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Plurality of Methodologies to Bridge the Gap Between Research and Practice: A Case Study in Infertility Research

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Abstract: This article discusses the benefit of combining a quantitative and qualitative approach in studying social phenomena and illustrates it relative to the experience of individuals struggling with infertility. The combined use of the two methodologies allows capturing a comprehensive, nuanced and expansive picture of infertility, providing information to help bridge the gap between research and practice, and offering implications for policy and further research.

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1. Introduction

This article focuses on examining how a quantitative and qualitative methodology in combination expand, refine and challenge each other offering a broader perspective of the Janus-face struggle with infertility (Janus was the two-faced God in ancient mythology), its traumatic aspects and its potential for personal growth. The infertility experience for men and women was for long identified across diverse cultural contexts as emotionally, physically, socially and financially challenging (BURNS & COVINGTON, 2006; CHACHAMOVICH et al., 2009; SHAPIRO, SHAPIRO & PARET, 2001). The nature of these challenges is colored by the nature of the environment, which can intensify or mitigate the effects of the experience. For example, challenges are further exacerbated in developing non-western societies, where infertility creates negative social repercussions, especially for women such as threatening the integrity of their marriages, domestic violence, stigmatization, and ostracism (OBEISAT, GHARAIBEH, OWEIS & GHARAIBEH, 2012). Recently, research has documented that in spite of the negative experiences, some of those struggling with infertility report also benefits and personal growth (PAUL et al., 2010). However, most research to date focused on *either* trauma and loss (CARTER & CARTER, 1989; DANILUK, 1997; DOMAR, BROOME, ZUTTERMEISTER, SEIBEL & FRIEDMAN, 1992; MATTHEWS & MATTHEWS, 1986; MEYERS et al., 1995a, 1995b) *or* on positive and growth aspects of the experiences (PAUL et al., 2010), whereas research

that captures the full comprehensive pathogenic *and* salutogenic effects of infertility has been missing. [1]

Findings from a recent US study that sought to identify whether posttraumatic growth exists in those with infertility and used both quantitative and qualitative methods, yielded a more integrated and appropriately balanced view of the infertility experience than the more limited information that emerged when one method was used without the other. The individual qualitative and quantitative findings of the study have been reported elsewhere (BERGER, PAUL & HENSHAW 2013; PAUL et al., 2010). This article focuses on the benefits of looking at the infertility experience through the combined lenses of a quantitative and qualitative approach. The article includes three parts. First, a brief description of the study is presented. Second, the nuanced findings that emerged from the combined quantitative and qualitative analysis about two main aspects of the experience are discussed. Finally, practice and policy implications of what we learned through the more comprehensive combined methodological lens are offered. [2]

2. An Overview of the Study: Sampling and Methodology

In 2007, a convenience sample of 121 men and women who were struggling with infertility was recruited via relevant discussion boards (e.g. RESOLVE; AFA) and associated websites, as well as through advertisement with fertility centers and snowballing. Potential participants were invited to partake in a study seeking to understand their infertility experience. Three quantitative measures were used: the Posttraumatic Growth Inventory (PTGI), the Social Support Questionnaire (SSQ) and a Demographic Survey (see PAUL et al., 2010 for details). In addition, respondents were asked to address a single open-ended question. Admittedly, one open-ended question is a very limited qualitative approach. The rationale for including it in what was otherwise a quantitative study seeking to learn if the struggle with infertility had the potential for receiving benefits in addition to its negative effects, was the wish to secure for participants an opportunity to elaborate on aspects of their experience that were not addressed by the standardized instrument and share a more detailed view of their overall infertility experience. The importance of offering such an opportunity was manifested by the fact that of the 108 women, 56 (51.9%) opted to answer the open question. The content analysis of the responses of the women was reported elsewhere (BERGER, et al., 2013). Men were excluded from that analysis because of their small number. [3]

3. Results of the Comparative Quantitative and Qualitative Data Analysis

While some studies of infertility have used both qualitative and quantitative methods (e.g. HÄMMERLI, ZNOJ & BERGER, 2010), they mostly analyzed the data separately rather than in tandem to gain a deeper understanding of the phenomenon. In the current article, data generated from the qualitative and the quantitative analyses were compared. This comparison helped refine the picture relative to two critical questions that touch on core issues of infertility: the availability and effects of social support from diverse sources, especially family and friends, and the degree to which those who encounter infertility experience posttraumatic growth (PTG). Previous findings regarding these questions have been inconsistent and the combination of qualitative and quantitative data suggests that part of the inconsistency might have been due to capturing different aspects of the constructs by using different research methods. [4]

3.1 Family and friends—love them or leave them?

The quantitative and qualitative analyses yielded different results regarding the amount and quality of support from family and friends reported by participants as well as their satisfaction with it. While the quantitative analysis suggested that participants perceived social support available to them as moderate and their level of satisfaction with this support as high, the qualitative findings put a dent in this picture and suggested that social supports (specifically from family and friends) were relatively limited and unsatisfying. Those who answered the open ended question painted a gap between the minimal support that they received from their social environment and the many psychological, financial, logistic, and socio-cultural challenges that they encountered, which made the experience feel taxing, painful and stressful. This gap led them to feel lonely and without support in encountering the aforementioned challenges. [5]

