

Best Practices in Mental Health

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Best Practices in Mental Health

EDITORIAL POLICY AND SUBMISSION GUIDELINES

Aims and Policies

Best Practices in Mental Health is a refereed publication intended for an interdisciplinary audience of mental health practitioners, administrators, and scholars. The journal publishes original, practice-focused articles that are in keeping with the best possible evidence about what works in clinical, community, and/or organizational settings. Each issue includes information on innovative programs, interventions, new research efforts, book reviews, and descriptions and links to relevant websites.

The journal seeks to provide readers with an array of articles on topics ranging from the micro application of a single practice intervention, such as psychoeducation, to macro applications, such as accreditation standards. Manuscripts are solicited from the entire mental health community and also invited from other educators, researchers, policy makers, and practitioners whose focus is on strengthening the knowledge base of mental health practices.

Categories of Best Practices

Best practices is a term with a broad definition that has numerous applications. The journal reviews four areas of mental health practices: (1) best practices, (2) emerging practices, (3) practice-based evidence, and (4) evidence-based practice. We ask that contributors ensure submissions meet at least one of these categories of best practices as described below.

Best practices for mental health can be described as a method or technique that has consistently shown results superior to those achieved with other means and is often used as a benchmark for others to base their practices on. Additionally, best practices guidelines are determined through a thorough process that includes research findings, clinical experience, and implementation guidelines which are then debated and discussed by panels of specialists including clinicians, researchers, program administrators, and client advocates.

Emerging practices are defined as treatments and services that are promising, are less thoroughly documented than evidence-based practices, and have a strong research foundation but fewer than five scientifically rigorous published studies. Emerging practices are often administrative or clinical practices that have proven effective at achieving a specific aim, hold promise for other organizations, and show effectiveness in small-scale projects where research designs are less rigorous or self-reporting measures are used.

Practice-based evidence is defined as evidence of real-world data collection and focuses heavily on improving practice. Descriptions are focused on effectiveness and practice, and studies often describe routine practices that have high external validity but little inferential generalizability.

Evidence-based practices are those interventions for which there is consistent scientific evidence showing that they improve client outcomes, with one or more replications of the original studies.

Overall, best practices are broadly seen as activities, programs, and guidelines that have been created based on careful identification and synthesis of the best available evidence in a particular field of practice.

Types of Articles

Best Practices accepts regular articles and brief reports, both of which can include conceptual papers (e.g., descriptive best practices), research reports (e.g., empirically supported best practices), and specialty topic literature reviews (e.g., best practices for transition-age youth). Anyone interested in submitting such material should contact the editor. From time to time, the editor will solicit articles on special topics and will feature such special topics as consumer-selected best practices, commentaries, and field notes. Book reviews are a regular feature of the journal and are usually solicited by the editor.

The following section describes the recommended format and procedures for conceptual and research manuscripts and book reviews.

Conceptual articles. The format for conceptual articles is introduction, best practices program or intervention description, preliminary findings, discussion (e.g., including implications for best practices), and conclusion. The introduction can include literature review, issues, problem statement, and identification of best practice category. The program or intervention description can include theoretical perspective, program description or design, components, steps for implementing best practice, or curriculum description. Preliminary findings can reference evaluation efforts and results, and note whether informed consent and institutional review board approval were obtained. The discussion section can describe findings, limitations of the intervention or program, recommendations for future development, and implications for best practices. The conclusion section pulls it all together and refers to main findings or conclusions supported by the discussion.

Research reports. The standard format for research reports is introduction, methods, results, discussion (with implications for best practices), and conclusion. In the last paragraph of the introduction, state the purpose of the research as either a statement or a research question, indicate type of study design (e.g., experimental, survey), and identify which category of best practice this article represents. Include descriptive data of participants or population, dates for original data collection, and statement of whether informed consent or institutional review board approval was obtained. In the methods section, describe the data analysis procedures in a manner understandable to non-statisticians. In the results section, report findings directly related to the research purpose or question. This section can report numbers of all percentages (in either text or table) as well as statistically significant results (e.g., values, degrees of freedom, probability levels). The discussion section should describe limitations as well as explicitly discuss the findings in relation to application and implications for best practices.

Book reviews. The journal's intent is to publish book reviews that are relevant to readers interested in resources for best practices in mental health. Books to be considered for review should be sent to David Follmer, The Follmer Group, 5758 S. Blackstone Ave., Chicago, IL 60637. Potential reviewers should contact David Follmer.

Submission of Manuscripts

General Requirements

Best Practices reviews material for publication on condition that it has not been previously published, including electronic publication, and is not being reviewed for publication elsewhere. For peer review, all submissions must:

1. Be sent electronically to gmenon@luc.edu as one file folder containing multiple documents. For example, the folder must have separate e-files for the following:
 - cover letter;
 - title page with author names, affiliations, and contact information;
 - article manuscript without author names on the title page, but including an abstract, keywords, full article text, references, and acknowledgments;
 - tables and figures (if any), submitted as separate files, with a corresponding callout in the text.

Files should be prepared using Microsoft Word and saved as .docx files. All tables and figures must fit on the page with portrait (not landscape) orientation; PowerPoint figures are not accepted. The entire article manuscript must be without author identification. E-mail or phone inquiries may be made directly to the editor: Goutham Menon, gmenon@luc.edu.

2. Conform to *The Chicago Manual of Style*, 17th edition for text style; citations and references should follow the *Publication Manual of the American Psychological Association*, 7th edition (APA). Please use person-first (e.g., person with schizophrenia, not schizophrenic; research participants, not subjects) and nonsexist language.
3. Be double-spaced (including tables), using 12 point font (Times New Roman preferred) with 1-inch margins. Do not use **bold** or underline. Number pages in the upper right-hand corner.
4. Conform to word and page limits. Regular articles should not exceed 5,000 words (about twenty pages). Brief reports should not exceed 800 words (about four pages). Book reviews should be about 600 words (about three pages).
5. Identify in the cover letter all authors and their contact information, include a statement claiming that the manuscript is not under review elsewhere, and note which category the manuscript should be reviewed under (best practices, emerging practices, practice-based evidence, or evidence-based practice).

Arranging the Manuscript

Best Practices uses a blind review system, thus all manuscripts must have a separate title page that can be removed when the manuscript is sent for review. As described above, please provide TWO title pages, one with title of manuscript and all authors' names, affiliations, and contact information; and a second title page in the article manuscript with NO author identification.

Authors. Only principal writers should be listed as authors. Persons listed as authors must have made substantial contributions to the article and must be able to take public responsibility for it. Other contributors may be named in the acknowledgments. For each author, list no more than two academic degrees or certifications and the primary current affiliation (including specific title and department, agency, or university affiliation).

Acknowledgments. Acknowledgment of individuals or groups is limited to those who contributed to the article's intellectual or technical content. List all financial support, including grants and support

from foundations and/or the pharmaceutical industry. For grants, include the grant number and full name of granting agency.

Abstract and keywords. The abstract is meant to be a brief, succinct summary of the manuscript, no longer than about 150 words. It is recommended that authors follow the format sections described for conceptual or research papers (given above). Following the abstract, list keywords that characterize your manuscript (e.g., geriatric depression; home care; screening); please provide two or three terms.

Manuscript. Whether your manuscript is a regular article (about twenty pages or 5,000 words) or a brief report (about four pages or 800 words), please structure the sections using the guidelines listed under conceptual or research.

Tables and figures. Include tables only when they present relevant numerical data more clearly than can be done in text; all tables should be referenced in text. Please limit tables to one or two per article. Figures can be used to illustrate a variety of relationships (e.g., logic models, flow charts, or program diagrams). These should be formatted in Microsoft Word (using SmartArt, drawing tools, or a text box), portrait orientation, no use of color, uncluttered, and clearly presented. Each table or figure should have its own electronic file, clearly labeled. Be sure to indicate in the text approximately where each table or figure should appear.

References. Please use care when preparing your article references. References cause the greatest loss of time and productivity when your article is being reviewed, copy edited, and typeset. Limit references to relevant published material cited in the text. Prior to submission of your article for review, please check to see that spelling of names, titles, years of publication, up-to-date URLs, and page numbers are correct and consistent. Please refer to previous issues of this journal for publishing style, and consult the *APA Publication Manual* for any questions on how to prepare your references.

Review Process and Editorial Decision

Manuscripts submitted for publication are sent for blind peer review to two or three editorial board members. Final decision for publication rests with the editor.

Timeline. The journal is published twice yearly (Spring and Fall). The peer review process takes approximately one month, after which time the editor will communicate the editorial decision to the author(s) along with a summary of information about the decision and, if appropriate, recommendations for revision of the manuscript for publication or resubmission for a second review. Once final manuscripts are accepted and revisions (if needed) are completed, a future publication and issue date will be provided to the author(s).

Revised manuscripts. Authors may be asked whether they wish to make suggested revisions, and if so, a time frame will be given for turnaround.

Welcome from the Editor in Chief: Passing the Torch

Daphne S. Cain

A few years ago, just before a milestone birthday, I decided to list the things I wanted to complete in my professional career before retirement. The first thing on that list was to serve as an editor for a journal. I immediately turned to colleagues and friends Kevin Corcoran and Vikki Vandiver, who were then the editors of *Best Practices in Mental Health*, and proposed serving as a guest editor for a special edition of *BPMH* in my research area, disaster mental health. That culminated in the fall 2019 edition of *BPMH* and a much broader conversation that eventually led to my professional move to the University of Alabama and taking on the editorship of the journal. Serving as editor in chief for *BPMH* over the past five years has been among the highlights of my academic career. It has fostered my creativity, expanded my network of academic colleagues, and provided me with both professional and personal joy. And now it is time to return to that list of things to complete in my professional career and begin a new adventure.

I would like to welcome the American Board of Clinical Social Workers (ABCSW) to *BPMH*, which is now the official journal for ABCSW. This edition of *BPMH* contains scholarship on the difficulties associated with measuring the concept and experiences of mothering; perceived mental health discrimination in health care settings by provider types; partners of military veterans and the human-animal bond; and a single-case design using Skype-mediated exposure therapy for a specific phobia. We also offer a review of the new textbook *The Comprehensive Guide to Interdisciplinary Veterinary Social Work*, edited by Sana Loue and Pamela Linden (2022).

Daphne S. Cain, PhD, LCSW, is professor, University of Alabama, Tuscaloosa, and editor in chief, *Best Practices in Mental Health*.

I would like to sincerely thank David C. Follmer, publisher; Siobhan Drummond, managing editor; Amy Traylor, book review editor; and Brent Jacocks, copy editor. It has been a pleasure working with you these past years, and I look forward to following the journal enthusiastically for years to come. And finally, congratulations and welcome to my colleague Goutham M. Menon, professor, Loyola University Chicago School of Social Work, who will serve as the next editor in chief of *Best Practices in Mental Health*.

Measuring Becoming a Mother: A Scoping Review of Existing Measures of Matrescence

December Maxwell, Sarah Leat, and Johanna Thomas

Abstract: *A myriad of scales measure the maternal role transition (matrescence) and its relationship to maternal mental health challenges. However, no synthesis exists. This scoping review aims to synthesize the concepts of matrescence measures as informed by the theory of becoming a mother. Following the guidelines for Preferred Reporting Items for Scoping Reviews and Meta-analyses Extension for Scoping Reviews (PRISMA-ScR), database searches included articles from January 1, 1982, through December 14, 2022. Twenty-three existing instruments were identified to measure matrescence. All the instruments included some constructs of becoming a mother as defined by the theory of becoming a mother. Many measures have been developed and never validated on additional populations after the initial development. These findings provide clinicians with a comprehensive evaluation of measurements of becoming a mother for use in subsequent studies. Implications include ensuring that measures used in clinical settings are validated and reliable, especially post-COVID-19, in order to heighten discernment when using these measures for screening with those who recently became mothers.*

Keywords: *maternal role attainment, matrescence, mothering beliefs, postpartum depression, scoping review*

Matrescence describes the transition into motherhood (Raphael, 1975), including beliefs surrounding maternal roles and motherhood. Motherhood beliefs are defined as “expectations of motherhood; expectations of the self as a mother;

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and role conflicts” (Warner et al., 1997). Beliefs about becoming a mother (BAM) can differ among cultures as motherhood expectations are socially constructed (Lim & Skinner, 2012; Razina, 2014). Some cultures value more patriarchally traditional gender roles and motherhood expectations, and beliefs may rely on those constructions (Huang et al., 2016; Lim & Skinner, 2012). Even within cultures, motherhood expectations may differ across geographical spheres or political spectra (Huang et al., 2016). Pressures to adhere to some form of culturally prescribed motherhood roles and beliefs appear universal, although more highly educated white women tend to have more anxiety about adherence (Henderson et al., 2016; Knudson-Martin & Silverstein, 2009). Despite cultural variations, the appearance of mothering competency and the ability to properly care for a child (Thomason et al., 2015) play a significant role in a mother’s self-worth and perceptions of efficacy and are constant across diverse cultural populations (Henderson et al., 2016).

Traditionally, matrescence is measured among women, including pregnant women, mothers who have given birth, and adoptive mothers who are transitioning into the defined role of a mother (Mercer, 1981; Warner et al., 1997). Existing matrescence measurements assess how a woman feels about the transition to the role of mother (Thomason et al., 2015; Warner et al., 1997). The self-perception of efficacy measures feelings as a mother, inherent worries of inadequacy (Cost et al., 2016), what it means to be a “good” or “bad” mother, and how much selflessness is required to be an effective or good mother (Warner et al., 1997).

Although there are multiple matrescence measurements, there is no scoping review of measurements and motherhood beliefs. Maladaptive motherhood beliefs pose risk factors for negative outcomes for the mother, including postpartum depression (PPD; Fonseca et al., 2018; Preis et al., 2018) and suicide (Doe et al., 2017). Children are also affected as there are risks to infant safety (Letourneau et al., 2012), mental health, educational outcomes (Surkan et al., 2008), and the potential to thrive (Edhborg et al., 2015).

Despite the numerous matrescence measurements, there is a question of whether culture, ethnicity and race, socioeconomic status (SES), political spectrum, and other environmental factors are clearly defined. Existing reviews of matrescence measures were used to inform the development of new measures and encompassed the scale development literature of only a few measurements (e.g., Leach et al., 2018), revealing a noteworthy gap in cultural relevance with certain populations. Using the most reliable and valid scale for a population can produce knowledge that informs interventions to prevent negative outcomes such as PPD, suicide, attachment issues, and familial strain.

The purpose of this scoping review is to better understand the number of measurements of matrescence, how matrescence has been measured in the extant literature, and what aspects of BAM measurements are prioritized. We add to the literature of matrescence by synthesizing existing measurements and by reporting the reliability and validity of existing measures, the factors

and concepts used by each measurement, and the populations with which each measurement was used.

Measuring Becoming a Mother: Theoretical Support

There are many constructs relating to perceptions of BAM. For example, motherhood beliefs are strongly tied to society's expectations of a "good" mother (Keefe et al., 2018). Cultural norms of society impose expectations that are internalized by mothers and reflected in their beliefs about their capacities (Tardy, 2000). Motherhood beliefs are also perceptions of attaining the new role of mother (Mercer, 1981; Rubin, 1967). Classical role acquisition comprises multiple stages (Thorton & Nardi, 1975):

1. Anticipatory: social and psychological adjustment
2. Formal: recognition and beginning to adhere to expectations
3. Informal: incorporating a unique approach to the role outside of societally expected norms
4. Impersonal: taking unique approaches and imposing them onto societal norms

In maternal role attainment (MRA) theory, Rubin (1967) explained the role attainment stages through which a mother progresses from pregnancy to motherhood. These stages involve the development of maternal identity consisting of a mother's self-concept, self-esteem, childbearing attitudes, flexibility as a mother, and perceptions of pregnancy and birthing (Mercer, 1981; Rubin, 1967). The stage at which a mother assumes the maternal identity is defined by the existence or lack of a "sense of harmony, confidence, satisfaction in maternal role, and attachment to the infant" (Mercer, 2004, p. 227).

Mercer proposed shifting the language from MRA to becoming a mother (BAM) because of BAM's mother-centered approach. Specifically, BAM involves a mother's perspective on growth and continuous change, whereas MRA presents a finite experience that is achieved as the end of the stage of maternal role transition. Further, MRA limits the experience of BAM to motherhood, ignoring other aspects of a woman's persona that interplay with motherhood, and does not "include the continued expansion of the self as a mother" (Mercer, 2004, p. 231). Mercer also described stages more specific to BAM, including the commitment and preparation stage (pregnancy); the acquaintance and learning stage, which allows the mother to engage in physical restoration; the movement toward the new normal; and the transition to mother as self.

Matrescence (Raphael, 1975) somewhat aligns with Mercer's definition of BAM, including the physiological and sociological changes aligned with the maternal role identity shift. However, Raphael broadened the concept to include the act of birth as a rite of passage, a cultural event, and considered the historical position of the mother. Thomas (2001) expanded matrescence to include the postpartum period (one year post birth) of maternal adjustment

and added the maternal role transition that can happen for adoptive mothers and stepmothers. Furthermore, Kurz and colleagues (2022) explored the deeper functions of maternal role transition to include parturescence, which emphasizes this transformation as a significant life experience and accounts for generational motherhood, cultural expectations, and the transformations that happen during birth that allude to positive or negative maternal well-being.

Using Mercer's theoretical framework (1981) and BAM stages (2004), matrescence (Raphael, 1975), and parturescence (Kurz et al., 2022), we operationalized 10 matrescence constructs:

1. Beliefs about maternal competency
2. Commitment to motherhood
3. Maternal self-confidence
4. Flexibility in the maternal role
5. Security in maternal identity
6. Attitudes toward child rearing
7. Birthing experience (including control over birthing)
8. Cultural birthing expectations
9. Maternal transformation
10. Maternal role strain

As part of the transition to mother as self, Rubin (1967) discussed the grief associated with motherhood as the mother acquires new identities. Thus, measurements of the grief of the loss of identity related to the motherhood role are also included.

History of Matrescence Measurement Development

Before 1982, maternal personality measurements existed but did not evaluate the mother's emotional state related to her feelings about the specific context of pregnancy and emerging motherhood (Kumar et al., 1984). Similarly, prior instruments used to evaluate maternal attitudes were administered by observers as opposed to self-report (e.g., Davids & Holden, 1970) or measured young people's attitudes toward parenting before parenthood (Schaefer & Bell, 1957). Other instruments such as the Maternal Attitudes Towards Pregnancy scale (Blau et al., 1964) are conceptually similar to BAM but measure the mother's worries about being pregnant and not her assessment of BAM.

Existing Measures

The first measure that emerged related to matrescence or BAM theory was the Maternal Self-Report Inventory (MSRI), developed to measure a mother's self-esteem toward mothering (Shea, 1982). The MSRI measures how the mother feels about her capabilities as a mother and whether she feels her relationship

with the baby is appropriate compared to social expectations. The MSRI also measures motherhood adjustment, introducing maternal adjustment—how much the mother assumes the new role as a mother and the incongruence between her actions and societal expectations—related to beliefs about motherhood (Shea, 1982). Following the MSRI, 10 other matrescence and BAM measurements were known to us at the time of writing. These measurements discuss concepts similar to those of BAM and matrescence, such as self-perceived maternal competence, feelings of role transition, expectations of motherhood, maternal anxieties regarding role transition, and perceptions of self as a mother (Kumar et al., 1984; Ruble et al., 1990; Thomason et al., 2015).

Methods

The purpose of this scoping review was twofold: (1) to answer the research question “what are the existing measures of matrescence?” and (2) to provide a clear understanding of the variables that matrescence measures are elucidating. The focus was on mothers experiencing a first-time (primiparous) or consecutive (multiparous) birth and newly adoptive mothers. Using findings from a prior review (Maxwell & Leat, 2022) we synthesized seven BAM constructs to assess their range: maternal confidence, maternal self-esteem, motherhood commitment, maternal role flexibility, maternal identity and grief of identity loss, attitudes toward child rearing, and maternal role strain. We also included three more constructs from matrescence and parturescence: birthing experience (including control over birthing), cultural birthing expectations, and maternal transformation.

Search Protocol

We followed the PRISMA-ScR guidelines (Tricco et al., 2018). Search terms included *motherhood*, *maternal*, and *mother**, as well as terms that encompass beliefs: *beliefs*, *attitudes*, *perceptions*, and *views*. Terms to encompass matrescence and parturescence were *birthing experience*, *cultural birth/birthing*, *birth transformation*, *matrescence*, and *maternal transformation*. These terms were used within extant literature about motherhood beliefs and BAM. Qualifiers for the search terms included the whole text, as the title or abstract did not always mention the scale or the measurement used (see table 1).

