze and understand phenomena, understand the nuances of different stages of development, and gain insight into the complex interactions between individuals and their families based on personal experience.

This book holistically provides actual and useful information for readers who have mastered HDFS or wish to start pursuing this field. For example, information about pseudoscience that is very foreign to the scientific community has led to the widespread practice of pseudoscience. Readers are helped by authors how to identify pseudoscience and ways to tackle this practice by understanding the strategies they use to make their work appear scientifically valid. Other information that can be useful for readers of qualitative research is self-report measures. This is the most popular measurement in HDFS research, which has been widely used in 2017. Even so, the authors highlight the weaknesses and limitations of using self-report measures in Human Development and Family Science research which are very helpful in defining the measurements to be used in the focus of qualitative research. The author is very good at explaining the difference between observation and self-report, leading readers to prioritize the use of observation both in terms of subjectivity and from the limited words that the object has to report on self-report.

This book makes a great source of information for qualitative researchers. The readers are given an overview of preparing a proper research report. The author explains the strengths and weaknesses of several theories without providing intervention in which direction the reader should side. This method provides two effects at once, and the advantage is that the readers are free to determine their attitude in choosing which version of the theory is correct. The weakness, the choice of the readers is different from the conditions agreed upon by the experts.

The author can provide sound advice in solving two problems that can potentially be mitigated in quality qualitative research: reactivity and observer bias. Reactivity is reduced by conditioning the subject to behave naturally even though it is being observed. This can be done by rehearsing behaviors that will stay the same in front of an observer or by reducing the subject's awareness while being observed. Whereas observer bias is reduced by using clear coding standards, observational measurement involves multiple coding and conditioning so that the observer does not recognize the subject's status. The author emphasizes how important coding training is for researchers to ensure that all recorded information can be retrieved so that it becomes an important part of research reporting. However, the authors need to provide 1 example of how good coding techniques are in qualitative research and case examples due to the less-than-optimal coding process carried out by researchers.

This book also has a reflection section to ensure there is feedback to the reader on how well understood the information explained explicitly and implicitly in each paragraph is. There is also vocabulary that serves to avoid articulation errors of words used in books. The author emphasizes that operational definitions are absent a priori in qualitative research. However, the process of forming this definition is established empirically. Explanations of all sub-materials are equipped with examples. However, the example also reiterates that qualitative research often constructs a theory that indicates that there is unnecessary repetition which is redundant.

Each exclamation point also contains questions that aim for readers to express their understanding of the information provided using self-composed sentences and stay focused on collecting the information needed.

On this occasion, we try to compare the book *Research Foundations of Human Development and Family Science-Science versus Nonsense* with a book that we consider having something in common, namely *the Handbook of Bowen Family Systems Theory and Research Methods* written by Mignonette N. Keller, and Robert J., Noone (2020). Both deal with issues concerning the family. However, the two also have some differences, which the last book discusses Bowen's family systems theory and presents an innovative approach to family research. This book examines core issues in family systems theory, such as anxiety, stress, emotional disconnection, self-differentiation, multigenerational transmission processes, and the emotional processes of the nuclear family. In addition, this book explores related constructs in the research literature, such as adaptation, resilience, social support, social networks, and intergenerational family relationships.

With Bowen's theoretical perspective, readers will gain a deeper understanding of the theoretical and methodological issues related to family research and how to address the challenges faced when studying individual, family, and societal issues. This book is an important resource for clinicians and researchers in the social and natural sciences as it provides a comprehensive framework for understanding the application of Bowen's theory to family practice and family research. Meanwhile, *Research Foundations of Human Development and Family Science: Science versus Nonsense* is a book that introduces various scientific research methods that form the basis of science and practice in HDFS. This book engages interdisciplinary study in developmental science, family science, and other social sciences. This book introduces readers to the difference between empirical scientific research by common knowledge and personal experience. In addition, this book examines the strategies used by pseudoscience and provides relevant examples. This book also describes the sampling and measurement methods in HDFS research, including various measurement tools used by HDFS experts. This book introduces study designs used in scientific research, such as qualitative, prevalence, correlational, and experimental designs. In addition, this book discusses the verification of scientific publications and the development of scientific consensus. This book was organized to introduce the discipline of HDFS and get students to understand the limits of general knowledge and the threats of pseudoscience to those who work professionally with children and families.

We conclude that the book *Research Foundations of Human Development and Family Science: Science versus Nonsense* is rich in explanation, covering various scientific research methods that form the basis of knowledge and practice in HDFS. By paying attention to the differences between general knowledge and scientific research and discussing in depth the strategies used by pseudoscience, this book provides a more flexible understanding for readers to develop strong research skills in HDFS to produce professional practice based on strong scientific evidence in working with children and families.

We highlight the limitations found in this book. We recommend that writers focus on concepts clearly and concisely, avoid complicated technical language, and use real examples to illustrate these concepts to help readers unfamiliar with the field. The author may also consider using visualizations like tables and figures and differentiating between paragraphs to emphasize important information. Through this approach, writers can make it easier for readers unfamiliar with the field and ensure their writing is more accessible and understandable to a wider audience. Despite its complex subject matter, this book remains a valuable resource for students, researchers, and professionals interested in learning and applying human development and family science knowledge.

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