Published in final edited form as:

Sociol Focus. 2020 ; 53(3): 236–253. doi:10.1080/00380237.2020.1782792.

Does Self-Identifying as Having a Health Problem Precede Medical Contact? The Case of Infertility

Arthur L. Greil,

Alfred University

Katherine M. Johnson,

Tulane University

Julia McQuillan,

University of Nebraska at Lincoln

Karina M. Shreffler,

Oklahoma State University

Ophra Leyser-Whalen,

The University of Texas at El Paso

Michele Lowry

Alfred University

Abstract

Studies of medical help-seeking presume that self-identifying as having a health problem precedes medical contact, but this ordering of the identity-behavior relationship has not been systematically examined. We used longitudinal data from the National Survey of Fertility Barriers (2004 to 2010) on 412 women with infertility to document the temporal relationship between self-identifying as having a fertility problem and making medical contact. The symbolic interactionist perspective suggests that infertility will be perceived as identity disruption and that in response women will align self-identity and medical behavior over time. Cross-tabulation analysis indicated that more women do self-identify as having a fertility problem first (24 percent) as opposed to making medical contact first (5.5 percent). There was also a tendency toward aligning self-identification and behavior over time. Latent class analyses revealed six patterns: 1) consistently involved, 2) early consulters, 3) consistently uninvolved, 4) consistent perceivers, 5) medical dropouts, and 6) early perceivers. Strong fertility intent and primary infertility, two identity-relevant characteristics, had the strongest associations with latent class membership. The relationship between self-identification and medical help-seeking is thus dynamic and complex.

Studies of medical help-seeking often presume that self-identifying as having a health problem precedes medical contact (Andersen 1968; Pescosolido 1992; Thoits 1985; White et al. 2006; Zola 1973), but such temporal ordering of the identity-behavior relationship has not been systematically addressed. Furthermore, there are examples of people seeking

*Corresponding author: Arthur L. Greil. Division of Social Sciences, Alfred University, 1 Saxon Drive, Alfred, NY 14802. fgreil@alfred.edu.

medical help without self-identifying as having a health problem (e.g., women seeking medical help to get pregnant but not thinking of themselves as infertile) (Leyser-Whalen et al. 2018). Therefore, sociological research and theorizing does not present us with a clear picture of the temporal ordering of identity and behavior for medical help-seeking. The symbolic interactionist (SI) perspective is not specific about temporal order but posits that people will try to align self-identity and behavior over time (Blumer 1969; McCall and Simmons 1978; Mead 1934). Alignment implies that medical contact will either follow self-identification of a health problem, or that self-identification will cease in the absence of medical contact. To explore the temporal ordering and consistency between self-identification as having a health problem and help-seeking behavior, we examine the case of infertility using the longitudinal National Survey of Fertility Barriers (NSFB) conducted from 2004 through 2010.

Infertility is medically defined as a lack of conception after 12 months or more of recurrent, unprotected intercourse (American Society for Reproductive Medicine 2008). Meeting medical criteria does not necessarily mean that individuals or couples experience a medical problem because only some will want a child or consider medical treatment as the most appropriate route to parenthood (Greil, Slauson-Blevins, and McQuillan 2010). Infertility is therefore similar to other non-life-threatening medicalized conditions because there are treatments that people may or may not seek out (e.g., urinary incontinence, acne, and baldness). To assess the temporal ordering of self-identification and help-seeking in the case of infertility among U.S. women, we first identify different patterns of the self-identification/medical contact relationship for women who met medical criteria for infertility within five years before the first NSFB interview in Wave 1 or between Waves 1 and 2. We then compare characteristics of women within these different patterns. Better understanding of the temporal order of self-identification and/or medical help-seeking contributes to the broader literature on understanding health and illness as socially constructed (Ereshefsky 2009) and, more practically, can inform strategies for ensuring that people receive needed health services but do not feel pressured into unnecessary treatment.