Databases used for the search were Social Work Abstracts, Alt HealthWatch, CINAHL Complete, Family Studies Abstracts, Health Source: Nursing/Academic Edition, MEDLINE, PsycARTICLES, Psychology and Behavioral Sciences Collection, PsycINFO, Health and Medical Collection, Nursing and Allied Health Database, Psychology Database, Public Health Database, Social Science Database, Sociology Database, Sociological Databases, Social Services Databases, and Race Relations Abstracts. After a search for terms including motherhood beliefs and maternal attitudes and measurements, as well as specific scales (e.g., maternal attitudes questionnaire), a Boolean search strategy was

Table 1 Search results for known measures

Search term	Results
Maternal Attitudes Questionnaire	140
Maternal Self-Report Inventory	49
Being a Mother scale	26
Childbearing Attitudes Questionnaire	22
Maternal Attitudes and Beliefs scale	13
Attitudes Towards Motherhood scale	7
Maternal Self-Report Inventory Short Form	4
Pregnancy Related Beliefs Questionnaire	2
Rigidity of Maternal Beliefs scale	2

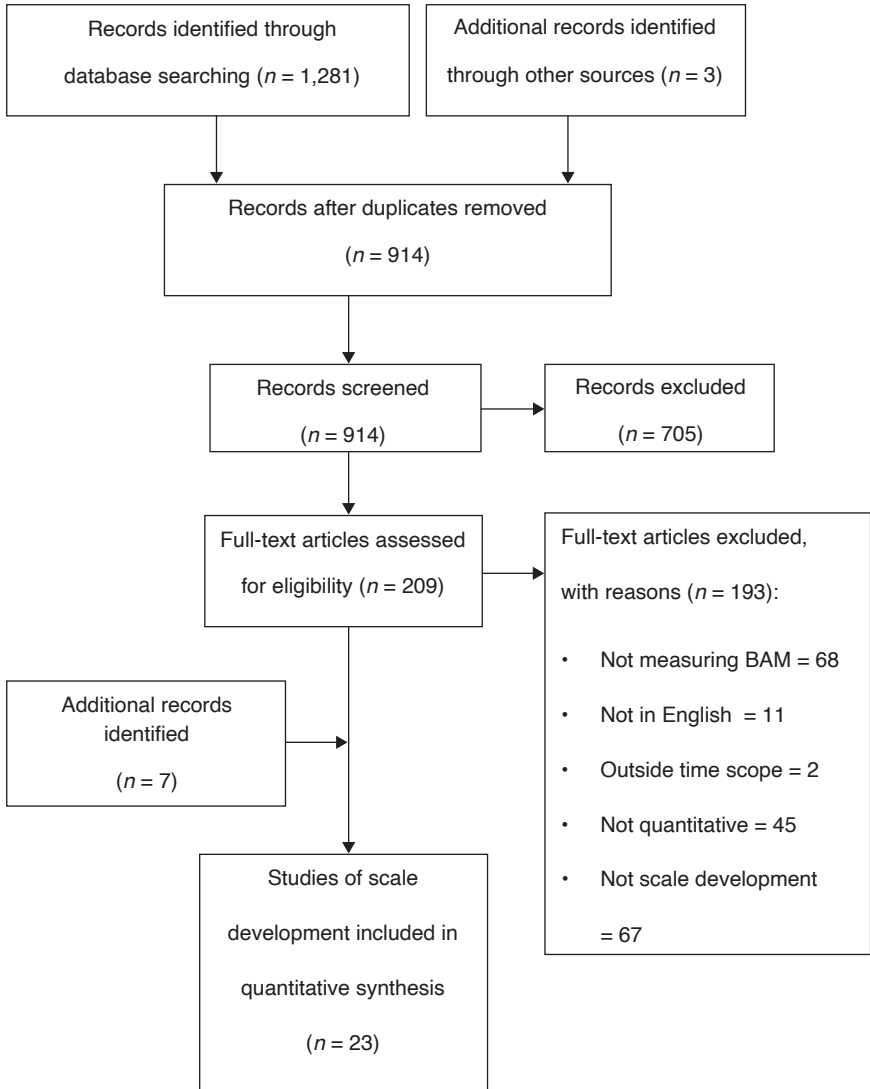
developed in consultation with a social sciences research librarian. Seventeen revised searches were conducted, with temporal limiters in place from 1982 (when the first contemporary assessment of BAM from the mother's perspective was developed) until December 14, 2022. Search terms for the first search included *motherhood* AND *beliefs*. The search, which was limited to journal articles, dissertations, and academic journals, yielded 703 results. A second search included the terms *matrescence* and *parturescence* in conjunction with measurement.

We also conducted separate searches for each of the motherhood beliefs measurements with which we were already familiar. Additionally, we searched the Maternal Health Task Force website (<https://www.mhtf.org>) using the research and news limiter but found no relevant results. Given that negative BAM could contribute to PPD, we searched the website of Postpartum Support International, an organization dedicated to PPD awareness and research, but again found no results. Searches on ResearchGate for motherhood beliefs within the Publications tab yielded 10 articles, one of which adhered to the search criteria. The original MSRI (Birkeland dissertation, 2004) was located on Google Scholar. The original Maternal Attitudes and Beliefs scale (Madar, 2013) was found on ResearchGate. Before removal of duplicates, the search yielded 1,281 articles (see fig. 1).

Exclusion and Inclusion Criteria

This review used the PICO (patient/population, intervention, comparison, and outcomes guideline (Littell et al., 2008) to develop inclusion and exclusion criteria; however, because we reviewed the measurements, we adapted the guideline to include relevant criteria (e.g., no comparison). This review encompassed all quantitative literature that developed measurements of BAM used with populations of both primiparous and multiparous female-identifying mothers during the perinatal period or shortly after adoption because these populations experience PPD at comparable levels (Mott et al., 2011). To evaluate the universality

Figure 1 BAM measurements extraction



of BAM measurements, we included studies in all geographic locations. Articles translated into English were included; otherwise, other-language studies were excluded.

All literature investigating the conception and validation of a quantitative measure of BAM, such as peer-reviewed journal articles, dissertations, theses, conference presentations, government reports, and unpublished studies, was included. Studies included had to report on the measure's face and content validity.

Exclusion criteria included measurements about general maternal attitudes toward other things (e.g., autism) or assessment of a mother's specific personality traits (e.g., anger outbursts) as these do not measure the same construct as beliefs about BAM. Additionally, measurements that assess others' perceptions of motherhood or general parenting attitudes were excluded as these do not reflect the role of motherhood and experience solely by the mother in the perinatal (or recent adoption) period. Studies of measurements of the desirability of motherhood (how important it is to become a mother) were not included as these do not measure the role and experience of motherhood. Finally, studies of PPD symptoms to predict motherhood beliefs were not included as these are counter to the review's intent of evaluating motherhood belief scales used during the perinatal transition to motherhood.

Data Extraction

The identified items ($N = 1,281$) were uploaded to the systematic review software RAYYAN. After removal of duplicates, 914 articles remained (see fig. 1). Titles and abstracts were independently screened by two authors using the inclusion and exclusion criteria. A consensus between these two reviewers was required to include articles in the full-text review. After screening of titles and abstracts, 705 articles remained; these articles were screened in their entirety for inclusion and exclusion criteria. Of these articles, 68 did not measure maternal role attainment or the transition into motherhood, 11 could not be translated into English, 2 measured mothering beliefs for more than one year postpartum, 45 were not quantitative, and 67 only used BAM measures rather than developing them. Through the full-text screening, seven additional BAM measures were identified and included. A total of 23 BAM measurement development articles were included in this review.

BAM and Measurement Factors

To determine which facets of BAM theory were included in each measurement, two researchers independently assessed each measurement article and scored each measurement based on how many of the seven inclusion constructs (table 2) it contained. Researchers compared their tables and reported the facets once a consensus was reached. Constructs not included in the inclusion criteria were added to the table to investigate additional aspects the measurements attempted to capture.

Table 2 Included measurements

Measurement	Sample size	Demographics race/ethnicity	Study design	Items	Population/ location/timing	Factor themes/ dimensions/subscales	Validity measures used	Internal consistency	BAM constructs
Maternal Self-Report Inventory (MSRI; Shea, 1982) and Short Form (Shea & Tronick, 1988)	30	83.3% white, 10% Black, 6.7% Puerto Rican	Cross-sectional	26	Mothers with newborns recently discharged from hospital following birth; Massachusetts	<ol style="list-style-type: none"> 1. Caretaking ability 2. General ability as a mother 3. Acceptance of baby 4. Expected relationship with infant 5. Feelings during pregnancy, labor, and delivery 	Face, concurrent, internal	Test-retest Pearson product moment reliability = .85 MSRI-S Cronbach's α = .846 Caretaking Ability scale = .83 General ability as mother = .88 Acceptance of baby = .66 Feelings during labor, pregnancy, and delivery = .89	4
Maternal Adjustment and Maternal Attitudes (MAMA; Kumar et al., 1984)	99	No race/ethnicity demographics reported	Longitudinal	60	Second trimester of pregnancy; London, UK	<ol style="list-style-type: none"> 1. Body image 2. Somatic symptoms 3. Marital relationship 4. Attitudes about sex 5. Attitudes about pregnancy and the baby 	Criterion	Yes; test-retest and split-half all $p < .001$	5

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Table 2 Included measurements (Continued)

Measurement	Sample size	Demographics race/ethnicity	Study design	Items	Population/location/timing	Factor themes/dimensions/subscales	Validity measures used	Internal consistency	BAM constructs
Semantic Differential scale—Myself as Mother scale (SD-Self; developed by Walker, Walker et al., 1986)	122	Majority white	Cross-sectional	22	1 day–6 weeks postpartum; Texas	Actual factors not reported Measures worth/importance of self as a mother 1. Strong/weak 2. Kind/cruel 3. Good/bad 4. Dangerous/safe 5. Mature/immature	Face, concurrent, construct	Yes; Cronbach's $\alpha = .81-.85$	5
Childbearing Attitudes Questionnaire (Ruble et al., 1990)	667	98% Caucasian	Cross-sectional	76	Six groups of primiparous women (Seattle, Toronto, and New York) who were married and cohabitating with a husband: (1) planning to conceive within 2 years, (2) in their first trimester,	1. Maternal worries 2. Maternal self-confidence 3. Relationship with husband 4. Relationship with mother 5. Body image 6. Identification with pregnancy 7. Feelings about children	Construct, concurrent	Yes; GFI = .96 postpartum = .94	6

Experience of Motherhood Questionnaire (Astbury, 1994)	90	No race/ethnicity demographics reported	Longitudinal	20	Population-based postal survey in Australia; 8–9 months postpartum	(3) in their second trimester, (4) in their third trimester, (5) in their first month postpartum, (6) in their third month postpartum	8. Negative self-image 9. Attitude toward breastfeeding 10. Pain Tolerance 11. Interest in sex 12. Denial 13. Feelings of dependency 14. Social boredom 15. Information seeking	Construct, concurrent Yes; Cronbach's $\alpha = .79$	6															
						Maternal Attitudes Questionnaire (Warner et al., 1997)	483			No race/ethnicity demographics reported	Cross-sectional convenience sample	14	Maternity visits in Manchester, UK; 6–8 weeks postpartum	1. Maternal anxiety/concern 2. Coping with baby 3. Personal autonomy 4. Coping/satisfaction with life 5. Maternal overload 6. Extrinsic support	Content, concurrent, predictive Yes; Cronbach's $\alpha = .84$	7								
														Prenatal Maternal Expressions scale (PMES; Coleman et al., 1999)			31	Predominantly white, homogenous sample	Cross-sectional convenience sample	46	First time mothers participating in a Lamaze class in a southeastern city in the US; third trimester of pregnancy	1. Expectations of motherhood 2. Expectations of self as a mother 3. Role conflicts 4. Attitudes toward baby	Content, concurrent, construct Yes; Cronbach's $\alpha = .80$	5

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Table 2 Included measurements (Continued)

Measurement	Sample size	Demographics race/ethnicity	Study design	Items	Population/location/timing	Factor themes/dimensions/subscales	Validity measures used	Internal consistency	BAM constructs
Pregnancy-Related Beliefs Questionnaire (PRBQ; Moorhead et al., 2003)	42	No race/ethnicity demographics reported	Cross-sectional convenience sample	54	Antenatal clinic in an inner-city general practice, UK; 6–40 weeks gestation	<ol style="list-style-type: none"> 1. Maternal role and expectations 2. Expectations of natural ability to cope 3. Changing body image 4. Maternal self-esteem 5. Expectations of motherhood fulfillment 6. Relationship insecurity 	Construct, criterion	Yes; Cronbach's $\alpha = .85$	6
Maternal Role Identity scale (Birkeland, 2004)	149	32% African American, 46% Caucasian, 19% Latina, 1% Asian 1%, other (biracial and Native American)	Cross-sectional	20	Teen parent programs in Tampa Bay, FL, and Twin Cities, MN; 3–12 months postpartum	<p>Actual factors not reported</p> <ol style="list-style-type: none"> 1. Maternal role satisfaction 2. Commitment to motherhood 3. Being a good mom 4. Changed life to be mom 	Construct, face, concurrent	Yes; Cronbach's $\alpha = .82$	7

Perceived Maternal Parenting Self-efficacy scale (PMP S-E; Barnes & Adamson-Macedo, 2007)	165	86% white	Cross-sectional	20	Intensive care neonatal units in UK; within 28 days of birth	<ol style="list-style-type: none"> Caretaking procedures Evoking behaviors Reading behaviors or signaling Situational beliefs (mother's beliefs about her ability to judge her overall interaction with her baby) 	Divergent	Yes; Cronbach's $\alpha = .91$	4
Perceptions of costs and growth in the Transition to Motherhood scales (Taubman Ben-Ari et al., 2009)	102	Race/ethnicity not reported	Prospective	25 (perceived costs), 19 (growth)	Birth preparation courses in hospital in Israel; during pregnancy and after birth.	<p>Actual factors not reported</p> <p>Perceived costs:</p> <ol style="list-style-type: none"> Displeasure with physical appearance Conflicts with people around you Feelings of depression <p>Growth:</p> <ol style="list-style-type: none"> Meaning in life Self-confidence Amount of warmth and love mothers give others Maternal satisfaction 	Concurrent, predictive, construct	Yes; Cronbach's $\alpha = .86-.91$ (costs), .89-.91 (growth)	4

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Table 2 Included measurements (Continued)

Measurement	Sample size	Demographics race/ethnicity	Study design	Items	Population/location/timing	Factor themes/dimensions/subscales	Validity measures used	Internal consistency	BAM constructs
Placental Paradigm Questionnaire (Raphael-Leff, 1986; validated in Roncolato & McMahon, 2011)	230	Race/ethnicity not reported	Cross-sectional convenience sample	28	Online advertisements in baby forums, flyer drops at local day cares, word-of-mouth, and Facebook networks with women in Australia; 12–41 weeks gestational age	1. Pregnant women's experience of self 2. Maternal representations about imagined baby 3. Feelings of internal experience of pregnancy	Predictive, concurrent	Yes; Cronbach's $\alpha = .66-.73$	3
Antenatal Orientation Measure (AMOM; Sharp & Bramwell, 2004)	205	88.3% European, 9.3% Asian/Indian, 2% Afro-Caribbean, 1% Oriental	Cross-sectional	27	Antenatal care at hospital in Leicester, UK; 6–8 months postpartum	1. Expectations of baby 2. Self as mother 3. Expectation of childbirth and feeding practices	Predictive, concurrent	Not reported	6
Being a Mother scale (BaM-13; Matthey, 2011)	630	64.9% Australian/English, 16.35% European, 6.25% SE Asian, 5.4% Middle Eastern, 5.4% Indian, 1.8% Central/ South American	Cross-sectional convenience sample	13	Early childhood clinics, day care facilities, facility for infant sleep problems in Sydney, Australia; Mean age of infant 7.7. months	1. Social isolation 2. Regret 3. Self-confidence 4. Relationship with child 5. Satisfaction with support 6. Coping 7. Guilt	Concurrent, discriminant	Yes; Cronbach's $\alpha = .798$	6

Barkin Scale of Maternal Functioning (Barkin et al., 2010)	109	80.6% white, 16.2% Black, 3.2% Asian	Cross-sectional	20	Day care facilities, hospitals, elementary schools in large metropolitan area of Western Pennsylvania; Given birth within the last year	1. Psychological well-being 2. Social support 3. Mother-child interaction 4. Self-care 5. Infant care 6. Management 7. Adjustment	Construct, content, concurrent	Yes; Cronbach's $\alpha = .87$	6
Antenatal Maternal Orientation Measure Short Form (AMOM-R; Roncolato & McMahon, 2011)	230	Race/ethnicity not reported	Cross-sectional convenience sample	18	Online advertisements in baby forums, flyer drops at local day cares, word-of-mouth, and Facebook networks with women in Australia; 12–41 weeks gestational age	1. Initial expectations of the baby 2. Mother's expectations of herself 3. Plans to feed the baby	Construct, content	Yes; Cronbach's $\alpha = .71-.72$	5
Maternal Attitudes and Beliefs scale (MAABS; Madar, 2013)	68	Race/ethnicity not reported	Cross-sectional	55	Pregnant women in third trimester or who had recently given birth recruited from a private practice and state maternity ward; Romania	1. Irrationality 2. Rationality 3. Demandingness 4. Self-doubting 5. Frustration tolerance 6. Awfulizing	Content, construct	Yes; Cronbach's α prepartum = .87 and postpartum = .96	5

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Table 2 Included measurements (Continued)

Measurement	Sample size	Demographics race/ethnicity	Study design	Items	Population/location/timing	Factor themes/dimensions/subscales	Validity measures used	Internal consistency	BAM constructs
Maternal Expectations scale (MES; Henshaw et al., 2014)	288	11.8% Black, 83.3% white, 1.7% Hispanic, 5.6% Asian, 0.7% other	Prospective with convenience sampling	14	Postpartum unit of a nonprofit in Ohio; 2 days postpartum and 6 weeks postpartum	1. Natural fulfillment 2. Sacrifice 3. Infant reflects mothering	Concurrent, construct	Yes; Cronbach's $\alpha = .69$ (MES Natural Fulfillment scale), .72 (MES Self-Sacrifice scale), .74 (MES Infant Reflects Mothering scale), .84 (BAM-13)	4
Attitudes Towards Mothering scale (AToM; Sockol et al., 2014)	136	94% Caucasian, 5% Latina, 4% Black/African American, 1% Asian/Pacific Islander	Cross-sectional convenience sample	12	Pregnant women between 13 and 20 weeks gestational age and women who had given birth in the last 6 months; recruited online via social media	1. Beliefs related to other's judgements 2. Beliefs related to maternal responsibility 3. Beliefs related to maternal role idealization	Content, concurrent, predictive	Yes; Cronbach's $\alpha = .74-.82$	6
Extended Objective Measure of Ego Identity Status II (EOMEIS-2) and Loss of Self (LOS) validated in Karaca, 2013	94	68.1% Caucasian, 9.6% Asian/Pacific Islander, 7.4% Black/African American, 5.3% Hispanic, 1% Native American/American Indian, 8.5% other/multiracial	Cross-sectional convenience sample	EOMEIS-2 = 64 items LOS = 5	Online survey recruited from parenting support centers and parenting blogs; Oakland and Berkeley, CA; 2-12 weeks postpartum	EOMEIS-2 interpersonal identity statuses 1. Diffusion 2. Foreclosure 3. Moratorium 4. Achievement LOS 1. Separation from or loss of identity	EOMEIS-2: discriminant, convergent, predictive, construct LOS: Confirmatory factor analysis, convergent, concurrent	Not reported for use in this study	5

Rigidity of Maternal Beliefs scale (RMBS; Thomason et al., 2015)	134	84.3% white, 5% African American, 7.5% Asian, 4.4% other	Cross-sectional convenience sample	26	Perinatal health registry associated with university in Midwest US; pregnant women	<ol style="list-style-type: none"> Perceptions of societal expectations of being a mother Role identity Maternal confidence Maternal dichotomy 	Content, face, concurrent, predictive	Yes; Cronbach's $\alpha = .85$	6
Pregnancy-Related Beliefs Questionnaire Short Form (PRBQ-8; Leach et al., 2018)	344	90.1% Caucasian, 3.2% Asian, 3.2% Hispanic, 1.5% Black, 1.5% mixed, 0.6% other	Cross-sectional convenience sample	8	Pregnant women or women who had given birth in the last 6 months recruited either online or through antenatal clinic waiting room; Bristol, UK	<ol style="list-style-type: none"> Maladaptive maternal beliefs Maternal role 	Convergent, concurrent, predictive	Test-retest reliability = $r^2 = .70$, $p < .001$	5
Birth Memories and Recall Questionnaire (BirthMARQ; Shuman et al., 2022)	670	88.8% white, 4.6% Latinx, 3.9% Asian, 0.9% Black, 0.6% Pacific Islander, 0.3% Native American, 0.9% other	Convenience sample	21	National social media study, US	<ol style="list-style-type: none"> Emotional memory Centrality of memory Coherence Reliving Sensory memory Recall 	Convergent, concurrent, face	Yes; Cronbach's $\alpha = .75-.91$	4

Results

What Was Being Measured?

This review found 23 BAM measures (see table 3) that consistently assessed multiple facets of BAM. With guidance from both Rubin (1967) and Mercer (1981), a set of constructs was selected based on relevance to BAM and used to indicate the extent to which each measurement captured the facets of BAM. Although diverse terminology was used to identify the facets of BAM within the conception articles, the articles used similar language or cited Mercer (1981) or Rubin (1967). All measurements included some constructs of BAM, with a range of 3 to 7 (table 2). The mean number of BAM constructs included in the scales was 5.27 ($SD = 1.03$). Maternal confidence was present in the factors in 19 of 23 measurements, maternal self-esteem in 18, commitment to motherhood in 17, maternal rigidity in 14, maternal identity in 19, and maternal role strain in 16. Attitude toward childbearing was found 19 times. Other factors measured included interest in sex, caretaking of the baby, body image, social/extrinsic support, and relationship security. Of the 23 measurements, only 2 encapsulated all seven facets of BAM: the Maternal Attitudes Questionnaire (Warner et al., 1997) and the MRIS (Birkeland, 2004).

Although there are ample valid and reliable measurements, all studies that reported demographics indicated a majority of white participants ($n = 16$); eight articles did not report race and ethnicity. Similarly, the conception articles contained minimal reporting on SES. Therefore, the use of BAM measurements across SES is unknown in this review. Also, the researchers developing BAM scales recruited primarily in non-developing countries with more economic opportunities, limiting studies to the United Kingdom, United States, Australia, Israel, and Romania, which is approaching first world status (Melenciuc, 2018). The sample sizes used to develop the scales ranged from 30 to 677. Total scale items ranged from 5 to 76.

Discussion

Although risks and protective factors relating to PPD have been identified, researchers continue to investigate the specific etiology (Ko et al., 2017). One risk factor for developing PPD that has gained recent research traction is the incongruence of mothers' beliefs about their own identities as mothers or their beliefs about BAM. Beliefs about BAM strongly influence maternal mental health and often rely on cultural mothering expectations (Preis et al., 2018). Negative motherhood beliefs that impose too much pressure on the mother or are not rational in basis are linked to the development and increased severity of PPD symptoms (Fonseca & Canavarro, 2018; Thompson & Bendell, 2014).