This discrepancy between the quantitative and qualitative finding may be related to the issue of invisible support. Acknowledging and recognizing that one is in need and receipt of support from others potentially carries an emotional cost because it may imply vulnerability and even a sense of failure. Thus, in a study of couples in which one spouse was preparing to undergo the challenging New York State Bar Examination[1], providers and recipients of support reported differently the same transactions such that the former tended to state delivering support that the latter did not perceive obtaining. These were conceptualized as invisible transactions (BOLGER, ZUCKERMAN & KESSLER, 2000). [6]

Alternatively, the discrepancy between the findings by means of qualitative and quantitative measures can be the result of lack of sensitivity of the quantitative social support scale (SSQ). The limited sensitivity of the instrument was originally thought to account for lack of association between social support and PTG as such associations have been reported in other populations. For example, studies

1 The New York State Board of Law Examiners is the body responsible for administering the examination to candidates seeking admission to practice law in the State of New York.

found a positive correlation between the variables following a diagnosis of cancer (POWELL, GILSON & COLLIN, 2012; SCHROEVERS, HELGESON, SANDERMAN & RANCHOR, 2010), but not in immigration (BERGER & WEISS, 2006). Thus, this lack of sensitivity may have been responsible for the inconsistency in many findings to date regarding the association between social support and PTG. Furthermore, qualitative and quantitative measures could be capturing characteristically different aspects of the construct of social support. Thus, using quantitative and qualitative methods to capture the same variable may produce data that is compatible only to some degree. Rather, such different methods may yield complementary information. For example, BERGER (1996) used both quantitative and qualitative means to measure how stepfamilies referred to pre-remarriage patterns, relationships, memories and items, and reported that complementary rather than identical information emerged. [7]

Despite these two possible reasons for the discrepancies in findings, utilizing a combined analysis of the quantitative and qualitative data offers a fuller picture of the dynamics. Those participants who answered the single open-ended question identified not only lack of support but also added pressure and burden from the medical and financial systems (insurance companies) as the most repeated message regarding the social environment. This provided a context within which the data may be understood. Support from family and friends during the infertility experience became so diluted by the overwhelming negative nature of the other systemic variables that it ultimately became lost in transit. Staying solely with the quantitative findings, one could easily conclude that while it may be hard to cultivate a large number of supportive others, the individuals in the sample were pleased with the support they had ("love it"!). Conversely, one could just as easily conclude from the qualitative findings that loneliness through the infertility process (within the context of family and friends) prevailed ("leave it"). Clearly, neither of the individual methods can portray sufficiently social support in those with infertility whereas their combination offers a broader, richer, and more nuanced picture of the relational aspect of struggling with infertility within multiple social networks. [8]

The answer to the question, "love it or leave it" likely varies depending on the particular combination of support or lack thereof from diverse sources. Previous studies showed that posttraumatic growth was associated with various mixtures of resources for support in those encountering diverse stressors. Thus, postoperative cancer patients and Holocaust survivors reported both family and friends as sources for support (BOZO, GÜNDOĞDU & BÜYÜKAŞIK-ÇOLAK, 2009; LEV WIESEL & AMIR, 2003) whereas Latina immigrant women identified only support from family but not from friends (BERGER & WEISS, 2006). The combination of the quantitative and qualitative data in this study suggested that for those struggling with infertility, the non-supportive attitude of medical and financial systems may have superseded support from other informal systems, muting their potential positive effects. [9]

3.2 Does PTG exist in those with infertility more ... or less?

The quantitative analysis suggested that participants' posttraumatic growth was moderate on the total scale as well as on all five factors identified in US populations: new possibilities, relating to others, personal strength, appreciation of life, and spiritual change (PAUL et al., 2010; TEDESCHI & CALHOUN, 1996). However in the qualitative data, only three of the 56 women reported growth and their report focused on only two of the factors, i.e. personal strength and relating to others (BERGER et al., 2013). This discrepancy may be because the negative aspect of the infertility experience takes center stage, when undirected free reign is provided to share thoughts and feelings. While the quantitative questionnaire focused on PTG and thus elicited exclusively responses relative to finding benefits from the struggle with infertility, that 56 participants chose to share details of their infertility experience by answering the single open question and used the opportunity to write about their many struggles suggested that for this group the negative superseded the positive. Furthermore, because this same group also reported the absence of social support, perhaps the open-ended question was used as an opportunity for catharsis by sharing with a remote stranger (the researcher) who could not try to prematurely solve or invalidate the main thread of their experience. Thus, the combined analysis of the qualitative and quantitative data suggested that struggling with infertility is a double edge sword. While for some the challenging aspects considerably overweight the potential for getting benefits from the experience, others did see it also as a turning point, setting them on a trajectory of growth. The literature about PTG consistently emphasizes that growth in the aftermath of trauma is not a universal phenomenon as not all of those exposed to a potentially traumatic event experience growth and that the absence of growth is not a failure (e.g. CALHOUN & TEDESCHI, 1999; LEPORE & REVENSON, 2006). This appears to apply in the current study. Future research will need to examine further what determines the meaning that those struggling with infertility attribute to the experience and what distinguishes the group of those who report growth following the struggle with infertility from those who do not. [10]