BACKGROUND AND THEORETICAL CONSIDERATIONS

Self-Identification and Infertility Help-Seeking

Infertility affects both women and men, but here we focus on women because most treatments target women's bodies, even when the male partner is personally diagnosed (Sandelowski 1993). Furthermore, prior research shows that, in heterosexual couples, female partners are more instrumental in seeking out infertility treatment (Greil 1991; Lorber and Bandlamudi 1993). Nearly half of U.S. women have met criteria for infertility at some point during their reproductive years (Johnson et al. 2018). Unlike the situation in acute health issues such as a broken arm, women can meet medical criteria for infertility but not perceive a fertility problem and even possibly resist the label "infertile" (Abbey, Andrews, and Halman 1994; Greil 1991; Leyser-Whalen et al. 2018; Loftus 2009; White et al. 2006). White et al. (2006) found that only 35 percent of women in their sample who had ever met the medical criteria for infertility perceived themselves as having had a fertility problem. The term "infertile" can suggest permanence and the end of hope for those who equate it

with “forever involuntarily childless” or “barren” (Loftus 2009). Such women may instead think of themselves as “not yet pregnant” and thus able to get pregnant with some medical help (Greil 1991). Others may have an ambivalent distrust of medical authority to definitively diagnose conditions (Leyser-Whalen et al. 2018).

Conversely, women may self-identify as having a fertility problem even if they do not meet the medical definition (Greil et al. 2014). Some are “impatient” to get pregnant and therefore do not wait the recommended 12 months to get fertility testing (Leyser-Whalen et al. 2018). Moreover, women can look for information on the internet, in books, or from social networks and decide that they are infertile even if they have not obtained a diagnostic label from a health professional (Slauson-Blevins, McQuillan, and Greil 2013). Polis and Zabin (2012) found that the number of young adults who believe that they have fertility problems is much larger than actual medical prevalence data suggests.

The relationship between meeting medical criteria, self-identifying as having a fertility problem, and medical help-seeking is not straightforward. In the National Survey of Fertility Growth, only 38 percent of U.S. women experiencing “current fertility problems” used infertility services in 2006 to 2010 (Chandra, Copen, and Stephen 2014). White et al. (2006) found that, among women who self-identified as having a fertility problem, 77 percent sought medical help; but another 20 percent sought medical help without self-identifying. Prior infertility studies, mostly based on quantitative data, assumed that self-identification precedes help-seeking (e.g., White et al. 2006), but interview-based research shows that some people self-identify prior to seeking medical care, others after seeking medical care, and some people never fully self-identify either pre- or post-medical contact (Leyser-Whalen et al. 2018; Miall 1986). Self-identities can evolve and change as people integrate new knowledge obtained through medical diagnoses and treatments with their previous knowledge and definitions of infertility (Leyser-Whalen et al. 2018).

In the contemporary United States, medical expertise provides authoritative and normative constructions of health and illness (Conrad 2007). Perception of a fertility problem may therefore be fostered by contact with medical professionals and medical institutions who promote the definition of physical and mental experiences as symptoms. There is evidence that being diagnosed contributes to self-identifying as having a fertility problem (Johnson and Fledderjohann 2012; Leyser-Whalen et al. 2018; Olshansky 1987). Given the authority of medical professionals, diagnostic labels conferred by them may have a certain “stickiness” (Becker 1973) in the sense that once applied, they tend to stay.

The increasing scope of medicalization (Conrad 2007) has led to the development of medical interventions for numerous non-life-threatening conditions, like infertility. Such conditions are unlikely to come to the attention of medical professionals unless potential “patients” initiate contact. In such situations, the temporal ordering of identity and behavior is not clear. Do people come to perceive themselves as having a condition and then seek help? Or do they have a more inchoate self-identity that develops via the medical encounter? Infertility provides a useful case for exploring the temporal ordering of self-identification and medical help-seeking. If the theoretical assumption that self-identification precedes medical help-seeking is accurate, then helping people obtain medical care could require

better public understanding of infertility and other non-life-threatening conditions that can be treated medically. If, however, medical help-seeking tends to precede self-identification, then medical providers need to be better aware of their roles in the process of educating people about the symptoms and medical options for care of conditions such as infertility. Infertility is also a useful case because it is a condition that many people experience, few seek treatment for, and for which there are data available that provide a way to parse out different patterns of the identity-behavior relationship. Our goal is to prompt questions about presumed temporal ordering that should be explored rather than remain untested.