A broad array of BAM measurements met inclusion criteria for this review, indicating a long-standing interest in the relationship between maternal mental health and the transitory time of BAM. The measurements found within this review were reported as being valid and reliable with the sample populations.

Table 3 BAM constructs

Measurement	Maternal confidence	Maternal self-esteem	Commitment to motherhood	Flexibility in maternal role	Maternal identity and/or grief of identity loss	Attitudes toward child rearing	Maternal role strain	Other constructs
1. MSRI (Shea, 1982) and MSRI Short Form (Shea & Tronick, 1988)	X	X	X			X		Feelings during pregnancy, labor, and delivery
2. MAMA (Kumar et al., 1984)	X		X	X		X	X	1. Attitudes to sex 2. Body image 3. Somatic symptoms
3. SD-Self (developed by Walker, validated in Walker et al., 1986)	X	X	X		X	X		
4. CAQ (Ruble et al., 1990)	X	X	X		X	X	X	1. Interest in sex 2. Feelings of dependency 3. Information seeking 4. Pain tolerance 5. Body image Extrinsic support
5. EMQ (Astbury, 1994)	X	X	X		X	X	X	
6. MAQ (Warner et al., 1997)	X	X	X	X	X	X	X	

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Table 3 BAM constructs (Continued)

Measurement	Maternal confidence	Maternal self-esteem	Commitment to motherhood	Flexibility in maternal role	Maternal identity and/or grief of identity loss	Attitudes toward child rearing	Maternal role strain	Other constructs
7. PMES (Coleman et al., 1999)	X		X		X	X	X	Friends
8. PRBQ (Moorhead et al., 2003)	X	X	X		X	X	X	1. Changing body image 2. Relationship security
9. MRIS (Birkeland, 2004)	X	X	X	X	X	X	X	Evoking behaviors
10. PMP S-E (Barnes & Adamson-Macedo, 2007)	X	X	X			X		
11. Perceptions of costs and growth in the Transition to Motherhood scales (Taubman Ben-Ari et al., 2009)	X	X			X		X	1. Displeasure with physical appearance 2. Feelings of depression
12. PPQ (Raphael-Leff, 1986) (validated in Roncolato & McMahon, 2011)			X		X	X		Feelings of internal experience of pregnancy
13. AMOM (Sharp & Bramwell, 2004)	X	X	X		X	X	X	Expectations of childbirth and feeding practices

14. BaM-13 (Matthey, 2010)	X	X	X	X	X	X	X	X	X	1. Social isolation 2. Satisfaction with support
15. Barkin Scale of Maternal Functioning (Barkin et al., 2010)	X	X	X	X	X	X	X	X	X	Social support
16. AMOM-R (Roncolato & McMahon, 2012)	X	X	X	X	X	X	X	X	X	Plans to feed baby
17. MABS (Madar, 2013)		X	X	X	X	X	X	X	X	
18. MES (Henshaw et al., 2014)		X	X	X	X	X	X	X	X	
19. AToM (Sokol et al., 2014)	X	X	X	X	X	X	X	X	X	
20. EOMEIS-2 and LOS validated in Karaca, 2013	X	X	X	X	X	X	X	X	X	
21. Rigidity of Maternal Beliefs scale (RMBS; Thomason et al., 2015)	X	X	X	X	X	X	X	X	X	
22. PRBQ-8 (Leach et al., 2018)	X	X	X	X	X	X	X	X	X	1. Recalling birth 2. Worry about COVID-19
23. BirthMARQ (Shuman et al., 2022)	X	X	X	X	X	X	X	X	X	
Total Frequency	20	19	18	8	20	19	17	19	17	

We found many measures encompassing similar concepts, thus calling into question the rationale behind developing new measurements instead of continuing to test existing measures across diverse samples. Because there are numerous valid and reliable BAM measurements, future research should expand upon existing measurements or synthesize factors from within them. An important starting point may be the two measures that included all seven BAM constructs: the Maternal Attitudes Questionnaire (Warner et al., 1997) and the MRIS (Birkeland, 2004). Additionally, the least common construct within the measurements was flexibility in the maternal role. However, some of the studies may have measured maternal role flexibility with additional scales that were not included in the BAM measurement or that were captured within the construct of maternal role strain.

Limitations

Despite every effort to ensure that this review is comprehensive and complete, there are some key limitations. First, the operationalization of BAM measurements was based on work by Rubin (1967) and Mercer (1981) regarding maternal role attainment and BAM theory. As a result, determining whether a measure had factors that fell within the inclusion criteria relied on researcher familiarity with the literature and BAM theory. Also, some conceptions of these measures did not rely on theoretical attributes from Rubin and Mercer and may not have been attempting to measure all aspects of BAM.

Additionally, some measures may have been adapted and validated for other cultures and languages, but translation of those articles were unobtainable. Thus, it is possible that testing on white women may not be as frequent; studies that have tested BAM measures on other populations, if they exist, should be included in future research. Although the facets of BAM are not as tangible as biomarkers such as estrogen levels and thyroid functions (Albacar et al., 2010; Mehta et al., 2014), these facets represent the latent constructs that women experience during the maternal transition and their relationship to the development of PPD.

Implications for Best Practices

Although this review only encapsulates the development of BAM measurements without addressing the frequency of use or populations with which they have been normed, the development of such scales among primarily white populations raises concerns regarding BAM's measurement generalizability. Using such scales in a clinical setting with more diverse populations may yield unreliable results. Based on the development articles, it is argued that BAM measurements are valid and reliable mainly for white populations. Despite having the highest rates of PPD in the United States (Baker et al., 2005; Wei et al., 2008), American Indian/Native American mothers are missing from BAM scale development. Due to the relationship between BAM and PPD, validation

of BAM measurements that address this population would expand maternal mental health knowledge and better inform clinical practice. Similarly lacking are scales normed with Latinas in the United States, for whom the rate of PPD is estimated as three to four times greater than that of the general population (Shellman et al., 2014). Furthermore, with the link between PPD and maternal mortality, whose rates are soaring among African American/Black mothers in the United States, BAM measurements that are valid and reliable for this population are critical.

The COVID-19 pandemic created unique experiences across all health care sectors, including perinatal care. With sudden visitation limits, revisions to perinatal care appointments (e.g., from in-person to virtual format with a reduced number of appointment slots), and changes in birthing procedures, there is no doubt that those who were pregnant during the pandemic had differing experiences from those who gave birth earlier. Of note, perinatal mental health challenges for pregnant women were at an all-time high (Caparros-Gonzalez & Alderdice, 2020; Demissie & Bitew, 2021; Durankus, & Aksu, 2022; Yan et al., 2020) with acute stress levels much higher than those of nonpregnant counterparts (Iyengar et al., 2021). Other studies (Praetorius et al., 2023) indicated that there was a disruption to the traditional events surrounding the rite of passage into motherhood due to the COVID-19 pandemic. In view of this heightened risk for BAM disruption, it is crucial that practitioners are equipped with recent valid measurements for BAM.

There is also a need for a lengthy and iterative process using multiple studies and applications with diverse populations for measurement validation (DeVellis, 2017). Future use of these BAM measurements will provide further validation and increase the ability to predict postpartum mental health issues. American Indian/Native American, Latina, and African American/Black mothers (Baker et al., 2005; Ehrlich et al., 2010) and those with lower SES experience PPD at a higher rate (Savitz et al., 2011). Because the main use of BAM measurements in the existing literature is to investigate their relationship to PPD, these measurements must be validated with diverse populations. DeVellis (2017) described scale measurement as a quantitative metaphor for latent constructs or a numerical representation of people's experiences. If BAM measurements have been validated only on white women, they are not inclusive of the experience of BAM for all mothers. Cultures such as American Indian/Native American that are more collective may have more communally related perceptions of BAM, and their transition to motherhood may rely on cultural expectations and connectedness (Clarke, 2010; Maxwell et al., 2022). Clinicians working with these populations may be misguided if they rely on BAM measurements that are not encapsulating the diverse experiences of maternal role transition.

Recruitment for validation studies needs to be more diverse across race, ethnicity, and SES. Recruitment in communities engaged in programs targeting diverse populations such as Temporary Assistance for Needy Families (TANF) or Special Supplemental Nutrition Program for Women, Infants, and Children (WIC),

agencies for service-enlisted mothers, or obstetrician-gynecologist services primarily serving Medicaid patients (or similar programs in other countries) may provide more diversity in scale development. Service-enlisted mothers have an increased risk of having posttraumatic stress disorder and less social support, which may impact their perceptions of BAM (Lutz, 2016). Women who experience intimate partner violence are also at an increased risk of PPD and may consider maternal role transition to be a transitional time prompting significant life changes (Maxwell et al., 2019); this enmeshment of intimate partner violence with maternal roles may prompt different perceptions of BAM.

Furthermore, recruitment in existing studies accessed mainly service-engaged mothers in places such as hospitals, online mothering blog forums, social media, and baby stores targeting middle- to upper-class women. Although this type of recruitment is effective at gathering numbers needed for scale development, it fails to include populations that may not have access to prenatal health care, such as undocumented immigrants and the uninsured. Recent immigrant mothers may be more socially isolated due to migration issues while also having unique cultural expectations that may shape their perceptions of maternal role transition (Fung & Dennis, 2010; Ganann et al., 2020). There is also a subset of mothers who actively avoid formal prenatal care due to racial discrimination, sexual assault histories, rural lack of proximity to care, and religious reasons (Holten & Miranda, 2016). Consequently, clinicians engaging with mothers who belong to these groups should be hesitant to rely on these measurements without additional information and clinical knowledge. Recruitment through community-based prenatal care providers, such as doulas, may provide a more comprehensive picture of BAM, which may differ in these populations, and scale validation. This subset of mothers may have different constructs that form their maternal identities since they actively chose unassisted or out-of-hospital birth and therefore may perceive maternal self-efficacy to be more closely associated with the birthing process (Holten & Miranda, 2016).

Research investigating the frequency of use of each measurement and the demographic characteristics of target populations—including race, ethnicity, and SES—would illuminate the utility of BAM measurements. Studies that specifically seek to validate BAM measurements on marginalized populations using all of the BAM constructs would contribute to BAM literature and better understanding of PPD. This review provides an introductory guide to BAM measurements to support future scale development or adaptation.

There are multiple valid and reliable measurements of BAM in the existing literature. These measures cover a wide swath of the constructs within the theories of BAM and MRA. The measurements were mostly validated on white mothers and lacked both generalizability for use in predicting PPD and encapsulation of diverse attributes of BAM for non-white mothers. The results of this review provide researchers with a comprehensive evaluation of BAM measurements to use in subsequent studies. The review has also identified gaps in BAM scale development, particularly regarding population demographics

and matrescence experiences. Furthermore, the recruitment tactics used targeted mothers engaged in services to access transportation, health care, and other resources. Additional research is needed to investigate how the measurements included in this review have been used and validated with additional populations.

References

- Albacar, G., Sans, T., Martín-Santos, R., García-Esteve, L., Guillamat, R., Sanjuan, J., Cañellas, E., Carot, J. M., Gratacòs, M., Bosch, J., Gaviria, A., Labad, A., Zotes, A. G., & Vilella, E. (2010). Thyroid function 48h after delivery as a marker for subsequent postpartum depression. *Psychoneuroendocrinology*, *35*(5), 738–742. <https://doi.org/10.1016/j.psyneuen.2009.10.015>
- Astbury, J. (1994). Making motherhood visible: The Experience of Motherhood Questionnaire. *Journal of Reproductive and Infant Psychology*, *12*(2), 79–88. <https://doi.org/10.1080/02646839408408871>
- Baker, L., Cross, S., Greaver, L., Wei, G., Lewis, R., & Healthy Start CORPS. (2005). Prevalence of postpartum depression in a native American population. *Maternal and Child Health Journal*, *9*(1), 21–25. <http://www.ncbi.nlm.nih.gov/pubmed/15880971>
- Barkin, J. L., Wisner, K. L., Bromberger, J. T., Beach, S. R., Terry, M. A., & Wisniewski, S. R. (2010). Development of the Barkin Index of Maternal Functioning. *Journal of Women's Health*, *19*(12), 2239–2246. <https://doi.org/10.1089/jwh.2009.1893>
- Barnes, C. R., & Adamson-Macedo, E. N. (2007). Perceived maternal parenting self-efficacy (PMP S-E) tool: Development and validation with mothers of hospitalized preterm neonates. *Journal of Advanced Nursing*, *60*(5), 550–560. <https://doi.org/10.1111/j.1365-2648.2007.04445.x>
- Birkeland, R. W. (2004). *Adolescent motherhood: A study of depression, parenting stress, maternal self-efficacy, and maternal role identity* [Doctoral dissertation, University of South Florida]. ProQuest Dissertations Publishing.
- Blau, A., Welkowitz, J., & Cohen, J. (1964). Maternal attitude to pregnancy instrument. *Archives of General Psychiatry*, *10*(4), 324. <https://doi.org/10.1001/archpsyc.1964.01720220002002>
- Caparros-Gonzalez, R. A., & Alderdice, F. (2020). The COVID-19 pandemic and perinatal mental health. *Journal of Reproductive and Infant Psychology*, *38*(3), 223–225. <https://doi.org/10.1080/02646838.2020.1786910>
- Clarke, P. J. (2010). *Saskatchewan Aboriginal women's postpartum depressive experiences: A qualitative exploration* [Doctoral dissertation, University of Regina], ProQuest Theses.
- Coleman, P., Nelson, E. S., & Sundre, D. L. (1999). The relationship between prenatal expectations and postnatal attitudes among first time

- mothers. *Journal of Reproductive & Infant Psychology*, 17(1), 27–39. <https://doi.org/10.1086/250095>
- Cost, K. T., Plamondon, A., Unternaehrer, E., Meaney, M., Steiner, M., & Fleming, A. S. (2016). The more things change, the more things stay the same: maternal attitudes 3 to 18 months postpartum. *Acta Paediatrica*, 105(7), e320–e327. <https://doi.org/10.1111/apa.13409>
- Davids, A., & Holden, R. H. (1970). Consistency of maternal attitudes and personality from pregnancy to eight months following childbirth. *Developmental Psychology*, 2(3), 364–366. <https://doi.org/10.1037/h0029192>
- Demissie, D. B., & Bitew, Z. W. (2021). Mental health effect of COVID-19 pandemic among women who are pregnant and/or lactating: A systematic review and meta-analysis. *SAGE Open Medicine*, 9. <https://doi.org/10.1177/20503121211026195>
- DeVellis, R. (2017). *Scale development: Theory and applications* (4th ed.). SAGE.
- Doe, S., LoBue, S., Hamaoui, A., Rezai, S., Henderson, C. E., & Mercado, R. (2017). Prevalence and predictors of positive screening for postpartum depression in minority parturients in the South Bronx. *Archives of Women's Mental Health*, 20(2), 291–295. <https://doi.org/10.1007/s00737-016-0695-4>
- Durankuş, E., & Aksu, E. (2022). Effects of the COVID-19 pandemic on anxiety and depressive symptoms in pregnant women: A preliminary study. *Journal of Maternal-Fetal & Neonatal Medicine*, 35(2), 205–211. <https://doi.org/10.1080/14767058.2020.1763946>
- Edhborg, M., Nasreen, H. E., & Kabir, Z. N. (2015). “I can’t stop worrying about everything”—Experiences of rural Bangladeshi women during the first postpartum months. *International Journal of Qualitative Studies on Health and Well-Being*, 10(1) (article 26226). <https://doi.org/10.3402/qhw.v10.26226>
- Ehrlich, M., Harville, E., Xiong, X., Buekens, P., Pridjian, G., & Elkind-Hirsch, K. (2010). Loss of resources and hurricane experience as predictors of postpartum depression among women in southern Louisiana. *Journal of Women's Health*, 19(5), 877–884. <https://doi.org/10.1089/jwh.2009.1693>
- Fonseca, A., & Canavarro, M. C. (2018). Exploring the paths between dysfunctional attitudes towards motherhood and postpartum depressive symptoms: The moderating role of self-compassion. *Clinical Psychology & Psychotherapy*, 25(1), e96–e106. <https://doi.org/10.1002/cpp.2145>
- Fonseca, A., Monteiro, F., & Canavarro, M. C. (2018). Dysfunctional beliefs towards motherhood and postpartum depressive and anxiety symptoms: Uncovering the role of experiential avoidance. *Journal of Clinical Psychology*, 74(12), 2134–2144. <http://10.0.3.234/jclp.22649>

- Fung, K., & Dennis, C.-L. (2010). Postpartum depression among immigrant women. *Current Opinion in Psychiatry*, 23(4), 342–348. <https://doi.org/10.1097/YCO.0b013e32833ad721>
- Ganann, R., Sword, W., Newbold, K. B., Thabane, L., Armour, L., & Kint, B. (2020). Influences on mental health and health services accessibility in immigrant women with post-partum depression: An interpretive descriptive study. *Journal of Psychiatric and Mental Health Nursing*, 27(1), 87–96. <https://doi.org/10.1111/jpm.12557>
- Henderson, A., Harmon, S., & Newman, H. (2016). The price mothers pay, even when they are not buying it: Mental health consequences of idealized motherhood. *Sex Roles: A Journal of Research*, 74(11–12), 512–526. <https://doi.org/10.1007/s11199-015-0534-5>
- Henshaw, E. J., Fried, R., Teeters, J. B., & Siskind, E. E. (2014). Maternal expectations and postpartum emotional adjustment in first-time mothers: Results of a questionnaire survey. *Journal of Psychosomatic Obstetrics & Gynecology*, 35(3), 69–75. <https://doi.org/10.3109/0167482X.2014.937802>
- Holten, L., & Miranda, E. (2016). Women’s motivations for having unassisted childbirth or high-risk homebirth: An exploration of the literature on “birthing outside the system.” *Midwifery*, 38, 55–62. <https://doi.org/10.1016/J.MIDW.2016.03.010>
- Huang, Y., Davies, P. G., Sibley, C. G., & Osborne, D. (2016). Benevolent sexism, attitudes toward motherhood, and reproductive rights: A multi-study longitudinal examination of abortion attitudes. *Personality & Social Psychology Bulletin*, 42(7), 970–984. <https://doi.org/10.1177/0146167216649607>
- Iyengar, U., Jaiprakash, B., Haitsuka, H., & Kim, S. (2021). One year into the pandemic: A systematic review of perinatal mental health outcomes during COVID-19. *Frontiers in Psychiatry*, 12, 845. <https://doi.org/10.3389/FPSYT.2021.674194>
- Karaca, K. M. (2013). *The transition to motherhood: Identity, loss, and life satisfaction*. ProQuest Dissertations Publishing.
- Keefe, R. H., Brownstein-Evans, C., & Polmanteer, R. S. R. (2018). The challenges of idealized mothering. *Affilia*, 33(2), 221–235. <https://doi.org/10.1177/0886109917747634>
- Knudson-Martin, C., & Silverstein, R. (2009). Suffering in silence: Idealized motherhood and postpartum depression. In *Couples, gender, and power: Creating change in intimate relationships* (pp. 171–190). Springer.
- Ko, J. Y., Rockhill, K. M., Tong, V. T., Morrow, B., & Farr, S. L. (2017). Trends in postpartum depressive symptoms—27 states, 2004, 2008, and 2012. *Morbidity and Mortality Weekly Report*, 66(6), 153–158. <https://doi.org/10.15585/mmwr.mm6606a1>
- Kumar, R., Robson, K. M., & Smith, A. M. (1984). Development of a self-administered questionnaire to measure maternal adjustment and

- maternal attitudes during pregnancy and after delivery. *Journal of Psychosomatic Research*, 28(1), 43–51. [https://doi.org/10.1016/0022-3999\(84\)90039-4](https://doi.org/10.1016/0022-3999(84)90039-4)
- Kurz, E., Davis, D., & Browne, J. (2022). Parturescence: A theorisation of women's transformation through childbirth. *Women and Birth*, 35(2), 135–143. <https://doi.org/10.1016/j.wombi.2021.03.009>
- Leach, D. M., Terry, P., & Nikčević, A. V. (2018). The Pregnancy Related Beliefs Questionnaire (PRBQ): An examination of the psychometric properties in perinatal samples. *Clinical Psychology & Psychotherapy*, 25(1), 152–162. <https://doi.org/10.1002/cpp.2149>
- Letourneau, N. L., Dennis, C. L., Benzies, K., Duffett-Leger, L., Stewart, M., Tryphonopoulos, P. D., Este, D., & Watson, W. (2012). Postpartum depression is a family affair: Addressing the impact on mothers, fathers, and children. *Issues in Mental Health Nursing*, 33(7), 445–457. <https://doi.org/10.3109/01612840.2012.673054>
- Lim, H.-J., & Skinner, T. (2012). Culture and motherhood: Findings from a qualitative study of East Asian mothers in Britain. *Families, Relationships and Societies*, 1(3), 327–343. <https://doi.org/10.1332/204674312X656266>
- Littell, J. H., Corcoran, J., & Pillai, V. (2008). *Systematic reviews and meta-analyses*. Oxford University Press.
- Lutz, A. (2016). Addressing the risk of postpartum depression in female veterans. *International Journal of Childbirth Education*, 31(4), 21–23.
- Madar, A. (2013). Maternal Attitudes and Beliefs Scale: Development and piloting. *Procedia—Social and Behavioral Sciences*, 78, 415–419. <https://doi.org/10.1016/j.sbspro.2013.04.322>
- Matthey, S. (2011). Assessing the experience of motherhood: The Being a Mother Scale (BaM-13). *Journal of Affective Disorders*, 128(1–2), 142–152. <https://doi.org/10.1016/j.jad.2010.06.032>
- Maxwell, D., & Leat, S. (2022). A review of the empirical measures on becoming a mother and their relevance to the American Indian/ Native Alaskan mother: Implications for research and policy. *Journal of Ethnic & Cultural Diversity in Social Work*, 31(2), 63–83. <https://doi.org/10.1080/15313204.2022.2041520>
- Maxwell, D., Mauldin, R., Thomas, J., & Holland, V. (2022). American Indian motherhood and historical trauma: Keetoowah experiences of becoming mothers. *International Journal of Environmental Research and Public Health*, 19(12), 7088. <https://doi.org/10.3390/ijerph19127088>
- Maxwell, D., Robinson, S. R., & Rogers, K. (2019). “I keep it to myself”: A qualitative meta-interpretive synthesis of experiences of postpartum depression among marginalized women. *Health and Social Care in the Community*, 27(3), 23–36. <https://doi.org/10.1111/hsc.12645>
- Mehta, D., Newport, D. J., Frishman, G., Kraus, L., Rex-Haffner, M., Ritchie, J. C., Lori, A., Knight, B. T., Stagnaro, E., Ruepp, A., Stowe, Z. N.,