4. Discussion

The findings reported above offer a more inclusive perspective and a fuller understanding of the intricate nature of the struggle with infertility than previous research, which focused on either negative or positive facets. Looking at both qualitative and quantitative data substantiated that those struggling with infertility may experience simultaneously challenges and growth as two separate but related processes. This trauma-growth combination in the aftermath of struggling with a highly stressful and potentially traumatic event has been documented relative to other complex human phenomena (WAGNER & MAERCKER, 2010). For example, SJOBERG, WALLENIUS and LARSSON (2011) used a quantitative approach to examine the universality of a qualitatively developed model of leadership in complex and stressful rescue operations and reported that the use of the two methods contributed to the development of a more comprehensive insight into the phenomenon under study. Specifically related to infertility,

FOUCHÉ, NORTJÉ, PHILLIPS and STROUD (2011), in a quantitative study of South African women who were undergoing infertility treatment, found that participants were able to find meaning in their experience, despite the challenges related to it. That about half of the participants in our study opted to answer the open question relative to the infertility experience and of them only a few presented content about growth, whereas on average the full sample reported moderate levels of growth in the quantitative study, suggests that the struggle of infertility is indeed complex and multi-faceted. Individuals who chose to answer the open question seem to have felt that the questionnaire, which focused exclusively on growth, failed to capture the full scope of the infertility experience and their responses added important contextual information for the interpretation of the quantitative results. [11]

The use of combined methods further highlighted the role of contextual influences of factors such as policies and attitudes of service providers on the two faces, i.e. trauma and potential for growth, of infertility. That external circumstances and policies may play a major role in the stability and quality of marital relationships as well as personal wellbeing has been documented relative to other stressors such as poverty. Environments that contain fewer sources of support and put more demands present to couples greater burdens, challenging their ability to cope effectively (KARNEY & BRADBURY, 2005). The findings of this study expand this understanding to the field of infertility and show the importance of interpreting the struggle within the socio-cultural organizational context, in which it occurs. [12]

The findings that emerged from the combined methods analysis offer implications for policy, practice, and future research. Policy and practice do not occur in a vacuum and practitioners as well as policy makers must recognize and take into consideration the environment in which problems occur and need to be addressed. Currently in the US, unlike in other countries, infertility-associated issues are at the bottom of the hierarchy of health needs as reflected by the absence of affordable treatment. For example, in Israel, women younger than 45 are entitled to free, unlimited infertility treatments until up to two live births are achieved irrespective of the number of children born, marital status, or sexual orientation (SHALEV & GOOLDIN, 2006). In their role as change agents on the macro level, it should be part of social workers' agenda to advocate for and seek the development of affordable and equitable fertility-friendly health care policies. [13]

Our findings support the recommendation by BOIVIN and colleagues (2012) for an integrated approach to organizational policy and service provision that takes into account the patient, the clinic and the treatment as well as their reciprocal influences on each other. Among the strategies they recommend are the development and dissemination of patient education materials, utilization of patient checklists and questionnaires to ensure a more holistic treatment approach that includes mental health with support and referral where needed, ensuring involvement of partners, use of formative clinic and service evaluations for patients, and in-service trainings for clinic staff to teach stress management and enhance patient communication skills. Social workers, with their person-in-

environment lens are well suited to be involved in and guide the implementation of such strategies. [14]

In providing direct clinical services, social workers can best help clients transform their struggle with infertility into a turning point toward growth by utilizing a systems approach aimed at enhancing connectedness and empowerment. Individual and couple counseling using a strengths-based relational model and facilitation of mutual support networks, i.e., support groups (real and internet based) are examples of such an approach. To enhance outreach to the relevant population, social workers ought to expand their presence within professional organizations that foster the aforementioned strategies (e.g. the American Fertility Association, a national not-for-profit organization, headquartered in New York City and the national support organization for those with infertility). In pursuit of life-long learning and consistent with the values of the profession and the core competencies of their graduate education, social workers can also benefit from engaging in continuing education relative to relevant interventions (e.g. The Mental Health Professional Group of the American Society for Reproductive Medicine provides many post-graduate trainings throughout the country). [15]

It is important to remember that the research reported in this article is limited by the convenience sampling, correlational design and subjective self-report nature of the data. Further research that diversifies and expands the sample, uses a more sensitive quantitative social support measure and collects deeper more ethnographic qualitative data can further our understanding of the meaning that those struggling with infertility attribute to the experience and what distinguishes the group of those who report growth following the struggle of infertility from those who do not. In an age of constant reproductive technological advancement, this is important so that we can minimize the "social lag" and better meet the emotional and mental health needs of a growing population of fertility service consumers. In spite of its limitation, this study offers a first step en route of using a combination of quantitative and qualitative methods to help bridge the gap from research to practice. [16]

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