- & Binder, E. B. (2014). Early predictive biomarkers for postpartum depression point to a role for estrogen receptor signaling. *Psychological Medicine*, *44*(11), 2309–2322. <https://doi.org/10.1017/S0033291713003231>
- Melenciuc, S. (2018, June 25). Is Romania a developed country? It is about to be officially considered part of the “first world,” despite much lower income levels than Western Europe. *Business Review*. <http://business-review.eu/investments/is-romania-a-developed-country-it-is-about-to-be-officially-considered-part-of-the-first-world-despite-much-lower-income-than-western-europe-174107>
- Mercer, R. T. (1981). A theoretical framework for studying factors that impact on the maternal role. *Nursing Research*, *30*(2), 73–77. <http://www.ncbi.nlm.nih.gov/pubmed/7010317>
- Mercer, R. T. (2004). Becoming a mother versus maternal role attainment. *Journal of Nursing Scholarship*, *36*(3), 226–232. <https://doi.org/10.1111/j.1547-5069.2004.04042.x>
- Moorhead, S. R. J., Owens, J., & Scott, J. (2003). Development and piloting of the Pregnancy Related Beliefs Questionnaire (PRBQ). *Behavioural and Cognitive Psychotherapy*, *31*(2), 207–213. <https://doi.org/10.1017/S1352465803002091>
- Mott, S. L., Schiller, C. E., Richards, J. G., O’Hara, M. W., & Stuart, S. (2011). Depression and anxiety among postpartum and adoptive mothers. *Archives of Women’s Mental Health*, *14*(4), 335–343. <https://doi.org/10.1007/s00737-011-0227-1>
- Praetorius, R. T., Maxwell, D. R., Williams, J. R., Hulama, K., & Tamura, A. (2023). “I didn’t get to have this experience with anyone”: Experiences of becoming a mother during the pandemic. *Social Work in Mental Health*. Advance online publication. <https://doi.org/10.1080/15332985.2023.2190437>
- Preis, H., Lobel, M., & Benyamini, Y. (2018). Between expectancy and experience. *Psychology of Women Quarterly*, *43*(1), 105–117. <https://doi.org/10.1177/0361684318779537>
- Raphael, D. (1975). Matrescence, becoming a mother, A “new/old” rite de passage. In *Being Female* (pp. 65–72). De Gruyter Mouton. <https://doi.org/10.1515/9783110813128.65>
- Raphael-Leff, J. (1986). Facilitators and regulators: Conscious and unconscious processes in pregnancy and early motherhood. *British Journal of Medical Psychology*, *59* (Pt. 1), 43–55.
- Razina, N. V. (2014). Attitudes to motherhood in different cultures. *Psychology in Russia: State of the Art*, *7*(2), 93–104. <https://doi.org/10.11621/pir.2014.0209>
- Roncolato, W., & McMahan, C. (2011). Facilitators and regulators: Psychometric properties of maternal orientation measures in pregnancy. *Journal of Reproductive & Infant Psychology*, *29*(5), 420–438. <https://doi.org/10.1080/02646838.2011.635421>

- Rubin, R. (1967). Attainment of the maternal role. Part 1. Processes. *Nursing Research, 16*, 237–245.
- Ruble, D. N., Brooks-Gunn, J., Fleming, A. S., Fitzmaurice, G., Stangor, C., & Deutsch, F. (1990). Transition to motherhood and the self: Measurement, stability, and change. *Journal of Personality and Social Psychology, 58*(3), 450–463. <https://doi.org/10.1037/0022-3514.58.3.450>
- Savitz, D. A., Stein, C. R., Ye, F., Kellerman, L., & Silverman, M. (2011). The epidemiology of hospitalized postpartum depression in New York State, 1995–2004. *Annals of Epidemiology, 21*(6), 399–406. <https://doi.org/10.1016/j.annepidem.2011.03.003>
- Schaefer, E. S., & Bell, R. Q. (1957). Patterns of attitudes toward child rearing and the family. *Journal of Abnormal and Social Psychology, 54*(3), 391–395. <https://doi.org/10.1037/h0048159>
- Sharp, H. M., & Bramwell, R. (2004). An empirical evaluation of a psychoanalytic theory of mothering orientation: Implications for the antenatal prediction of postnatal depression. *Journal of Reproductive and Infant Psychology, 22*(2), 71–89. <https://doi.org/10.1080/0264683042000205945>
- Shea, E. M. (1982). *The development and evaluation of a scale to measure maternal self-esteem* [Master's thesis, University of Massachusetts, Amherst]. <https://doi.org/10.7275/92pq-wa98>
- Shea, E. M., & Tronick, E. Z. (1988). The Maternal Self-Report Inventory: A research and clinical instrument for assessing maternal self-esteem. In H. E. Fitzgerald, B. M. Lester, & M. W. Yogman (Eds.), *Theory and research in behavioral pediatrics* (vol. 4, pp. 101–139). Plenum Press.
- Shellman, L., Beckstrand, R. L., Callister, L. C., Luthy, K. E., & Freeborn, D. (2014). Postpartum depression in immigrant Hispanic women: A comparative community sample. *Journal of the American Association of Nurse Practitioners, 26*(9), 488–497. <https://doi.org/10.1002/2327-6924.12088>
- Shuman, C. J., Morgan, M. E., Paredy, N., Chiangong, J., Veliz, P., Peahl, A., & Dalton, V. (2022). Associations among postpartum posttraumatic stress disorder symptoms and COVID-19 pandemic-related stressors. *Journal of Midwifery and Women's Health, 67*(5), 626–634. <https://doi.org/10.1111/jmwh.13399>
- Sokol, L. E., Epperson, C. N., & Barber, J. P. (2014). The relationship between maternal attitudes and symptoms of depression and anxiety among pregnant and postpartum first-time mothers. *Archives of Women's Mental Health, 17*(3), 199–212. <https://doi.org/10.1007/s00737-014-0424-9>
- Surkan, P., Kawachi, I., Ryan, L., Berkman, L., & Vieira, L. (2008). Maternal depressive symptoms, parenting self-efficacy, and child growth. *American Journal of Public Health, 98*(1), 125–152.

- Tardy, R. (2000). "But I AM a good mom": The social construction of motherhood through healthcare conversations. *Journal of Contemporary Ethnography*, 29(4), 433–473.
- Taubman Ben-Ari, O., Ben Shlomo, S., Sivan, E., & Dolizki, M. (2009). The transition to motherhood—A time for growth. *Journal of Social and Clinical Psychology*, 28(8), 943–970. <https://doi.org/10.1521/jscp.2009.28.8.943>
- Thomas, T. (2001). Becoming a mother: Matrescence as spiritual formation. *Religious Education*, 96(1), 88–105. <https://doi.org/10.1080/00344080117878>
- Thomason, E., Flynn, H. A., Himle, J. A., & Volling, B. L. (2015). Are women's parenting-specific beliefs associated with depressive symptoms in the perinatal period? Development of the rigidity of maternal beliefs scale. *Depression and Anxiety*, 32(2), 141–148. <https://doi.org/10.1002/da.22280>
- Thompson, K. D., & Bendell, D. (2014). Depressive cognitions, maternal attitudes and postnatal depression. *Journal of Reproductive and Infant Psychology*, 32(1), 70–82. <https://doi.org/10.1080/02646838.2013.858312>
- Thorton, R., & Nardi, P. (1975). The dynamics of role transition. *American Journal of Sociology*, 80(4), 870–885.
- Tricco, A. C., Lillie, E., Zarin, W., O'Brien, K. K., Colquhoun, H., Levac, D., Moher, D., Peters, M. D. J., Horsley, T., Weeks, L., Hempel, S., Akl, E. A., Chang, C., McGowan, J., Stewart, L., Hartling, L., Aldcroft, A., Wilson, M. G., Garritty, C., & Straus, S. E. (2018). PRISMA extension for scoping reviews (PRISMA-ScR): Checklist and explanation. *Annals of Internal Medicine*, 169(7), 467. <https://doi.org/10.7326/M18-0850>
- Walker, L. O., Crain, H., & Thompson, E. (1986). Maternal role attainment and identity in the postpartum period: Stability and change. *Nursing Research*, 35(2), 68–71.
- Warner, R., Appleby, L., Whitton, A., & Faragher, B. (1997). Attitudes toward motherhood in postnatal depression: Development of the Maternal Attitudes Questionnaire. *Journal of Psychosomatic Research*, 43(4), 351–358.
- Wei, G., Greaver, L., Marson, S., Herndon, C., & Rogers, J. (2008). Postpartum depression: Racial differences and ethnic disparities in a tri-racial and bi-ethnic population. *Maternal Child Health Journal*, 12, 699–707.
- Yan, H., Ding, Y., & Guo, W. (2020). Mental health of pregnant and postpartum women during the coronavirus disease 2019 pandemic: A systematic review and meta-analysis. *Frontiers in Psychology*, 11(article 617001). <https://doi.org/10.3389/fpsyg.2020.617001>

Provider Types and Perceived Mental Health Discrimination in Health Care Settings: Results of a Canadian Nationally Representative Sample

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Abstract: *An exploratory investigation was conducted to assess the influence of provider types on a client's perception of mental health stigmatization in a health care setting. A subsample of respondents (n = 2,323) to the Canadian Community Health Survey-Mental Health was included in the analysis. We used multiple regression to investigate the potential associations between provider types and number of providers seen for persons with mental health concerns experiencing health-care-related stigma. Seeking help from some groups was associated with increased odds of experiencing health care provider stigma. Seeing more professionals was also associated with an increased likelihood of experiencing health care provider stigma. The results clarify that individuals who experience mental illness often perceive discrimination and prejudice when seeking mental health treatment. Given the impact of stigma on treatment-seeking behavior, it is plausible that some mental health providers are contributing to the client's choice not to seek care.*

Keywords: *mental health care, mental illness, stigma, treatment seeking*

Stigma is a reality for persons with mental health concerns. Goffman (1963), whose influential work explored how stigmatized individuals experience social

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This analysis is based on the Statistics Canada Canadian Community Health Survey Micro-data File, which contains anonymized data collected in the 2011–2012 Canadian Community Health Survey. All computations, use, and interpretation of these data are entirely the responsibility of the authors.

disapproval and discrimination, posited that stigma refers to a deeply discrediting attribute and is sometimes perceived as a deficiency or fault. He theorized that a person who is stigmatized may be regarded as inferior or not entirely human and may therefore experience discrimination. Whether the discrimination is deliberate or unintentional, such individuals face heightened challenges in everyday life.

Persons with mental health concerns (PWMHC) are often marginalized and stigmatized by members of the public (Pescosolido, 2013) and in settings like health care service environments (Hinshaw, 2007). The perception of mental illness stigmatization in health care poses a significant risk to care seeking, engagement with treatment, and health outcomes for PWMHC (Thorncroft et al., 2007). Negative attitudes and behaviors of health care providers toward PWMHC potentially contribute to disparities in care for this group (Jones et al., 2008). Stigma that results from the perception of negative attitudes, beliefs, and behaviors because of mental illness is often accompanied by troubling consequences (Thorncroft, 2006). These consequences are frequently viewed as more burdensome than symptoms (Gallo, 1994). People with mental health concerns report the co-occurrence of stigma, alienation, and isolation (Linz & Sturm, 2013).

Livingston and Boyd (2010) conducted a systematic review and meta-analysis of the correlates of stigma. They found that demographic variables associated with stigma include gender, age, education, employment, income, and race/ethnicity. Stigma-related variables included symptom severity, mental illness, psychiatric hospitalization, and functioning.

Stigma and Mental Health Services

Beyond the experience of distressing symptoms, perceived stigma presents a significant hindrance to receiving health care services. Research indicates that providers' negative attitudes toward PWMHC are a problem in mental and physical health care (Gabbidon et al., 2014). Clients' perceptions of discrimination are often associated with receiving treatment and being diagnosed with a mental health concern. Although mental health service providers, such as social workers and psychiatrists, are typically compassionate and want to help, PWMHC may still perceive stigmatization by providers, which can become a barrier to receiving quality care (Schulze & Angermeyer, 2003). A study conducted in 2014 indicated that, although mental health practitioners had more positive regard for mental illness than the public, they still had negative ideas and dangerous perceptions about individuals with severe mental illness (Stuber et al., 2014). A review of mental-health-related stigma in health care and mental health care settings by Henderson and colleagues (2014) concluded that, although professionals within those settings may believe in fair and equitable treatment in the context of civil rights for those

who experience mental illness, that does not negate their stigmatized views of mental illness.

Providers of mental health services are members of the public and are thus subject to the same influences, including mass media, as any other citizen. As a result, mental health providers may subscribe to the same stereotypes about PWMHC endorsed by the general public (Schulze, 2007). However, interventions have been designed to reduce mental health stigmatization by providers (Eiroa-Orosa et al., 2021). Fear of those living with mental illness is one of the most prevalent emotions reported by mental health providers (Overton & Medina, 2008). Other prejudices, such as dislike and anger, are also reported (Penn & Martin, 1998). Research indicates that provider attitudes and beliefs are often no different or even *more* pessimistic than those of the general population (e.g., Björkman et al., 2008; Kopera et al., 2015; Lauber et al., 2004, 2006; Nordt et al., 2006; Overton & Medina, 2008; Penn & Martin, 1998; Ross & Goldner, 2009). Even when the provider does not overtly express these prejudices, clients may still perceive them, potentially following a similar pattern of microaggressions toward groups defined by race (Gonzales et al., 2015; Nemeč et al., 2015). Microaggressions are subtle slights and invalidations that cumulatively create tension. For example, using patronizing phrases or a condescending tone and avoiding encouraging specific courses of action for fear of raising “false hopes” have been identified as potentially stigmatizing microaggressive provider actions (Charles, 2013; Nemeč et al., 2015; Reidy, 1993).

Perceived stigmatization based on mental illness in mental health settings presents a threat, potentially fracturing the ever-important therapeutic relationship between patient and provider. This damage can lead to less favorable treatment outcomes, blocked life goals, service avoidance, and nonadherence to treatment plans (Schulze & Angermeyer, 2003; Thornicroft et al., 2007). In an investigation in which inpatient service recipients had negative attitudes toward mental health providers, these clients had substantially worse outcomes and exhibited more problematic behaviors over time than did service recipients who did not express negative attitudes toward providers (Barrowclough et al., 2001). In addition to potentially poorer treatment outcomes, clients who perceive provider stigma may be more likely to avoid mental health services. Björkman and colleagues (2008) argued that a client’s experience of rejection in the helping relationship “may lead to them not seeking treatment even when needed” (p. 176). Treatment plan and recommendation nonadherence, referred to by Björkman and colleagues as “additional resistance in taking part in the healthcare system when needed” (p. 176), are also more likely when the client interacts with a provider who harbors stigmatizing beliefs. This observation aligns with that of Sadow and colleagues (2002), who caution that, when providers hold stigmatizing views, they may inadvertently interfere with effective treatment by underestimating their client’s social and intellectual potential.

Stigma and General Medical Care

Medical care settings, such as emergency departments, hospitals, or physician offices, have been identified as frequent sites of perceived discrimination by consumers of mental health services (Gabbidon et al., 2014). Even anticipation of stigmatization by health care professionals may make some individuals apprehensive about seeking mental health treatment (Knaak et al., 2017). Stigmatization in these settings can lead to disparities in care—inadequate access to proper treatment, underdiagnosis of health issues, and less timely treatment (Jones et al., 2008; Ross & Goldner, 2009; Thornicroft et al., 2007)—as well as increased mortality rates for PWMHC (Druss et al., 2001). Additionally, provider stigmatization in the health sector has been associated with *diagnostic overshadowing*, in which physical problems of individuals with mental illness are erroneously attributed to mental health symptoms (Jones et al., 2008). For example, when a person with a serious mental illness comes into the emergency room complaining of pain in the chest, the attending physician, rather than ruling out a heart condition, assumes that these symptoms relate to some anxiety associated with the mental illness.

Understanding how consumers perceive health care provider stigma (HCPS) can inform interventions to remedy the problem. Prior investigations have focused on attitudes, beliefs, and behaviors of health care providers who perpetrate stigmatization rather than on clients who perceive the discrimination and the impact of endorsing stigmatizing beliefs on their health care decisions (i.e., Corrigan et al., 2014). For example, Corrigan and colleagues (2014) found that providers with more stigmatizing attitudes were more likely to be pessimistic about their clients' potential to adhere to treatment. The same providers were less likely to express a willingness to use mental health services for themselves. Hodges and colleagues (2001) reported that, due to inadequate training, health care providers may not be fully aware of the possible outcomes for PWMHC. However, Corrigan and colleagues (2014) noted surprisingly that professional background did not relate to the degree of stigma endorsement, indicating that stigmatization is equally likely in mental health and primary care providers.

A complete understanding of HCPS must be concerned with both the providers who overtly or unknowingly stigmatize and the clients who perceive the mistreatment. Some clients may have lived experiences predisposing them to perceive or not perceive HCPS. Only a few studies (e.g., Gabbidon et al., 2014; Marchand et al., 2016) have investigated client factors, including the types of professionals from whom the client receives services and the client's perception of HCPS. The literature indicates several factors that may constitute risk factors for perceiving HCPS. For example, having a mental health diagnosis is a risk factor for perceiving HCPS (Marchand et al., 2016). Other demographic characteristics linked with an increased likelihood of perceiving HCPS, perhaps indicative of risk factors, included younger age (Sirey et al., 2001), being

White, and experiencing homelessness for more than three years (Skosireva et al., 2014). Beyond these findings, scarce research exists on the characteristics of individuals with mental illness who are likely to perceive HCPS.

The current study adds to the literature by answering the following questions:

1. From what types of providers do PWMHC receive services?
2. How many PWMHC perceive HCPS?
3. How do the kinds of providers consulted for mental health concerns impact participants' feelings of discrimination by their providers?
4. How does the number of providers seen impact participants' feelings of discrimination by their providers?

Method

Procedure and Sample

This study used a subsample of participants in the Canadian Community Health Survey–Mental Health (CCHS-MH; Statistics Canada, 2013); data were collected in 2012. The subsample consisted of those who reported receiving mental health treatment in the previous 12 months ($n = 2,323$). The CCHS-MH used a cross-sectional, multistage, stratified cluster sampling strategy, in which data were collected via phone or in-person interviews. A detailed description of the survey's development and sampling is available from Statistics Canada. The Indiana University institutional review board reviewed and approved the study. Table 1 provides descriptive information about the sample.

Variables

Dependent Variable

The dependent variable, perceived provider stigma, was measured by the self-reported experience of prejudice or discrimination by a health care provider, specifically related to mental illness. Respondents were asked if they had experienced prejudice or discrimination based on emotional or mental health problems from a health service provider. The variable was measured nominally. The reference group was individuals who did not perceive HCPS, with persons who experienced HCPS coded as 1 and those who did not as 0.

Independent Variables

The impact of the following demographic characteristics was assessed for this descriptive study:

- Marital status included two categories, married and not married, with not married coded as the reference group (0).
- Race consisted of two categories, White and non-White. Because no racial category other than White accounted for more than 5 percent of

Table 1 Sample demographics

Married	39.56%
Non-White	13.26%
Female	67.11%
Age	
≤29	21.87%
30–44	27.55%
45–59	30.82%
≥60	19.76%
Education	
No high school	15.93%
High school graduate	15.20%
At least some college	68.26%
Low income	26.82%
Psychiatric treatment in past 12 months	
No treatment	20.85%
Informal support	53.94%
Psychiatrist	25.18%
General practitioner	52.52%
Nurse	9.21%
Social worker	27.98%
Psychologist	20.58%
Number of providers seen	1.37 (.02)*
Psychiatric condition	
None	58.96%
Depression	29.18%
Bipolar type I	2.43%
Bipolar type II	2.95%
Generalized anxiety disorder	16.69%
Substance abuse	2.73%
Health care provider stigma	11.60%

*Mean (SD).

the sample, we collapsed all racial categories other than White into one group, non-White. White was the reference group (0).

- Gender was coded as male and female, with males as the reference group.
- Age was divided into four groups: ≤29, 30–44, 45–59, and ≥60 years. The reference group (0) was ≤29 years.
- Education was divided into three groups: no high school degree, high school degree, and at least some college; no high school degree was the reference category (0).
- Income was a subjective dichotomous variable. Individuals identified their income level as hard to meet living expenses or not hard to meet living expenses. Not hard to meet living expenses was the reference group (0).

As part of the original study, the World Health Organization World Mental Health-Composite International Diagnostic Interview (WHO WMH-CIDI; Kessler

& Üstün, 2004) was used to identify individuals who met 12-month criteria for depression, bipolar I or II, generalized anxiety disorder, or substance use disorders (alcohol, cannabis, sedatives, stimulants, and/or analgesics). In addition, to qualify for the current study, respondents' symptoms had to interfere with their work, social life, or personal relationships. This second criterion was added because the present study was intended to investigate the perception of HCPS by persons experiencing the most distress (Angermeyer et al., 2004). The reference group implies only that the individual did not have a particular mental health diagnosis. Therefore, respondents could have multiple diagnoses. Although interviewers asked participants if they had schizophrenia or psychosis, data on these variables were not publicly available for this analysis. The WHO WMH-CIDI is both reliable and valid for determining mental health concerns (Kessler & Üstün, 2004)

Included in the analysis were data on mental health treatment, which included seeking psychiatric treatment from an informal source, psychiatrist, general practitioner, nurse, social worker, or a combination of these providers. We also included use of a support network for advice on treating a mental health condition as informal support. Each of these mental health treatment sources was treated as a variable. Not seeking services from these respective professional groups served as the reference group, coded as 0.

We added a final variable to the analysis: the number of providers seen in the last 12 months.

Data Analysis

The authors used multiple logistic regression and hierarchical multiple regression to address the research questions. We estimated five equations by entering blocks, or sets, of independent variables:

1. Demographic and diagnostic variables
2. Types of providers seen
3. Demographic and diagnostic variables and types of providers seen
4. Number of providers seen
5. Demographic and diagnostic variables and number of providers seen

Normalized weights were used when conducting analyses to correct for unequal selection probability and make the results meaningful to the population. Data analysis was conducted using STATA 15.

Results

Univariate Analysis

We started by exploring the types of providers seen by PWMHC. Most participants sought help from informal sources of support, followed by general practitioners

for mental health support and social workers for mental health support. We then explored the number of individuals who reported experiencing HCPS. Figure 1 shows the percentages of provider types seen by respondents.

Multivariate Analysis

Data were entered in five blocks. The first block contained only demographic data and was statistically significant. The variables in the model account for 11 percent of the variance in perceiving HCPS. Six variables were significant predictors of perceived HCPS. First, being 60 years old or older was associated with a 64-percent decrease in the likelihood of perceiving HCPS. Low income was associated with a 52-percent decrease in the odds of perceiving HCPS. Depression, bipolar I, generalized anxiety disorder, and substance abuse disorder were associated, respectively, with increases of 54, 236, 77, and 231 percent in the likelihood of perceiving HCPS. Results from these models are presented in table 2.

In model 2, we examined the impact of the types of providers seen for mental health concerns on perceived HCPS. This model was significant, explaining about 6 percent of the variance in perceived HCPS. Four variables were significant predictors of perceiving HCPS: seeking help from informal sources of support, receiving care from a social worker, receiving psychiatric care from a nurse, and seeing a psychiatrist were associated with respective increases of 122, 44, 85, and 88 percent in the odds of perceiving HCPS.

Figure 1 Percentage of clients who see each type of provider

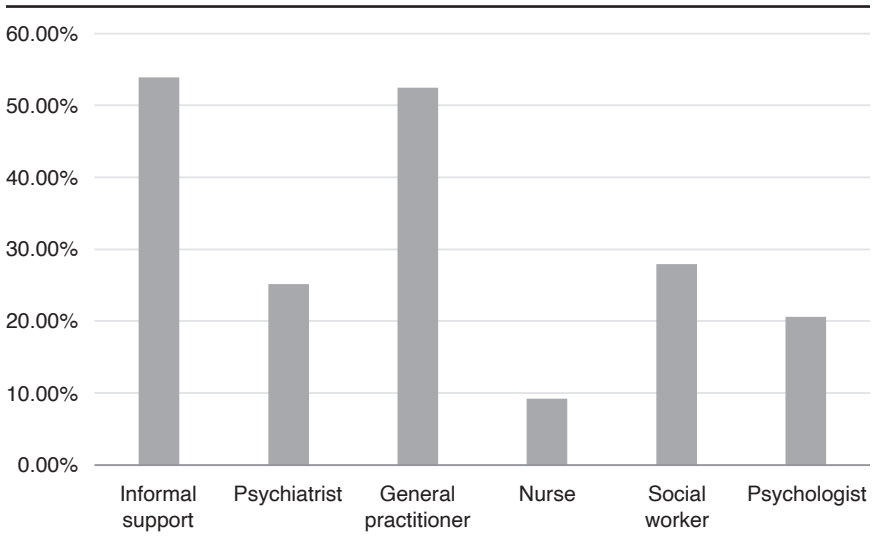


Table 2 Logistic regression results for health care provider stigma

Variable	Odds ratio (95% confidence interval)				
	Model 1	Model 2	Model 3	Model 4	Model 5
Constant	.43 (.21, .93)	.04 (.02, .05)**	.18 (.07, .43)**	.05 (.04, .07)**	.24 (.11, .55)**
Married	.73 (.51, 1.05)		.72 (.50, 1.05)		.75 (.52, 1.08)
Non-White	.77 (.51, 1.18)		.68 (.44, 1.04)		.70 (.46, 1.07)
Female	.70 (.49, 1.01)		.72 (.49, 1.05)		.69 (.47, .99)*
Age (reference is ≤29)					
30–44	1.21 (.78, 1.88)		1.25 (.79, 1.96)		1.27 (.81, 1.98)
45–59	.97 (.62, 1.49)		1.04 (.66, 1.63)		1.00 (.64, 1.55)
≥60	.36 (.17, .75)**		.40 (.19, .83)**		.37 (.18, .79)**
Education (reference is no high school)					
High school graduate	.92 (.52, 1.62)		.95 (.53, 1.71)		1.00 (.56, 1.78)
At least some college	.94 (.60, 1.47)		.89 (.56, 1.41)		.95 (.61, 1.52)
Low income	.48 (.35, .67)**		.50 (.35, .71)**		.49 (.35, .69)**
Psychiatric conditions (reference is none)					
Depression	1.52 (1.09, 2.18)*		1.26 (.88, 1.82)		1.33 (.93, 1.91)
Bipolar I	3.36 (1.74, 6.46)**		3.13 (1.61, 6.08)*		3.06 (1.58, 5.94)**
Bipolar II	1.52 (.79, 3.14)		1.46 (.69, 3.10)		1.45 (.69, 3.04)
General anxiety disorder	1.77 (1.23, 2.55)**		1.53 (1.06, 2.23)*		1.57 (1.09, 2.28)*
Substance abuse	3.31 (1.73, 6.37)**		3.28 (1.68, 6.42)**		3.22 (1.66, 6.23)**

Psychiatric treatment in past
12 months (no treatment is
reference)

Informal	2.22 (.53, 3.20)**	2.09 (1.38, 3.15)**	1.66 (1.46, 1.89)**	1.44 (1.23, 1.68)**
Social worker	1.44 (1.06, 1.94)*	1.11 (.79, 1.57)	-643.06	-520.20
Nurse	1.84 (1.26, 2.79)**	1.68 (1.10, 2.57)*	56.42**	149.16**
Psychologist	1.10 (.79, 1.53)	1.04 (.71, 1.52)	.04	.13
Family doctor	1.36 (.98, 1.90)	1.37 (.94, 2.00)		
Psychiatrist	1.88 (1.40, 2.54)**	1.56 (1.11, 2.22)*		
Number of providers seen	-530.76	-511.16		
Log likelihood	128.49**	167.69**		
X ²	.11	.14		
R ²				

* $p < .05$; ** $p < .01$

Model 3 included demographic, psychiatric, and provider variables. This model was also significant, explaining about 14 percent of the variance in the odds of perceiving HCPS. In this model, eight variables were significant predictors of perceiving HCPS. Being 60 years old or older was associated with a 61-percent increase, low income was associated with a 50-percent decrease, bipolar 1 was associated with a 213-percent increase, and anxiety disorder was associated with a 54-percent increase in the odds of perceiving HCPS. Living with a substance use disorder was associated with a 228-percent increase in the odds of perceiving HCPS. Seeking help from informal sources of support was associated with a 109-percent increase, seeking help from a nurse was associated with a 68-percent increase, and seeing a psychiatrist was associated with a 57-percent increase in the odds of perceiving HCPS.

Next, we modeled how the number of providers seen was associated with HCPS. The model was significant and explained about 4 percent of the variance in the dependent variable. The total number of providers seen was associated with a 66-percent increase in HCPS for every additional provider.

Finally, we modeled the joint impact on HCPS of demographic variables, psychiatric variables, and number of providers seen and explained 13 percent of the variance in perceiving HCPS. Seven variables were significant predictors of perceiving HCPS: being female (compared to being male) was associated with a 32-percent decrease in the odds of perceiving HCPS, being sixty years or older was associated with a 63-percent decrease, and low income was associated with a 51-percent decrease. Bipolar 1 was associated with a 206-percent increase, generalized anxiety disorder was associated with a 57-percent increase, and substance use disorder was associated with a 222-percent increase in the odds of experiencing perceived HCPS. For every provider seen, the odds of perceiving HCPS was 43 percent, $z(1) = 4.67, p < .01$.

Discussion

These results build on past studies of predictors of HCPS (e.g., Skosireva et al., 2014). They clarify that individuals who experience mental illness often perceive discrimination and prejudice when seeking mental health treatment. This is especially concerning because previous research has shown that individuals with mental illness are reluctant to seek treatment (Henderson et al., 2013). One contributing factor to that reluctance is perceived prejudice.

Age and income were among the most consistent predictors. Older individuals were more likely to perceive stigma, although only marginally so. Those from low-income backgrounds were less likely to perceive stigma. Marital status, race, education, and gender were primarily unrelated to how people perceived stigma.

When all covariates are accounted for (model 3), individuals diagnosed with generalized anxiety disorder, bipolar I, and substance use disorder were more likely to perceive discrimination and prejudice from their health care provider.

The high prevalence of these conditions only adds to treatment-seeking behavior concerns. Simply put, individuals with some of the most common mental health concerns may not get adequate treatment due to perceptions of stigmatization by their mental health provider.

Those who had received psychiatric treatment in the past 12 months were more likely to perceive stigma from informal support, nurses, and psychiatrists. Although it isn't surprising that sources of informal support can contribute to stigmatization, nurses and psychiatrists receive training on mental illness and mental health treatment. Therefore, it is somewhat surprising that they are often believed to be discriminatory or prejudiced against individuals with mental illness. Social workers, psychologists, and family doctors are the three most common professionals to engage in mental health treatment (Heisler, 2018). Perceptions of stigma are far less common among these three professions. What is less clear is *why* those professional differences exist. Treatment setting may be one reason. Nurses and psychiatrists often work in inpatient settings and are commonly involved with the most severe cases (van Schijndel et al., 2021). Future research should examine the influence of treatment settings, such as inpatient, intensive outpatient, and community-based treatment.

As the number of providers seen increases, so do perceptions of stigma. The more providers individuals see, the more likely they are to feel stigmatized. Based on what has been reported, this is not surprising. As individuals interact with multiple providers, they may also contact different types of providers (social workers, psychiatrists, etc.). Similarly, because there is a significant shortage of mental health providers in the United States (Heisler & Bagalman, 2013), an individual may need to seek support from another type of provider. The cumulative impact of seeing different providers over time is unknown but should be considered in future research. There is sufficient evidence to suggest that individuals who contact psychiatrists and nurses often make a voluntary change to a different provider or provider type. Specifically, an individual who experiences discrimination is likely to seek another provider. As the number of providers increases, so too do feelings of stigma.

Limitations

This study has several limitations. This initial survey was intended to determine, in part, the extent to which individuals in the sample had mental health concerns and the extent to which they were receiving services. We used a subsample of respondents who reported receiving treatment for mental health issues. We do not know if the findings would be different if we had sampled from the population of all persons receiving mental health care. Next, individuals themselves self-reported experiencing health care provider stigma. Participants may misread the intentions of their providers. Further, we lumped all providers of one type into one group. We do not know if specific providers received special training in working with persons with mental health concerns.

Implications

Stigma is a significant factor affecting health-seeking behaviors (Henderson et al., 2013). Individuals who do not readily seek treatment for mental illness may have decreased quality of life, and they are at greater risk for encountering the negative consequences of their illness (Velasco et al., 2020). Given the influence of stigma on treatment-seeking behavior, it is plausible that some mental health providers are contributing to the choice not to seek care. Consequently, mental health providers are encouraged to discuss stigma with their patients. Although the quality or quantity of a professional's education on mental illness is not questioned, their preparedness to deal with the ancillary concerns of the patient is a concern. If the health and well-being of those with mental illness are to be adequately addressed, education about mental illness needs to extend beyond diagnosis and treatment options.

References

- Angermeyer, M. C., Beck, M., Dietrich, S., & Holzinger, A. (2004). The stigma of mental illness: Patients' anticipations and experiences. *International Journal of Social Psychiatry, 50*, 153–162. <https://doi.org/10.1177/0020764004043115>
- Barrowclough, C., Haddock, G., Tarrier, N., Lewis, S. W., Moring, J., O'Brien, R., Schofield, N., & McGovern, J. (2001). Randomized controlled trial of motivational interviewing, cognitive behavior therapy, and family intervention for patients with comorbid schizophrenia and substance use disorders. *American Journal of Psychiatry, 158*, 1706–1713. <https://doi.org/10.1176/appi.ajp.158.10.1706>
- Björkman, T., Angelman, T., & Jönsson, M. (2008). Attitudes toward people with mental illness: A cross-sectional study among nursing staff in psychiatric and somatic care. *Scandinavian Journal of Caring Sciences, 22*(2), 170–177. <https://doi.org/10.1111/j.1471-6712.2007.00509.x>
- Charles, J. L. K. (2013). Mental health provider-based stigma: Understanding the experience of clients and families. *Social Work in Mental Health, 11*(4), 360–375. <https://doi.org/10.1080/15332985.2013.775998>
- Corrigan, P. W., Mittal, D., Reaves, C. M., Haynes, T. F., Hans, X., Morris, S., & Sullivan, G. (2014). Mental health stigma and primary health care decisions. *Psychiatry Research, 218*(1-2), 35–38. <https://doi.org/10.1016/j.psychres.2014.04.028>
- Druss, B. G., Bradford, D., & Rosenheck, R. A. (2001). Quality of medical care and excess mortality in older patients with mental disorders. *Archives of General Psychiatry, 58*(6), 565–572. <https://doi.org/10.1001/archpsyc.58.6.565>
- Eiroa-Orosa, F. J., Lomascolo, M., & Tosas-Fernández, A. (2021). Efficacy of an intervention to reduce stigma beliefs and attitudes among primary

- care and mental health professionals: Two cluster randomised-controlled trials. *International Journal of Environmental Research and Public Health*, 18(3), 1214. <https://doi.org/10.3390/ijerph18031214>
- Gabbidon, J., Farrelly, S., Hatch, S. L., Henderson, C., Williams, P., Bhugra, D., Dockery, L., Lassman, F., Thornicroft, G., & Clement, S. (2014). Discrimination attributed to mental illness or race-ethnicity by users of community psychiatric services. *Psychiatric Services*, 65, 1360–1366. <https://doi.org/10.1176/appi.ps.201300302>
- Gallo, K. M. (1994). First person account: Self-stigmatization. *Schizophrenia Bulletin*, 20(2), 407–410. <https://doi.org/10.1093/schbul/20.2.407>
- Goffman, E. (1963). *Stigma: Notes on the management of spoiled identity*. Prentice-Hall.
- Gonzales, L., Davidoff, K. C., Nadal, K. L., & Yanos, P. T. (2015). Microaggressions experienced by persons with mental illnesses: An exploratory study. *Journal of Psychiatric Rehabilitation*, 38(3), 234–241. <https://doi.org/10.1037/prj0000096>
- Heisler, E. J. (2018). *The mental health workforce: A primer*. Congressional Research Service.
- Heisler, E. J., & Bagalman, E. (2013). *The mental health workforce: A primer*. Congressional Research Service.
- Henderson, C., Evans-Lacko, S., & Thornicroft, G. (2013). Mental illness stigma, help seeking, and public health programs. *American Journal of Public Health*, 103(5), 777–780. <https://doi.org/10.2105/AJPH.2012.301056>
- Henderson, C., Noblett, J., Parke, H., Clement, S., Caffrey, A., Gale-Grant, O., Schulze, B., Druss, B., & Thornicroft, G. (2014). Mental health-related stigma in health care and mental healthcare settings. *Lancet Psychiatry*, 1(6), 467–482. [https://doi.org/10.1016/S2215-0366\(14\)00023-6](https://doi.org/10.1016/S2215-0366(14)00023-6)
- Hinshaw, S. P. (2007). *The mark of shame: Stigma of mental illness and an agenda for change*. Oxford University Press.
- Hodges, B., Inch, C., & Silver, I. (2001). Improving the psychiatric knowledge, skills, and attitudes of primary care physicians, 1950–2000: A review. *American Journal of Psychiatry*, 158(10), 1579–1586. <https://doi.org/10.1176/appi.ajp.158.10.1579>
- Jones, S., Howard, L., & Thornicroft, G. (2008). “Diagnostic overshadowing”: Worse physical health care for people with mental illness. *Acta Psychiatrica Scandinavica*, 118(3), 169–173. <https://doi.org/10.1111/j.1600-0447.2008.01211.x>
- Kessler, R. C., & Üstün, T. B. (2004). The World Mental Health (WMH) Survey Initiative version of the World Health Organization (WHO) Composite International Diagnostic Interview (CIDI). *International Journal of Methods in Psychiatric Research*, 13(2), 93–121. <https://doi.org/10.1002/mpr.168>
- Knaak, S., Mantler, E., & Szeto, A. (2017). Mental illness-related stigma in healthcare: Barriers to access and care and evidence-based solutions.

- Healthcare Management Forum*, 30(2), 111–116. <https://doi.org/10.1177/0840470416679413>
- Kopera, M., Suszek, H., Bonar, E., Myszka, M., Gmaj, B., Ilgen, M., & Wojnar, M. (2015). Evaluating explicit and implicit stigma of mental illness in mental health professionals and medical students. *Community Mental Health Journal*, 51, 628–634. <https://doi.org/10.1007/s10597-014-9796-6>
- Lauber, C., Anthony, M., Ajdacic-Gross, V., & Rossler, W. (2004). What about psychiatrists' attitude to mentally ill people? *European Psychiatry*, 19, 423–427. <https://doi.org/10.106/j.eurpsy.2004.06.019>
- Lauber, C., Nordt, C., Braunschweig, C., & Rössler, W. (2006). Do mental health professionals stigmatize their patients? *Acta Psychiatrica Scandinavica*, 113(Suppl. 429), 51–59. <https://doi.org/10.1111/j.1600-0447.2005.00718.x>
- Linz, S. J., & Sturm, B. A. (2013). The phenomenon of social isolation in the severely mentally ill. *Perspectives in Psychiatric Care*, 49(4), 243–254. <https://doi.org/10.1111/ppc.12010>
- Livingston, J. D., & Boyd, J. E. (2010). Correlates and consequences of internalized stigma for people living with mental illness: A systematic review and meta-analysis. *Social Science & Medicine*, 71(12), 2150–2161. <https://doi.org/10.1016/j.socscimed.2010.09.030>
- Marchand, K., Palis, H., & Oviedo-Joekes, E. (2016). Patient perceptions of prejudice and discrimination by health care providers and its relationship with mental disorders: Results from the 2012 Canadian Community Health-Mental Health Survey data. *Community Mental Health Journal*, 52, 294–301. <https://doi.org/10.1007/s10597-015-9949-2>
- Nemec, P. B., Swarbrick, M., & Legere, L. (2015). Prejudice and discrimination from mental health service providers. *Psychiatric Rehabilitation Journal*, 38(2), 203–206. <https://doi.org/10.1037/prj0000148>
- Nordt, C., Rossler, W., & Lauber, C. (2006). Attitudes of mental health professionals toward people with schizophrenia and major depression. *Schizophrenia Bulletin*, 32(4), 709–714. <https://doi.org/10.1093/schbul/sbj065>
- Overton, S. L., & Medina, S. L. (2008). The stigma of mental illness. *Journal of Counseling & Development*, 86(2), 143–151. <https://doi.org/10.1002/j.1556-6678.2008.tb00491.x>
- Penn, D. L., & Martin, J. (1998). The stigma of severe mental illness: Some potential solutions for a recalcitrant problem. *Psychiatric Quarterly*, 69(3), 253–247. <https://doi.org/10.1023/a:1022153327316>
- Pescosolido, B. (2013). The public stigma of mental illness: What do we think; what do we know; what can we prove? *Journal of Health and Social Behavior*, 54(1), 1–21. <http://www.jstor.org/stable/43186830>

- Reidy, D. E. (1993). "Stigma is social death": Mental health consumers/survivors talk about stigma in their lives. <http://www.freedom-center.org/pdf/debreidystigma.pdf>
- Ross, C. A., & Goldner, E. M. (2009). Stigma, negative attitudes and discrimination towards mental illness within the nursing profession: A review of the literature. *Journal of Psychiatric and Mental Health Nursing*, 16(6), 558–567. <https://doi.org/10.1111/j.1365-2850.2009.01399.x>
- Sadow, D., Ryder, M., & Webster, D. (2002). Is education of health professionals encouraging stigma towards the mentally ill? *Journal of Mental Health*, 11(6), 657–665. <https://doi.org/10.1080/09638230021000058210>
- Schulze B. (2007). Stigma and mental health professionals: A review of the evidence on an intricate relationship. *International Review of Psychiatry*, 19(2), 137–155. <https://doi.org/10.1080/09540260701278929>
- Schulze, B., & Angermeyer, M. C. (2003). Subjective experience of stigma: A focus group study of schizophrenic patients, their relatives and mental health professionals. *Social Science & Medicine*, 56(2), 299–312. [https://doi.org/10.1016/s0277-9536\(02\)00028-x](https://doi.org/10.1016/s0277-9536(02)00028-x)
- Sirey, J. A., Bruce, M. L., Alexopoulos, G. S., Perlick, D. A., Raue, P., Friedman, S. J., & Meyers, B. S. (2001). Perceived stigma as a predictor of treatment discontinuation in young and older outpatients with depression. *American Journal of Psychiatry*, 158(3), 479–481. <https://doi.org/10.1176/appi.ajp.158.3.479>
- Skosireva, A., O'Campo, P., Zerger, S., Chambers, C., Gapka, S., & Stergiopoulos, V. (2014). Different faces of discrimination: Perceived discrimination among homeless adults with mental illness in healthcare settings. *BMC Health Services Research*, 14, 376. <https://doi.org/10.1186/1472-6963-14-376>
- Statistics Canada. (2013). *Canadian Community Health Survey (CCHS) annual component user guide*. http://odesi2.scholarsportal.info/documentation/CCHS_2011-2012/cchs-esc2012_2011-2012gid-eng.pdf
- Stuber, J. P., Rocha, A., Christian, A., & Link, B. G. (2014). Conceptions of mental illness: Attitudes of mental health professionals and the general public. *Psychiatric Services*, 65(4), 490–497. <https://doi.org/10.1176/appi.ps.201300136>
- Thornicroft, G. (2006). *Shunned: Discrimination against people with mental illness*. Oxford University Press.
- Thornicroft, G., Rose, D., & Kassam, A. (2007). Discrimination in healthcare against people with mental illness. *International Review of Psychiatry*, 19(2), 113–122. <https://doi.org/10.1080/09540260701278937>
- van Schijndel, M. A., van Wijngaarden, J. D. H., & van de Klundert, J. J. (2021). Organization and outcomes integrated inpatient medical and

- psychiatric care units: A systematic review. *Psychiatric Services*, 73(1), 64–76. <https://doi.org/10.1176/appi.ps.202000416>
- Velasco, A. A., Santa Cruz, I. S., Billings, J., Jimenez, M., & Rowe, S. (2020). What are the common barriers, facilitators and interventions targeting help-seeking behaviours for common mental health problems in adolescents? A systematic review. *BMC Psychiatry*, 20 (article 293). <https://doi.org/10.1186/s12888-020-02659-0>

Partners of Military Veterans and Their Pet Dogs: Exploring the Human-Animal Bond

Beth A. Pratt, Cheryl A. Krause-Parello, and Christine E. Spadola

Abstract: *Partners of military veterans with mental health challenges may experience more stress than their civilian counterparts due to unique stressors. Consequently, exploration of effective support mechanisms is warranted. Research suggests that pets provide social support to various populations. This qualitative study explored the impact of the human-animal bond in pet-owning partners (N = 17) of veterans with mental health challenges by conducting one-on-one interviews and utilizing interpretive phenomenological analysis. Findings support the therapeutic role of pets for veteran partners. Results of this study contribute to emerging evidence for consideration by health care providers including the human-animal bond as a social support mechanism to potentially improve mental health and well-being of veteran partners and their families.*

Keywords: *human-animal bond, military veteran families, social support*

Partners of US military veterans make up 70 percent of the 5.5 million caregivers who are the primary source of emotional and social support for veterans with conditions such as depression, anxiety, posttraumatic stress disorder (PTSD), and traumatic brain injury (Family Caregiver Alliance, 2016; Ramchand et al., 2014). Compared to their civilian counterparts, partners who support these

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veterans experience unique challenges related to the invisible or visible trauma-related injuries of combat, financial burden, and care management in multiple complex health care systems (Strong, 2018). Research focuses on the effects of military service on veterans' mental health and well-being (Ahmadian et al., 2019) and on treatment options to improve their mental health and well-being (Possemato et al., 2019; Sloan et al., 2018). Although the effects of mental health challenges may decrease over time for the individual veteran, there may be a lasting negative impact on the functioning of their families, especially their partners (Levin et al., 2017). The US Department of Veterans Affairs (2022) recognizes the importance of partners, and its strategic goals for 2022–2028 include determining how to work with, improve, and create new support services for partners and families of military veterans. Further research is necessary to explore support mechanisms for partners living with veterans with mental health conditions.

Compared to civilian couples, military couples have a more strained relationship, higher levels of stress and uncertainty (McGaw et al., 2020), and a higher prevalence of intimate partner violence and abuse (MacManus et al., 2022). Because military couples face distinct challenges, it is important to understand the issues that a partner may face in living with a veteran (Crasta et al., 2022). For example, a partner may feel resentment, shame, and anger toward the veteran, leading to increased stress, depression, lower life satisfaction, and poorer health (Easom et al., 2018). Therefore, it is important to explore the mechanisms partners use to cope with these potential issues.

One emerging support mechanism that shows promise to support health and well-being across the life span is a relationship with a pet (Krause-Parello et al., 2019; McClaskey, 2019). According to the American Veterinary Medical Association (2019), 38.4 percent of households in the United States own at least one pet dog. Pets have been found to be a main source of social support across the life span (Brooks et al., 2016). Because the bond between humans and their pets has the potential to improve physical, psychological, and social well-being (McClaskey, 2019), pet ownership may be a form of social support and a coping mechanism for partners of veterans with mental health challenges. However, this theory remains understudied in the empirical literature. The purpose of this study was to qualitatively explore the lived experience of the human-animal bond in pet-owning veteran partners.

Methods

Design

Qualitative methods using interpretive phenomenological analysis (IPA) were employed to explore the essence (Husserl, 1931/2012) and the unspoken meanings (Heidegger, 1962) of the lived experience of the human-animal bond for partners of military veterans with mental health challenges. During the study, phenomenological reduction, or suspension of personal understanding of the

world (Husserl, 1931/2012, p. 56), was achieved by continually bracketing, or setting aside (p. 58), personal beliefs related to the phenomenon of interest to observe and describe the essence of the veteran partner's lived experience in its purest form. Through the interpretive process, the veteran partners' accounts of the phenomena were uncovered.

Interpretive phenomenological analysis has been used extensively in health psychology research as the framework for data analysis incorporating an idiographic, inductive, and interrogative process (Smith et al., 2009). As an idiographic approach, IPA entails an in-depth analysis of one individual's lived experience before moving on to another's and ultimately analyzing the lived experiences of all respondents as a whole. It is an inductive process constructed from broad research questions that are condensed into a small number of concepts and themes. Lastly, it is an interrogative process that involves situating the results into the existing literature.

The IPA process comprises seven steps:

1. Reading and rereading transcripts
2. Noting initial themes
3. Developing emerging themes
4. Searching for connections across themes
5. Moving on to the next transcript and repeating the previous steps
6. Looking for patterns across transcripts
7. Interpreting themes at deeper levels

Interpretive phenomenological analysis allows for exploration of subjective personal experiences and is often conducted on small samples of respondents for whom the research would be specifically relevant. Typically, the members of the sample have similar characteristics; in this case, they are pet-owning partners who care for veterans with a mental health condition.

Participants

After the study was approved by the university's institutional review board, a purposive sample of veteran partners ($N = 17$) was recruited. Participants were recruited through e-mails sent to various veteran organizations and by word of mouth. Inclusion criteria included:

1. Living with a military veteran with one or more self-reported mental health conditions (PTSD, depression, anxiety, suicidal ideations, alcohol or substance use disorder, chronic pain, or traumatic brain injury)
2. Age 18 years or older
3. Current dog ownership
4. Fluency in English
5. Willingness and ability to provide informed consent

Exclusion criteria were separation or divorce from a military veteran or uncorrected hearing or visual impairment.

Procedures

The researchers developed a participant demographic and characteristics questionnaire and interview questions based on a previous study (Krause-Parello & Morales, 2018). The participant partners' and veterans' demographics and characteristics were captured, stored, and analyzed using the online Research Electronic Data Capture (REDCap) platform (Harris et al., 2009, 2019).

As principal investigator (PI), the first author informed the participants about the nature and purpose of the study and answered all questions prior to obtaining verbal informed consent. Participants completed the demographics and characteristics questionnaire via a REDCap link followed by one-on-one audio-recorded interviews via a secure online conferencing platform or via telephone. The PI disclosed her role as a former military family member and current pet owner to establish a relationship with the participants.

The interview consisted of an opening question to build trust, introductory questions to foster conversation, transition questions to explore the lived experience in a broad context, and key questions that drove the study. Key questions included the following: (1) describe the bond that exists between you and your pet dog, (2) describe how you would feel if you did not have your dog, and (3) describe how you feel when you are away from your dog for long periods of time. The PI incorporated probing techniques as needed to obtain a deeper perspective and to better understand the participant's viewpoint. The final question, describe the impact that dog ownership has had on your well-being, assisted in bringing closure to the discussion.

Data collection lasted up to one hour and was completed between July 2020 and January 2021. The PI took field notes before, during, and after the individual interviews. No participants refused to answer questions or dropped out of the study. Upon completion of the questionnaire and interview, participants received a \$20 electronic gift card from a national retail chain store as a token of appreciation for their time.

Data Analysis

The PI transcribed the interviews verbatim, checked the transcripts for accuracy against the field notes, and imported them into Atlas.ti Web (version 7.5, 2018), a qualitative data analysis software program. The demographic and characteristic data were quantified utilizing REDCap and Microsoft Excel. Data were analyzed using the IPA method (Smith et al., 2009).

The PI read and reread individual transcripts to gain a sense of the participant's meaning arising from the lived experience; she then noted thoughts and comments regarding linguistic content and context on each transcript. As a

result of the initial analysis 21 codes were derived from the data and maintained in a codebook. Upon further analysis by the PI, the 21 codes were combined into 5 emerging themes which were detailed in a working document. The PI and the third author, who had previous qualitative research experience, achieved concurrence after reviewing and connecting the emerging themes. Data with conceptual similarities were grouped until superordinate themes and subthemes emerged. Transcription and data analysis occurred concurrently until data saturation was reached. The second author, who also had previous qualitative research experience, performed an independent audit to verify themes. Five emerging themes were refined into three superordinate themes and subthemes to reflect overall participant meanings of the lived experience and the effect of the human-animal bond on their health and well-being. The final superordinate themes and subthemes were reviewed by all researchers, and discrepancies were resolved.

Results

Participants

There were 17 participants (female $n = 15$; male $n = 2$) who were married ($n = 16$) or living with a partner ($n = 1$); their ages ranged from 22 to 74 years of age ($M = 42$; $SD = 13.52$). Eight had children. Participants were mainly non-Hispanic white ($n = 12$), followed by Latino/Hispanic ($n = 2$), individuals with two or more/other races/ethnicities ($n = 2$), and Asian ($n = 1$). Of 17 participants, 11 had a college degree, 1 had a vocational degree, and 5 had some college credit. Household annual income ranged from \$25,000 to \$49,999 ($n = 2$), \$50,000 to \$99,999 ($n = 7$), \$100,000 to \$199,999 ($n = 6$), and more than \$200,000 ($n = 2$). Participants were employed ($n = 13$), homemaker ($n = 1$), student ($n = 2$), or retired ($n = 1$); two had previous military service.

Characteristics of the military veterans and their partners' pets are described in tables 1 and 2.

Superordinate Themes and Subthemes

Interviews of the 17 participants yielded three superordinate themes with two including subthemes:

1. Unconditional human-dog bond
 - 1a. Reciprocal relationship
 - 1b. Family member
 - 1c. Physical and emotional presence
2. Dog's impact on human health and well-being
 - 2a. Physical health
 - 2b. Emotional well-being
3. Drawbacks to dog ownership

Table 1 Characteristics of the participants' veteran partners

Variable	<i>n</i>	%
Branch of US Military		
Army	11	64.7
Air Force	1	5.9
Marines	1	5.9
Navy	3	17.6
National Guard	1	5.9
Deployment		
Vietnam	1	5.9
Gulf War	2	11.8
Operation Iraqi Freedom	4	23.5
Operation Enduring Freedom	5	29.4
Not applicable	5	29.4
Mental health challenges*		
Posttraumatic stress disorder	13	76.5
Depression	13	76.5
Anxiety	11	64.7
Suicidal ideations	5	29.4
Increased alcohol use	5	29.4
Substance use disorder	3	17.6
Chronic pain	7	41.2
Traumatic brain injury	3	17.6

*Participants responded to more than one choice.

Themes and subthemes are discussed below; interpretive commentary is provided in the discussion section.

Superordinate Theme 1: Unconditional Human-Dog Bond

Subtheme 1a: Reciprocal relationship. Participants in this study described the unconditional and nonjudgmental bond they have with their pet dog. Dogs were found to be predictable, consistent, and dependable. For example, during stressful times, participants expressed that dogs provided nonjudgmental support that their human counterparts often do not provide:

People are not always predictable or consistent or dependable and, you know, the dogs are pretty predictable, consistent, and dependable, and dogs love you no matter what. I could have the worst day. I have the worst panic attack. And my dog never acts like they're afraid of me, you know, like I'm diseased or weird or anything like that.

The importance of the human-dog bond was a recurring thread. Many participants perceived that their relationship with their dog was distinct and unique as compared to their relationships with humans. Participants sensed trust and authenticity when interacting with their dogs and an immense amount of love and loyalty between them:

Table 2 Characteristics of participants' pets and pet ownership

Variable	<i>n</i>	%
Number of dogs in home		
One	9	52.9
Two	6	35.3
Three	2	22.8
Years of current dog ownership*		
0–2	7	41.2
3–5	6	35.3
6–8	2	11.8
9–11	4	23.5
12–14	1	5.9
≥15	2	11.8
Dog health rating*		
Excellent	11	64.7
Very good	8	47.1
Good	1	5.9
Fair	2	11.8
Exercise level after dog ownership		
Increased	10	58.8
Has not changed	7	41.2
Interaction with people after dog ownership		
Increased	5	29.4
Decreased	3	17.6
Has not changed	9	52.9

*Participants responded to more than one choice.

There are some things I will share with my dog that I would never share with a person.

I think there's this big or overwhelming amount of love that you get from a dog that you just don't really find in any other animal, sometimes in other humans.

My dogs are the first thing I think about when I wake up and the last thing I think about when I go to bed at night.

Subtheme 1b: Family member. A major part of the unconditional human-dog bond encompassed the idea of the dog as a member of the family. Many of the participants described their dog as their child, treating their dogs with the same love and care as a human child. This was even echoed by those who did not have children:

She is so special. I love that dog so much. As much as a mother would a child, just it's a very, very strong bond.

I have no children, so my pets are my children.

Dogs were also taken into consideration when making decisions for the family. They were acknowledged as active participants in the family's daily routines at mealtime and sleep time, for example:

The dog is part of our lives. I think she's part of our family, and we always consider the dog in everything we do.

Our one dog sleeps on the couch, and she knows in the morning what my little ritual is. I fix my coffee and I sit right where she lays. In the morning, she gets up when she sees me get my coffee and moves over cause she knows that's where I want to sit.

One participant stated that "I think they complete our family," and another went so far as to give the dog "our last name." A third participant equated the dog with family members and enthusiastically said, "I just love him so much. I don't know what to do without him."

Subtheme 1c: Presence. Dogs were noted as a continuous presence both physically and emotionally for their human counterpart. The interesting twist that occurred during the interviews was the repeated notion of the dog seeking proximity to their human:

You know the dog is always in the space and always around and makes me feel welcomed.

He follows me everywhere. He needs to know where I am at all places at all times, and in fact, knows when my car pulls in the driveway and lets everyone know that mom's home.

She's attached to my hip almost all the time anyway. So, she . . . like gets almost like inside my hip when we're sitting on the couch. She can't get close enough or something. I think she would crawl inside me if she could. She just wants to be close.

The dogs were seen as a security measure, an alarm system, someone to keep them safe, and a calming steady presence while the military veteran was away from home for long periods of time:

Being a military partner, I like having an animal in the house. And when you're home alone with a couple of children, if for no other reason, I wanted an early warning system in the house.

He's always there for me; he's always making sure I'm okay.

The anticipated lack of presence was equally as important as the presence. The participants had a hard time imagining life without their dog. They expressed an unconditional love and a feeling of loss if anything were to happen to their dog. In fact, many participants showed signs of anticipatory grief and began to cry when they talked about losing their dogs:

If something happened to him, I would be devastated. It's just a bond that I can't imagine not having. He's just my little sidekick.

I don't know what I'll do when he passes because he's . . . I couldn't imagine my life before him and I can't imagine my life after him. He's been my best friend [gets weepy]. Sorry I just thought about, I'm like, oh God, it's too real.

Superordinate Theme 2: Dog's Impact on Human Health and Well-Being

Subtheme 2a: Physical health. Participants felt that their dogs had an impact on their health and well-being in many ways. Exercise, namely dog walking, was frequently discussed. The dogs provided the motivation for physical activity, especially during the COVID-19 pandemic:

I walk him a couple times a day. During quarantine, we went on lots of walks.

Typically, every morning we walk them about two or three miles before we go to work. So, we got to get up a bit earlier. But it helps us get steps and it also helps us with physical exercise you know maintain your weight.

It has made me healthier in that I have to walk the dog. I don't have to walk the dog; I could let him out on a leash in the backyard and stuff. But I walk the dog because it's good for him. Somehow or another that converts into being good for me, too.

The dogs promoted good sleep hygiene, including pre-bed routines and consistent sleep schedules. As such, some participants felt a sense of comfort in having their dog as a bed partner:

I don't get to sleep without the dog in the bed.

At 8:15, she gets up and is headed back to the hallway, the bedroom, and she'll come back and try to get us, you know—come on, it's bedtime. I mean it's like you can set the clock. And she does it every evening.

Subtheme 2b: Emotional well-being. Dogs were acknowledged for supporting the participants' emotional well-being. A majority of the participants who felt depressed or anxious credited their dog for being a steadfast companion:

He has had a positive influence on a lot of things in my mental health like the biggest thing, the anxiety, being sad. I'm not depressed anymore. It's a companion. It's definitely a way to get me out of a funk or something that could lead into a depression.

Honestly, I was literally going into a deep depression with everything from health to in general, just little things. So, when he came into our lives, it was like the most amazing feeling.

Dogs gave their owners a sense of purpose and something greater than themselves to hold onto. Dog ownership provided a sense of responsibility and gave the participants something to care for other than themselves:

Dog ownership makes us better, makes you a better person. I mean overall it teaches you, especially from a young age, it teaches you responsibility and how to adjust to different needs and gives you something to look forward to at the end of the day.

My dogs give my life a different meaning and a stronger purpose.

Dogs helped ground their humans' emotions to the present. Participants felt their dogs supported free expressions of their feelings without judgment and provided emotional stability:

His emotional support, just being happy, kind of helps me live in the moment more. I know he's a dog, but he's one of my best friends.

When I am unhappy, just petting them makes me feel better. There's something about that tactile experience that is very comforting.

Superordinate Theme 3: Drawbacks to Dog Ownership

Although the majority of participants described the many positive aspects of owning a dog, some discussed the drawbacks of pet ownership. Caring for an animal could be expensive and during times of financial uncertainty could make dog ownership stressful:

They're expensive so there's that.

There's been a couple of times where financial crunches definitely didn't help our well-being, but it comes with the territory.

Another drawback of dog ownership was interference with human-to-human relationships, whether between friends or family:

I would probably try to reach out to my friends and people. Just not be as busy with the dog as I am.

He gets actually in the way of mine and my husband's relationship, because there are nights when he wouldn't let the dog in the bed that I would want to sleep on the couch and be by the dog.

Participants expressed concerns that their dogs might increase their risk for falls. Personal injury, perceived or real, due to their dog's proximity was highlighted as a cause of worry:

She is underneath our, right underneath our feet. She might cause an injury one day.

There are times when I wish he wouldn't follow me around or lay on my feet. I have to always look down to see where he is because I broke a table one time because I tripped over him and I didn't know he was there.

Discussion

Our study revealed that veteran partners ($N = 17$) felt a loving and beneficial bond with their pet dogs, which they perceived to positively impact their health and well-being. To the best of our knowledge, this is one of the only qualitative studies focusing on the human-animal bond and veteran partners.

Veteran partners with pet dogs described an abundance of unconditional love as part of the human-animal bond. The participants and their dogs cultivated mutual reciprocal relationships embodied by genuineness and trustworthiness. The partners, as well as the veterans and in some cases their daughters and sons, considered the pet dog an essential family member. Furthermore, the dog's devotion and faithful presence augmented their unconditional human-dog bond. The dog's unconditional love, status as a family member, and steadfast companionship have been described in the existing literature investigating the human-animal bond in military veterans, particularly with service dogs (Cole, 2019; Krause-Parello et al., 2021; McConnell et al., 2019). Although this study focused on veteran partners and the bond with their pet dogs, the analysis confirmed findings from existing literature suggesting that veteran partners might consider dog ownership to foster well-being at an individual level as well as a familial level.

The rich dialogue that occurred during the interviews revealed that dogs had a profound impact on veteran partners' health and well-being. The common thread throughout this theme included the dog as a catalyst for increased

physical activity (Krause-Parello et al., 2019), improved sleep quality (Hoffman et al., 2018), and a sense of purpose (Hawkins et al., 2021; McDonald et al., 2021). The positive aspects of the dog's influence on physical health and emotional well-being are important to consider for veteran partners and families, especially those managing physical and mental health challenges related to military duty. Likewise, the human-animal bond may be significant for active duty military partners and families who may experience multiple moves and deployments. The dog may be the one constant in the daily life of the veteran or active duty military family that provides stability (Krause-Parello & Morales, 2018). Additionally, a partner who is the sole caregiver for a veteran who has chronic physical and mental health conditions may rely on the pet dog to offer relief in the form of exercise and playfully encourage being in the moment.

Dialogue from the interviews indicated positive aspects of owning a dog; however, some participants discussed drawbacks of dog ownership. Burdens supported by other research included finances and caregiving (Krause-Parello & Morales, 2018), impingement on relationships with other human beings (Applebaum et al., 2021), and perceived or actual risk of personal injury (van Delft et al., 2019). Participants overwhelmingly expressed that these drawbacks would not deter them from including a dog in their life. However, for a person who has limited finances, is advancing in age, lives alone, or has difficulty with vision and balance, it is especially important to consider these issues (Enders-Slegers & Hediger, 2019).

Compared to the civilian family, the military veteran family has unique health challenges including increased stress and uncertainty due to service-related psychological and cognitive conditions (McGaw et al., 2020) and higher prevalence of intimate partner violence and abuse (MacManus et al., 2022). Often partners of veterans with mental health challenges are the main source of support for the family; they have been referred to anecdotally as "the glue that keeps the family together." Because partners having this responsibility can feel overwhelmed, support mechanisms are essential.

It is important to have an array of easily accessible support mechanisms in this population to address individual and family needs related to maintaining optimal health and well-being. The veteran partners in this study voiced the benefits of the human-animal bond on their emotional and physical health. For instance, partners shared that their dogs provided unconditional and non-judgmental love, dependability, trustworthiness, encouragement for living in the moment, and shared activities (e.g., dog walking).

Emerging Practice Implications

Health care providers can use the findings from this research to gain a greater understanding of the impact of the human-animal bond on health and well-being for partners of veterans with suboptimal mental health. With this greater understanding, health care providers can discuss the potential benefits of dog ownership, engage in dialogue with veteran partners and other marginalized

populations about pet ownership, and consider the possibility of incorporating pets as a support mechanism into individual and family plans of care.

To bolster social support networks, health care providers can encourage current pet owners to connect with other pet owners at dog parks, planned community activities such as fundraisers for animal shelters, or on social media groups dedicated to veteran spouses and/or pet owners. However, some veteran spouses cannot own a pet due to financial constraints or housing restrictions. Health care providers can consider alternative methods of incorporating animals into individualized and family plans of care, such as animal-assisted activities and therapy, inclusion of animals in support groups, visits to zoos, and volunteering at or visiting animal shelters.

Based on the results of this study, it is suggested that future research should build upon the subjective experiences of the veteran partners and broaden the understanding of the perceived effects of the human-animal bond for the active duty military and veteran family as a unit. Focused biological, psychological, and social research using objective measures such as stress hormones and reliable and valid psychosocial measures can provide important insight into the quantification of the human-animal bond. Large-scale studies are recommended to characterize the nature and quality of the human-animal bond and methodically expand the body of existing knowledge.

Limitations

The results of this study should be viewed in the context of its limitations. Although the researchers have experience with previous research projects based on qualitative research methodology, personal bias and subjective interpretations of the transcripts and consequent development of the superordinate themes and subthemes may have influenced the results. Researchers established credibility with reflexivity, prolonged time spent with participants, and use of participant quotes; however, member checking and feedback would have further strengthened the results.

Although the researchers acknowledge the relatively small sample size, small sample sizes are common when using IPA methodology in health research (Smith et. al., 2009). Based on data saturation, the researchers are confident that the sample size was ample to achieve the goals of this research. The sample was adequately distributed according to gender when compared to the actual percentage of female to male military and veteran partners (Women's Bureau, 2019); however, there was a lack of heterogeneity in the race and ethnicity of the sample population that will be important to address in future studies.

Conclusion

This qualitative study highlights the importance of the human-animal bond for partners of veterans with mental health challenges. Veteran partners provided important insights for understanding the supportive effects of dog ownership

on health and well-being. Health care providers should consider the incorporation of pets as a therapeutic support mechanism for military and veteran family members and other marginalized populations.

References

- Ahmadian, A. J., Neylan, T. C., Metzler, T., & Cohen, B. E. (2019). Longitudinal association of PTSD symptoms and self-reported physical functioning among veterans. *Journal of Affective Disorders*, *250*, 1–8. <https://doi.org/10.1016/j.jad.2019.02.048>
- American Veterinary Medical Association. (2019). *U.S. pet ownership statistics*. <https://www.avma.org/resources-tools/reports-statistics/us-pet-ownership-statistics>
- Applebaum, J. W., MacLean, E. L., & McDonald, S. E. (2021). Love, fear, and the human-animal bond: On adversity and multispecies relationships. *Comprehensive Psychoneuroendocrinology*, *7* (article 100071). <https://doi.org/10.1016/j.cpnc.2021.100071>
- ATLAS.ti Scientific Software Development GmbH. (2018). *ATLAS.ti Web* (version 7.5). <https://atlasti.com/atlas-ti-web>
- Brooks, H., Rushton, K., Walker, S., Lovell, K., & Rogers, A. (2016). Ontological security and connectivity provided by pets: A study in the self-management of the everyday lives of people diagnosed with a long-term mental health condition. *BMC Psychiatry*, *16* (article 409). <https://doi.org/10.1186/s12888-016-1111-3>
- Cole, A. (2019). Grow old along with me: The meaning of dogs in seniors' lives. *International Journal of Community Well-Being*, *2*, 235–252. <https://doi.org/10.1007/s42413-019-00034-w>
- Crasta, D., Spears, A. P., Sullivan, S. R., Britton, P.C., & Goodman, M. (2022). Better off with you: Exploring congruity between caregivers' and veterans' experience of efforts to cope with suicide. *Military Psychology*, *34*(3), 326–334. <https://doi.org/10.1080/08995605.2021.1959222>
- Easom, L. R., Wang, K., Moore, R. H., Wang, H., & Bauer, L. (2018). Operation family caregiver: Problem-solving training for military caregivers in a community setting. *Journal of Clinical Psychology*, *74*, 536–553. <https://doi.org/10.1002/jclp.22536>
- Enders-Slegers, M. J., & Hediger, K. (2019). Pet ownership and human-animal interaction in an aging population: Rewards and challenges. *Anthrozoös*, *32*(2), 255–265. <https://doi.org/10.1080/08927936.2019.1569907>
- Family Caregiver Alliance. (2016). *Caregiver statistics: Demographics*. <https://www.caregiver.org/resource/caregiver-statistics-demographics>
- Harris, P. A., Taylor, R., Minor, B. L., Elliott, V., Fernandez, M., O'Neal, L., McLeod, L., Delacqua, G., Delacqua, E., Kirby, J., & Duda, S. N. (2019). The REDCap Consortium: Building an international community

- of software platform partners. *Journal of Biomedical Informatics*, 95 (article 103208). <https://doi.org/10.1016/j.jbi.2019.103208>
- Harris, P. A., Taylor, R., Thielke, R., Payne, J., Gonzalez, N., & Conde, J. G. (2009). Research electronic data capture (REDCap)—A metadata-driven methodology and workflow process for providing translational research informatics support. *Journal of Biomedical Informatics*, 42(2), 377–381. <https://doi.org/10.1016/j.jbi.2008.08.010>
- Hawkins, R. D., Hawkins, E. L., & Tip, L. (2021). “I can’t give up when I have them to care for”: People’s experiences of pets and their mental health. *Anthrozoös*, 34(4), 543–562. <https://doi.org/10.1080/08927936.2021.1914434>
- Heidegger, M. (1962). *Being and time*. Blackwell.
- Hoffman, C. L., Stutz, K., & Vasilopoulos, T. (2018). An examination of adult women’s sleep quality and sleep routines in relation to pet ownership and bedsharing. *Anthrozoös*, 31(6), 711–725. <https://doi.org/10.1080/08927936.2018.1529354>
- Husserl, E. (2012). *Ideas: General introduction to pure phenomenology* (W. R. B. Gibson, Trans.). Routledge. (Original work published 1931).
- Krause-Parello, C. A., Gulick, E. E., & Basin, B. (2019). Loneliness, depression, and physical activity in older adults: The therapeutic role of human-animal interactions. *Anthrozoös*, 32(2), 238–254. <https://doi.org/10.1080/08927936.2019.1569906>
- Krause-Parello, C. A., & Morales, K. A. (2018). Military veterans and service dogs: A qualitative inquiry using interpretive phenomenological analysis. *Anthrozoös*, 31(1), 61–75. <https://doi.org/10.1080/08927936.2018.1406201>
- Krause-Parello, C. A., Pratt, B. A, Meyer, E., & Browne-Banic, L. (2021). Veterans and animals: A review of the literature on well-being and social isolation and recommendations during COVID-19. *Journal of Military, Veteran, and Family Health*, 7(3), 86–99. <https://doi.org/10.3138/jmvfh-2020-0059>
- Levin, Y., Bachem, R., & Solomon, Z. (2017). Traumatization, marital adjustment, and parenting among veterans and their partners: A longitudinal study of reciprocal relations. *Family Process*, 56(4), 926–942. <https://doi.org/10.1111/famp.12257>
- MacManus, D., Short, R., Lane, R., Jones, M., Hull, L., Howard, L. M., & Fear, N. T. (2022). Intimate partner violence and abuse experience and perpetration in UK military personnel compared to a general population cohort: A cross-sectional study. *Lancet Regional Health—Europe*, 20 (article 100448). <https://doi.org/10.1016/j.lanep.2022.100448>
- McClaskey, B. (2019). Companion animals and their impact on human lives. *Midwest Quarterly*, 60(3), 335–350.
- McConnell, A. R., Lloyd, E. P., & Humphrey, B. T. (2019). We are family: Viewing pets as family members improves well-being. *Anthrozoös*, 32(4), 459–470. <https://doi.org/10.1080/08927936.2019.1621516>

- McDonald, S. E., Matijczak, A., Nicotera, N., Applebaum, J. W., Kremer, L., Natoli, G., O’Ryan, R., Booth, L. J., Murphy, J. L., Tomlinson, C. A., & Kattari, S. K. (2021). “He was like, my ride or die”: Sexual and gender minority emerging adults’ perspectives on living with pets during the transition to adulthood. *Emerging Adulthood, 10*(4), 1008–1025. <https://doi.org/10.1177/21676968211025340>
- McGaw, V. E., Reupert, A. E., & Maybery, D. (2020). Partners of veterans with PTSD: Parenting and family experiences. *Families in Society, 101*(4), 456–468. <https://doi.org/10.1177/1044389420905753>
- Possemato, K., Johnson, E. M., Emery, J. B., Wade, M., Acosta, M. C., Marsch, L. A., Rosenblum, A., & Maisto, S. A. (2019). A pilot study comparing peer supported web-based CBT to self-managed web CBT for primary care veterans with PTSD and hazardous alcohol use. *Psychiatric Rehabilitation Journal, 42*(3), 305–313. <https://doi.org/10.1037/prj0000334>
- Ramchand, R., Tanielian, T., Fisher, M. P., Vaughan, C. A., Trail, T. E., Batka, C., Voorhies, P., Robbins, M. W., Robinson, E., & Ghosh-Dastidar, B. (2014). *Hidden heroes: America’s military caregivers*. RAND Corporation. https://www.rand.org/pubs/research_reports/RR499.html
- Sloan, D. M., Marx, B. P., Lee, D. J., & Resick, P. A. (2018). A brief exposure-based treatment vs cognitive processing therapy for posttraumatic stress disorder: A randomized noninferiority clinical trial. *JAMA Psychiatry, 75*(3), 233–239. <https://doi.org/10.1001/jamapsychiatry.2017.4249>
- Smith, J. A., Flowers, P., & Larkin, M. (2009). *Interpretive phenomenological analysis: Theory, method and research*. SAGE.
- Strong, J. D. (2018). Military caregivers. *Clinical Social Work Journal, 46*(2), 156–163. <https://doi.org/10.1007/s10615-018-0657-6>
- US Department of Veterans Affairs. (2022, March 30). *Department of Veterans Affairs fiscal years 2022–28 strategic plan*. <https://department.va.gov/wp-content/uploads/2022/09/va-strategic-plan-2022-2028.pdf>
- van Delft, E. A. K., Thomassen, I., Schreuder, A. M., & Sosef, N. L. (2019). The dangers of pets and horses, animal related injuries in the Emergency department. *Trauma Case Reports, 20* (article 100179). <https://doi.org/10.1016/j.tcr.2019.100179>
- Women’s Bureau. (2019). *Military spouses fact sheet*. US Department of Labor. <https://www.dol.gov/sites/dolgov/files/WB/mib/WB-MilSpouse-factsheet.pdf>

Self-Conducted and Skype-Mediated Exposure Therapy for a Severe Balloon Phobia: A Single-Case Design

Katie Elmhurst and Bruce A. Thyer

Abstract: *Real-life exposure therapy involving Skype technology was used to successfully treat a 27-year-old woman with a debilitating fear of balloons. The majority of the therapeutic work consisted of self-conducted exposure by the client, augmented by two hours of therapist-modeled and guided exposure to blowing up and popping balloons, observed by the client via Skype and then emulated with therapist guidance. This case study was jointly documented by the client, a licensed clinical social worker (LCSW) and psychotherapist, and the therapist, also an LCSW as well as a board-certified behavior analyst. Apart from the client's personal narrative, the outcomes of the case study were supported by two standardized behavioral approach tests conducted by the therapist prior to treatment and after three months of treatment. A novel aspect of this treatment was the use of Skype technology to make possible real-life exposure therapy conducted by the therapist and synchronously delivered to the client, who was more than 200 miles distant. The joint writing of first person perspectives of treatment by the client and therapist is another unusual element that we believe strengthens the credibility of this single-case study.*

Keywords: *anxiety evoking stimulus, exposure therapy, single-case study, specific phobia*

Case studies relating to the treatment of a fear of balloons are relatively rare and have usually involved children or adolescents (e.g., Brewer, 2013; Houlihan et al., 1993; McGrath et al., 1990; Mosier, 1973; Yule et al., 1974). AuBuchon (1993) reported treating a 22-year-old woman and Kraft (1994) a 60-year-old woman, each with a balloon phobia. A severe fear and avoidance of balloons

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may meet the criteria for a specific phobia (American Psychiatric Association, 2013, pp. 197–202). A well-supported treatment for specific phobias known as exposure therapy (ET; Barlow et al., 2007) usually involves exposing the client in a graduated manner to their anxiety evoking stimulus (AES), preferably in real life. The client is encouraged to continue exposure to the AES at a given proximity or level of intensity until concurrent improvements are seen in subjective anxiety, physiological arousal, and avoidance behavior. When this occurs, the therapist encourages the client to come closer to the AES, which enhances anxiety. This process is repeated, ideally until avoidance, fear, and arousal are markedly diminished or eliminated. Generally, ET sessions last 1 to 2 hours, terminating when the client has relaxed and returned to a calmer state. This process is continued until a satisfactory clinical result is obtained and the client is free from unrealistic fear. Success rates are high and usually obtained within a dozen hours of exposure or less.

When conducted by a skilled clinician, ET is never an overwhelming experience for the client; early observable improvements provide reinforcement for the client's efforts and encourage continued treatment (Thyer, 1981, 1983, 1987, 2022; Thyer & Stocks, 1986; Vonk & Thyer, 1995). Although clinical skills such as support, encouragement, reinforcement, and empathy are important, the ingredient critical to the success of ET is the client's prolonged contact with the AES. This latter contention is supported by numerous studies demonstrating the therapeutic success of self-conducted ET using self-help manuals and computer-based therapy programs without the presence of a therapist, as well as by the absence of credible evidence that nonspecific supportive therapies conducted in person are an effective treatment for clinical phobias. The following case study, which describes the ET treatment of a woman with a severe fear of balloons, takes the form of concurrent descriptions of the therapeutic process from both her perspective and that of the therapist.

Background

In the spring semester of 2016 the second author, Bruce Thyer, taught a practice research methods course within the doctoral social work (DSW) program at Tulane University. This was a three-credit-hour class taught largely online with two weekends of live instruction. There were nine students, one of whom was first author Katie Elmhurst. Having read articles for class that described using single-case designs to evaluate treatment provided to clients with anxiety disorders, Katie approached Bruce at the end of the term and asked if he would treat her for her severe fear of balloons. After some discussion, Bruce agreed, with the stipulation that the director of the DSW program and dean of the university must give permission and that Katie would work on preparing a case study of her treatment and submit it for publication with Bruce as a co-author. Because acceptance of a published research project is a DSW program requirement, Katie could potentially fulfill two objectives: to overcome her fear as well as to become an author. Permission was readily obtained. The university's

Human Subjects Review Committee told Bruce that research involving three or fewer participants (e.g., single-case studies such as this one) did not require institutional review board approval; hence, none was sought. Bruce provided treatment on a pro bono basis.

First Person Account: My Case History (Katie)

Growing up as the eldest of four, my childhood was circled by commemorative events that included the presence of balloons: birthday parties, the circus, the local community's seasonal parades, and New Year's Eve. Initially, when I asked Bruce to help me overcome my fear of balloons, I did not know how this problem began and I could not recall a time when I was not terrified of them. Over the years my phobia of balloons worsened. Balloons, in my opinion, had become only more threatening, loud, and unpredictable. Although a self-proclaimed rationalist, I found myself unable to curb the use of scary adjectives to best describe my object of fear. Due to my beliefs about balloons, any events festooned with balloons were situations approached with anxious fearful uncertainty. During my adolescence, a number of events involving balloons ended in panic-stricken flight. For instance, once I found myself tearfully hyperventilating in a dark corner at the Ontario Woodbine Theme Park after spotting a cheery clown crafting inflated balloon animals for passersby. On another occasion I dashed out of a high school assembly following the unanticipated release of balloons to commemorate the first hockey home opener of the season.

Although these were all dreadful situations, during an incident that occurred at Silver Birch Bible Camp in the summer of 2005 I believe my phobia took a significant turn for the worse. As a camp counselor for a number of rambunctious elementary aged youth, I found myself trapped in the middle of an overpacked mess hall, occupied by dozens of yelling kids and an overabundance of free-floating balloons. Unable to make it to the exit in time, I found myself belly up on the floor, encircled by a number of my concerned cabin A campers. It was at this moment that I truly felt powerless, in the relentless grip of my phobia, leading me to believe that it had inevitably defeated me. My self-proclaimed failure to overcome my phobia resulted in me feeling both defeated and embarrassed.

After my camp experience, if balloons were present, I was not. In situations where balloons made an unforeseen entrance, I would both quickly and quietly exit. I was aware of the irrational nature of my fear but, despite being a licensed clinical social worker and a trained psychotherapist, I could not force myself to tolerate being around balloons. I even avoided uninflated balloons.

In spring 2016, following Bruce Thyer's class, in which he shared past exposure therapy work in the treatment of clients with severe fears, a newfound possibility of addressing my own severe phobia emerged. I asked him to treat me, and he agreed, with some conditions he described in the Background section of this article. I committed to expose myself to balloons, with his help. My hope rested in the exposure process, needing to relocate balloons to their appropriate place in my life: objects of celebration and fun.

Assessment (Bruce)

In talking with Katie I recognized that she met the DSM5 (*Diagnostic and Statistical Manual of Mental Disorders*, fifth edition) criteria for a specific phobia. I knew that she was a very bright person who wanted to overcome her fears because they had negatively impacted her life. It turned out that she was also afraid of loud noises in general, and occasions like the 4th of July, Mardi Gras, and New Year's Eve were pretty miserable for her. The sounds of loud gunshots and thunder were also quite frightening. She had insight into the unrealistic nature of her fears, but this did not enable her to overcome them. I hypothesized that the fears of loud noises were secondary to her primary evoking stimulus of inflated balloons and the noise they made when popped.

Although I had never treated anyone with a balloon phobia, I had more than 30 years of experience in treating clients with other specific phobias and was confident that her fear should be similarly responsive to ET. In searching the literature prior to working with Katie, I found case studies of treating balloon phobias with ET. No other intervention seemed to have been used for this purpose so I suggested a course of ET as a first choice research-supported treatment. Katie agreed. At some point in our discussions I asked her if she recalled a precipitating event for her balloon phobia. When she indicated that she was not aware of one, I asked if she could recall a time when she was NOT afraid of balloons. This too she denied. Therefore, I asked her to ask her parents if they could shed any light on the origins of her phobia.

After talking to her parents, Katie responded,

Despite not immediately being able to determine the exact moment in which my balloon phobia began, through prompted conversation with family and friends, memories of the past have leisurely resurfaced. In particular, through recent discussion, I was able to evoke a childhood memory of an event that occurred 23 years earlier. I was age four and out for dinner with my family at the local diner when the server gave me a bright and shiny red balloon. Initially, I was told that I squealed in delight, grabbing the balloon, running with it to chase my little sister around the restaurant tables.

Despite being told that I excitedly received the gift, my own memory of the event was vividly different. It was during the weaving between tables while chasing my sister that it happened. As I was clutching the balloon tightly to my chest, I heard a deafening sound followed by the pop of my shiny red balloon. Immediately crying out in shocked disbelief, I took flight, seeking safety in my mother's embrace. Through the adamant self-search for my phobia's origins, I arguably believe this unprecedented event was the beginning of my severe balloon phobia.

In September of 2016 I returned one weekend to teach in the DSW program and met Katie after class. She knew I planned to conduct a standardized behavioral

approach test (BAT; Crowley et al., 2022; Ollendick et al., 2011) to operationalize her phobia in measurable terms before we began treatment. I had inflated a balloon to a diameter of about 12 inches and placed it in the corner of a classroom across the hall. She arrived, we chatted, and I explained what I had done with the balloon. I then described how I would ask her to get closer and closer to it until she refused to move closer.

As previously arranged, she placed a heart rate monitor on her fingertip, and we moved to the door of the classroom containing the balloon. While she stood there I asked her to rate her anxiety on a 0 to 100 scale, with 0 meaning no fear and 100 as fearful as she could imagine being. This quantitative approach to measuring subjective anxiety, labeled subjective units of distress (SUDs), has been widely used for more than 60 years and correlates well with concurrent measures of physiological arousal (Thyer et al., 1984). She gave me a number and I noted it on a data collection form, along with her concurrent heart rate. I then opened the door to the classroom and asked her to step into it with me and observe the balloon from about 20 feet away. She did, and when prompted, provided an anxiety rating; I recorded that and her heart rate. I next moved to within 15 feet of the balloon and invited her to join me. This process was repeated until she was standing next to the stationary balloon on the floor, at which point she refused to touch it. Having reached her tolerance, I terminated the BAT and we left the room. The data from this pretreatment BAT are depicted in figure 1.

We sat in another classroom where we processed her reactions to the BAT and made plans to begin treatment. Previously, during the summer, I had asked Katie not to attempt any ET work on her own, but to wait until I could complete the pretreatment assessment in person. We were now ready to begin treatment.

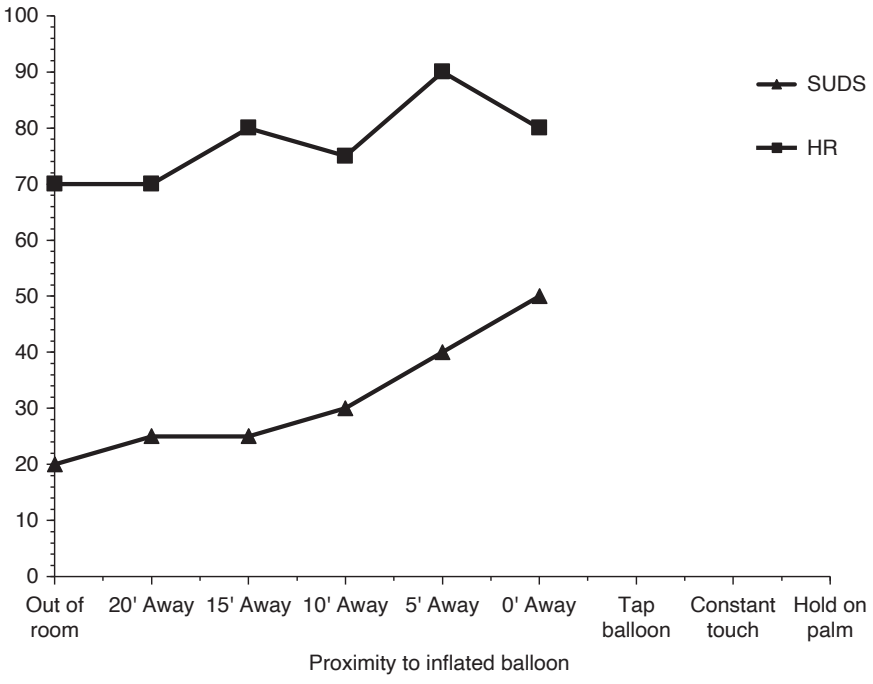
Self-Conducted Exposure Therapy (Bruce)

After returning home following that weekend, I located a one-minute YouTube video depicting dozens of balloons being popped, and I sent the link to Katie by e-mail. By phone I asked her to watch it, repeatedly, with the volume low if need be, and to keep track of her time engaged in this exercise and her reactions to viewing the video. I also asked for her to locate additional similar videos when she became bored with the one I sent her. She will describe what happened in the next section.

My Self-Conducted Exposure Therapy Experience (Katie)

I was tasked with slowly exposing myself to videos of balloons. Under Bruce's guidance I was to allot time to continual picture and video exposure to balloons. Starting in September and for the duration of the month, I spent approximately three nights a week watching YouTube videos of popping balloons. The first video session resulted in high anxiety. However, with the computer volume off and the screen minimized, I challenged myself to squarely face the screen,

Figure 1 Pretreatment behavioral approach test



focusing my attention on the balloon footage. Despite my high anxiety lasting for the first three exposure sessions, over the course of the month I was able to increase both the volume and screen size. To my disbelief, I successfully mastered watching videos of balloons without experiencing high levels of anxiety. In October, I continued to move forward in my video balloon exposure. In addition, Bruce suggested that I place uninflated balloons around my home and workspace. While completing these activities, I made a conscious effort to visualize being able to blow up and pop balloons.

Vivid dreams and balloon ruminations occurred during the beginning stages of my self-conducted balloon exposure. In one dream, I found myself running in a meadow cluttered with red and yellow balloons. Although I would not describe the dream as a nightmare, balloon-themed dreams were a common occurrence early in treatment. With my marked success in my video-based exposure, Bruce suggested I move forward to incorporate more direct exposure to balloons. In my next attempt to advance my exposure, I decided to personify the enemy. In my mind's eye, perhaps a balloon would be slightly less threatening with a nicely drawn smile and a friendly name. Wilfred was his name—my small, yellow, mellow balloon. Bruce next suggested that I have a

balloon with me whenever possible. A small deflated Wilfred traveled around with me: to work and class and around the house. At this time, Bruce inquired if I felt ready to undergo a Skype-mediated exposure session, which would be conducted under his instruction.

Skype-Mediated Exposure Therapy (Bruce)

I was not surprised by Katie's success in desensitizing herself to the videos, and I was pleased with her innovation of personalizing one balloon by painting a smiley face on it and naming it. Her experiencing balloon-themed dreams is not unusual; clients often report such dreams and waking thoughts about their anxiety-evoking stimulus. Because I lived more than 200 miles away, opportunities for conducting real-life ET with Katie were limited. I hit upon the idea of using Skype, a free Internet-based audio-visual program, to see and talk to each other in real life on our computer screens. I proposed that we use Skype to conduct a remote session of ET. Katie will describe the experience below. I asked her to bring several bags of balloons and a thumbtack with her for our meeting (I did the same), along with earplugs and a pair of noise-reducing headphones. I thought that using Skype for this purpose would be a natural segue from having Katie watch videotapes of popping balloons to conducting more quasi-real-life experiences.

Skype-Mediated Exposure Therapy with Bruce (Katie)

Bruce and I arranged a day and time for our one-on-one Skype session, in which we would blow up and pop balloons together. The meeting was scheduled for an early Monday morning in October. During the weekend prior to our meeting, I experienced severe anxiety, unable to sleep, eat, or concentrate. I found myself fixating on a number of imagined worst-case scenario situations: What if I pass out over Skype? What if the balloon pops on my face when I am blowing it up? What if I have a heart attack because I cannot handle the anxiety? Honestly, I would describe myself as a sleep-deprived, anxiety-ridden, nervous wreck prior to our appointment.

Over Skype, Bruce guided me along, providing clear step-by-step instructions on how to engage in self-conducted exposure. After I gave my permission to begin, Bruce clearly stated that before doing anything he would explain what he wanted to do and ask for my consent before proceeding. Certainly this eased my overall anxiety, as my greatest fear was unanticipated exposure. Bruce began by blowing up and popping balloons in his office over the computer screen. While he did this, I was able to turn the volume off so I could not hear the balloons being popped. I was directed to square my shoulders, focusing on his repetitive action of blowing up and popping balloons.

While tracking my anxiety, I turned up the volume after each balloon was popped. My anxiety decreased: 10, 8, 6, 3. Pop! Pop! Pop! With the initial popping of balloons, my anxiety was very high, 8 out of 10, with 10 being the

maximum level of anxiety. However, I slowly found myself entering into an unanticipated state of calm. Now, with the volume on high, I was able to square myself to the screen and watch while Bruce blew up a balloon and popped it with a pin shortly thereafter. Initially I used my earplugs and headphones, but after a bit I removed them so that I was experiencing the full effect of popping balloons by the end of the session.

Bruce asked if I was able to both blow up and pop my own balloon. Despite experiencing an instant increase in my anxiety, I was adamant. Picking up a balloon, I slowly began to blow it up. Although I would describe it as an out-of-body experience, I found myself blowing up and tying four medium-sized balloons. Despite experiencing light-headedness, disassociation, and high anxiety, I felt encouraged. I could hardly believe I was able to be so close to balloons. Enjoying the success of my effort, I nervously anticipated what I knew was coming next.

Bruce asked, "Do you have a thumbtack near you?" Not given to lying, I hesitantly picked up the thumbtack on my left. Bruce asked me to take the pin, hold the balloon firmly, and bring the pin down swiftly to pop the balloon. Despite wanting to maintain my composure, my popping of the balloon was far more likely to resemble a scene from a slasher flick. Surprising even me, a high-pitched scream bellowed out of my mouth (my apologies, Bruce) followed by the violent stabbing of my balloon. POP! It was a monumental moment. Feeling the aftermath of coming down from high adrenaline and anxiety, I instantaneously experienced overwhelming tiredness, headache, and exhaustion. However, not quite finished with the session, I successfully popped three more balloons. Unfortunately, I was able to do this only by screaming while stabbing the balloons but now my yelps were interspersed with laughter. Although I was not exactly having fun, it was tremendously fulfilling to pop balloons on my own without panicking. With an empty bag of balloons, the session was coming to an end. Bruce popped seven more balloons. I watched as he popped the balloons by sitting on them or pushing them against his head and chest. When I said that I was not yet able to pop a balloon against my body, the session came to an end.

Throughout November and December I received instruction on how to continue my self-exposure: I placed inflated balloons randomly around my home. Throughout the day, I blew up and popped balloons. Balloons had now flooded my living space, existing in and around my bed, bathtub, and kitchen sink. When I decided to fly to Indiana with a friend for Thanksgiving, Bruce and I brainstormed about how I would continue moving forward in my balloon exposure. He encouraged me to use any opportunity to invite others to pop balloons at random while in my presence. My Thanksgiving holiday, which in the past had revolved around the passing of the cranberry sauce, now incorporated a game of balloon tag in the backyard with a boisterous bunch of kids more than happy to help with my exposure. I was able to see kids fearlessly hop, skip, and play around with balloons. Despite experiencing a moderate level of anxiety (6 out of 10), I was able to successfully blow up and pop balloons.

In mid-December, Bruce and I scheduled to meet prior to the start of class. While monitoring my heart rate, Bruce guided me through another BAT. I successfully approached a balloon placed in the corner of the classroom, picked it up, and held it in the palm of my hand. The anxiety I felt was low (3 out of 10). During class, later that evening, Bruce blew up a number of balloons, placing them on and around my desk. (My classmates knew of my work with Bruce, understood this exercise, and were very encouraging.) In the past, this would have caused me to experience crippling anxiety, likely resulting in my physical flight from the room. This time I was able to maintain my concentration during class, although I found myself looking up at the rotating ceiling fan periodically, wondering about the likelihood of an unsuspecting balloon being sucked up by it. After class, with my earplugs in, Bruce asked me to pop a number of balloons. I was able to complete this challenge successfully. In addition, I popped three balloons by sitting on them, but I was still unable to silence my screams that coincided with each loud pop. Ending the session, I found myself pleased with my progress.

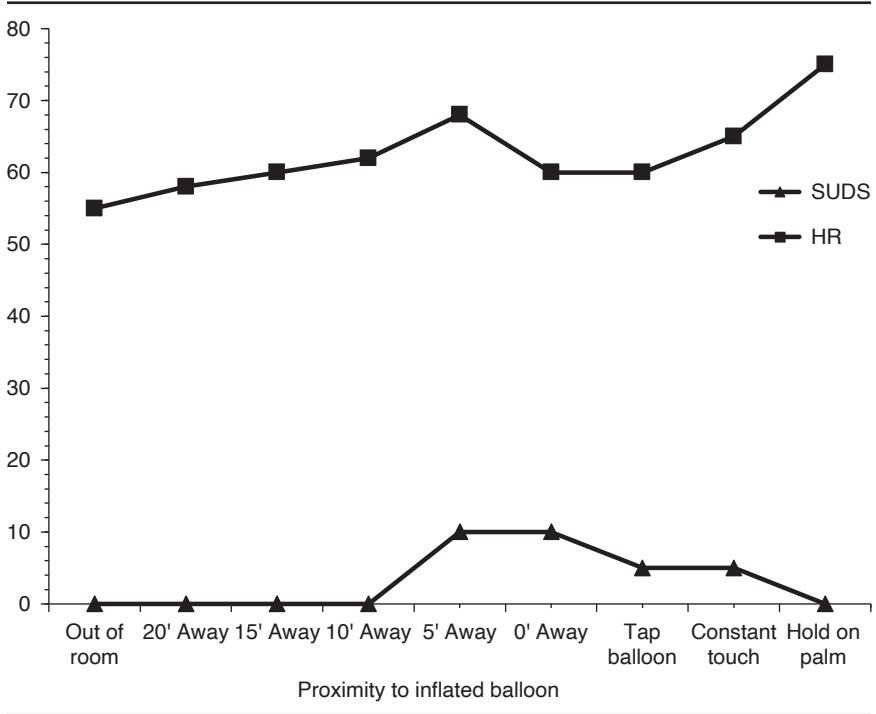
Over the holidays and throughout January I continued my self-exposure. During my family winter holiday, I even rang in my New Year surrounded by balloons. At Coco Bongo, a wildly popular dance show in the Dominican Republic, I wound up swimming in a roomful of free-falling balloons at midnight among a screaming crowd of a thousand or more partyers. With balloons floating all around me, I knew that my once proclaimed worst nightmare was no more. An oddly liberating experience, my time at Coco Bongo revealed that I no longer felt the need to retreat to small dark corners in the presence of balloons. Instead it was at Coco Bongo, during Michael Jackson's rendition of *Thriller*, that I confidently grabbed a free-falling red balloon, excitedly joining the crowd in upbeat song and dance. Moving and grooving, I felt utterly free. What a truly wonderful way to ring in the New Year.

Posttreatment Assessment (Bruce)

By early December Katie no longer met the *DSM5* criteria for a specific phobia. I conducted a posttreatment BAT in a manner similar to that used for the pre-treatment BAT. Avoidance, at least in terms of holding a balloon, high anxiety, and a high heart rate, were absent. The results of this second BAT are depicted in figure 2. After this we did a little more real-life exposure work, and I deliberately encouraged her to go above and beyond normative amounts of desensitization. Such overtraining (popping a balloon next to one's face or popping a balloon by sitting on it) helps to ensure the maintenance and generalizability of treatment effects and avoid relapse. I was confident that what residual anxiety Katie experienced would not interfere with her daily functioning and that with additional self-exposure work any lingering phobic-like symptoms could be eliminated.

Later she wrote me about her New Year's Eve experience. I wish I had been there! In March of 2017 we jointly presented this case study, Katie's first

Figure 2 Posttreatment behavioral approach test



conference paper, at a national Women in Behavior Analysis convention, held in Nashville, TN. We were joined at the conference by Katie’s sister, her mother, and a close friend, and the four of us had an enjoyable dinner together.

As I do with all my clinical work, I approached Katie’s treatment from the perspective of social learning theory and the practice of applied behavior analysis. The professional rewards of this approach to therapy are evident.

Impact and Final Reflection (Katie)

My self-conducted exposure therapy has been a liberating experience. With Bruce’s guidance, I finally became aware of the extent to which fear can negatively impact our self-control and well-being. My phobia of balloons had over time adversely shaped some of my behaviors, actions, and decisions. Over the years, I had let my fear rob me of my ability to enjoy events meant for my pleasure. At present, I see that this opportunity provided me with the tools and skills needed to face any phobia, fear, or obstacle, strengthening my ability as a clinician and empowering me as a person. Through my exposure to balloons, the association between the fear and object has been addressed. A balloon no

longer exists as my worst nightmare, the trigger of crippling anxiety, or a heart attack tied to a string. A balloon has become what it is intended to be, a balloon—not the enemy yet not a friend. It is that object that just happened to decorate my recently celebrated December birthday. Self-conducted exposure therapy may predictably be a tool of the future. Perhaps this experience may serve as a rare gift for others: with clear guidance and sheer determination, it may be possible to check things off the fear list.

Discussion

There are several novel elements to this case study. First, we could not locate any prior published papers involving the use of Skype or similar programs to conduct real-life exposure therapy for phobias. Using Skype in this manner extended the possibility of conducting real-life exposure under a therapist's guidance. Without this technology, distance would have precluded such treatment. Skype allowed the ET to be conducted in a manner virtually identical to that used for live face-to-face treatment. As therapist, Bruce modeled desired approach behavior and exposure, moving from less intense to more intense and initially frightening experiences. We then transitioned to having Katie imitate the behaviors modeled by Bruce, again moving from low to high levels of exposure.

The second novel element is the parallel writing style we used in this case report, with both the client and the therapist contributing equally to the preparation of this article and using their respective perspectives and voices. This had a pedagogical value in developing Katie's research and writing skills and helping her complete doctoral program requirements. Describing her own case as a poster presentation at a professional conference was also a new experience for her. The design and conduct of exposure therapy is a highly research-supported treatment, and this case exemplifies the process of evidence-based practice by incorporating not only research evidence but also client preferences and values, pragmatic considerations, potential costs, professional values and ethics, and the empirical evaluation of outcomes. Our experience leads us to recommend that other psychotherapist/client teams consider the joint authorship of case histories in this manner.

References

- American Psychiatric Association (2013). *Diagnostic and statistical manual of mental disorders* (5th edition). <https://doi.org/10.1176/appi.books.9780890425596>
- AuBuchon, P. G. (1993). Formulation-based treatment of a complex phobia. *Journal of Behavior Therapy & Experimental Psychiatry*, 24, 63–71.
- Barlow, D. H., Allen, L. B., & Basden, S. L. (2007). Psychological treatment for panic disorders, phobias and generalized anxiety disorder.

- In P. E. Nathan & Jack M. Gorman (Eds.), *A guide to treatments that work* (3rd ed., pp. 351–394). Oxford University Press.
- Brewer, C. (2013). Balloon phobia. *BMJ*, 347(7932), 39.
- Crowley, M. J., van Noordt, S. R., Castagna, P. J., Vaca, F. E., Wu, J., Lejuez, C. W., & Mayes, L. C. (2022). Avoidance in adolescence: The Balloon Risk Avoidance Task (BRAT). *Journal of Psychopathology and Behavioral Assessment*, 44(2), 297–311.
- Houlihan, D., Shwartz, C., Miltenberger, R., & Heuton, D. (1993). The rapid treatment of a young man's balloon (noise) phobia using *in vivo* flooding. *Journal of Behavior Therapy and Experimental Psychiatry*, 24(3), 233–240.
- Kraft, T. (1994). The combined use of hypnosis and *in vivo* desensitization in the successful treatment of a case of balloon phobia. *Contemporary Hypnosis*, 11, 71–76.
- McGrath, T., Tsui, E., Humphries, S., & Yule, W. (1990). Successful treatment of a noise phobia in a nine-year-old girl with systematic desensitization *in vivo*. *Educational Psychology*, 10, 79–83.
- Mosier, D. (1973). Systematic desensitization of extreme and unreasonable fear of balloons. *SALT: School Applications of Learning Theory*, 5(3), 9–67.
- Ollendick, T., Allen, B., Benoit, K., & Cowart, M. (2011). The tripartite model of fear in children with specific phobias: Assessing concordance and discordance using the behavioral approach test. *Behaviour Research and Therapy*, 49, 459–465.
- Thyer, B. A. (1981). Prolonged *in-vivo* exposure therapy with a 70-year-old woman. *Journal of Behavior Therapy and Experimental Psychiatry*, 12, 69–71.
- Thyer, B. A. (1983). Treating anxiety disorders with exposure therapy. *Social Casework*, 64, 77–82.
- Thyer, B. A. (1987). *Treating anxiety disorders: A guide for human service professionals*. SAGE.
- Thyer, B. A. (2022). Assessment and treatment for specific phobias. In K. Corcoran & L. Rapp-McCoy (Eds.), *Social worker's desk reference* (pp. 1007–1016). Oxford University Press.
- Thyer, B. A., Papsdorf, J. D., Davis, R., & Vallecorsa, S. (1984). Autonomic correlates of the Subjective Anxiety Scale. *Journal of Behavior Therapy and Experimental Psychiatry*, 15, 3–7.
- Thyer, B. A., & Stocks, J. T. (1986). Exposure therapy in the treatment of a phobia blind person. *Journal of Visual Impairment and Blindness*, 80, 1001–1003.
- Vonk, M. E., & Thyer, B. A. (1995). Exposure therapy in the treatment of vaginal penetration phobia: A case study. *Journal of Behavior Therapy and Experimental Psychiatry*, 29(3), 359–363.
- Yule, W., Sacks, B., & Hersov, L. (1974). Successful flooding treatment of a noise phobia in an eleven-year old. *Journal of Behavior Therapy & Experimental Psychiatry*, 5, 209–211.

Book Review

The Comprehensive Guide to Interdisciplinary Veterinary Social Work

Sana Loue and Pamela Linden, Editors

Springer, 2022

323 pp. (hard cover), \$109.99, ISBN 978-3-031-10329-2

Reviewed by Bree Conklin

The Comprehensive Guide to Interdisciplinary Veterinary Social Work is a groundbreaking textbook on veterinary social work (VSW). This text is a comprehensive guide for those interested in any dimension of the unique needs that arise in settings addressing the intersection of humans and animals and the human-animal relationship—from students, professionals, and academics to those who are simply curious about the field. The editors have created a tremendous resource by recruiting a stellar combination of authors from multiple backgrounds who have been highly influential in their contributions to the profession and by providing a historical overview of VSW and insight into the roles and responsibilities of VSW professionals.

The text is organized into five sections, each with an identified focus: a review of the contextual framework and foundation upon which VSW was established, a multifaceted overview of the practice of VSW, the many roles and responsibilities of VSW professionals within veterinary settings, VSW education, and finally, a brief look into the future of VSW with a review of the current state of research and its application across diverse settings and cultures. This organizational structure facilitates a clear understanding of the expansive, integrative, interdisciplinary nature of VSW to address the complexity of human needs at the intersection of veterinary and social work practice.

Bree Conklin, DSW, LCSW, is founder of Magnolia Harbor Carefarm, Powell, TN.

The Comprehensive Guide to Interdisciplinary Veterinary Social Work thoroughly and concisely introduces readers to the education and training needed to build the skill set and knowledge necessary to address the complexity of such needs, especially in situations charged with high levels of stress and emotion. For example, the link between human and animal violence is an issue that is challenging to consider, much less to discuss and then intervene. However, VSW professionals are prepared to navigate all sides of such an issue to assess and determine how best to intervene for both humans and animals. Beyond the capacity to intervene directly, VSW can help educate professionals about what to consider when they encounter situations in which there is knowledge or concern that an animal or human is being harmed. Case examples and scenarios along with discussion questions and points to consider are provided throughout the text to further illustrate the practical application of the content.

It is generally acknowledged that VSW encompasses four areas: the link between human and animal violence, conflict management, animal-assisted intervention, and animal-related grief and bereavement. Although this text addresses the first three of these areas, there is no overview or discussion around animal-related grief and bereavement. Future editions of this book would benefit greatly from including even a brief overview of this topic because animal-related grief and bereavement impact individuals at every level of veterinary practice.

The Comprehensive Guide to Interdisciplinary Veterinary Social Work is a gift to those interested in learning more about the multifaceted aspects of this profession. This text accomplishes what the editors aimed to do, providing a comprehensive in-depth resource for any individual or organization—a community agency, veterinary practice, animal shelter, or academic institution—that serves needs that arise from the human-animal relationship. The editors have created a resource that illuminates a path forward—a path that opens the door to greater understanding of the interdisciplinary collaborative nature of VSW and hopefully to incorporation of VSW in a vast array of settings and at all levels of practice.