Symbolic Interactionism, Identity, and Infertility

Our analysis is guided by core concepts and relevant insights from SI. One core idea is that behavior is responsive to perceptions of others' evaluations and that people usually seek to align their behavior with how they want to be, or think they are being, perceived (Burke and Stets 2009; Goffman 1959). What it means to align identity and behavior can change through interaction over time (Manzi, Vignoles, and Regalia 2010), for example in the case of infertility after a doctor tells a woman that she is infertile. Thus, definitions of situations shape behavior (Blumer 1969, Mead 1934). Similarly, Thoits (1985) argues that self-labeling a bodily state as a health problem is central to creating a "symptom." When symptoms interfere with personal and social relationships, significant others are often instrumental in encouraging people to seek help (Zola 1973). But SI can also provide theoretical support for the notion that self-identification as having a fertility problem could be the *result* of the diagnostic process because medical professionals have the authority to confer the label "infertile" (Jutel and Nettleton 2011; Leyser-Whalen et al. 2018). Applying SI to infertility, we expect that self-identifying as having a fertility problem will be strongly associated with medical help-seeking.

Additionally, if people cannot enact behaviors that fit their definition of a situation, then they are likely to revise their definition to facilitate alignment. If women cannot afford medical help, they may cease desiring a child, and if they can afford it, they will likely pursue their desire through medical treatment or adoption. We conceptualize alignment as either self-identifying as having a fertility problem and seeking treatment or as not self-identifying as having a fertility problem and not seeking treatment.

McCall and Simmons (1978) argue that selves have "agendas" of future enactments of self: people think not only about who they are but also about who they might become. Scholars have introduced the notion of "possible" or "potential" identities or selves (Loftus and Namaste 2011; Markus and Nurius 1986; Oyserman and James 2011), which refer to the aspects of self that are future-oriented; possible selves include the selves people hope to become or hope not to become (Markus and Nurius 1986). In the case of infertility, the possible selves include being a person with a disease and/or becoming a person with, or without, biological children. Women can think of themselves as having a fertility problem before a medical diagnosis if they imagine a future possible self as having a biological child and therefore are more aware that they are not getting pregnant. The importance of infertility for the repertoire of possible selves is likely to be shaped by social structures, such as educational opportunities, marriage laws, and insurance coverage for infertility treatment, as

well as life course norms about when to get married and/or have biologically related children (Markus and Nurius 1986).

The experience of infertility for women is best understood if we recognize the importance of life course norms that link adult womanhood to motherhood (McQuillan et al. 2008).

Despite the increasing proportion of women without children (Dye 2008), most American women do not expect to be childless (Martinez, Daniels, and Chandra 2012), and the social identity of women has remained strongly linked to their status as mothers (Koropeckyj-Cox, Romano, and Moras 2007), particularly as biological mothers (Ulrich and Weatherall 2000). Because biological parenthood is generally a desired and anticipated identity for most U.S. women (Becker 2000; Hayford 2009; Matthews and Martin-Matthews 1986), becoming infertile is typically experienced as an unanticipated roadblock to achieving a desired self.

Yet women might or might not perceive lack of conception as a medical problem that necessitates medical help-seeking. The major “symptom” (i.e., experiencing menses) (Koropatnick, Daniluk, and Pattinson 1993) is only a “problem” when it indicates lack of desired conception. Furthermore, infertility usually occurs in a couple context (Sandelowski 1993), and the source can be in either or both partners, thus complicating the process of perceiving oneself as having a fertility problem. For infertility to be conceived of as a medical problem, women need to perceive lack of conception as the result of a problem with their own body that is interfering with fulfillment of their own life goals and is best addressed by biomedical rather than social (e.g., adoption) solutions.

Infertility as Identity Disruption

Identity control theory—a variant of SI—conceptualizes identity as a homeostatic process where individuals monitor implicit and explicit messages from those around them, compare the input to their identity standard, and then adjust their behaviors to verify their identities (Burke and Stets 2009). In the case of infertility, they might notice that their age peers are having babies, or their parents might ask when grandchildren might arrive. If women think that their lives are not aligned with these expectations, then they will experience a lack of homeostasis or misalignment. For example, recent studies have found that claiming an infertility identity depends to a large degree on interactions with other infertile women in support groups (Loftus 2009) and that social cues from significant others, such as friends and family members, are associated with medical contact for fertility problems (Greil et al. 2013).

Situations preventing individuals from achieving or maintaining a valued role or social identity are called identity disruptions (DeGarmo and Kitson 1996). Because motherhood is highly valued for most U.S. women, expecting to have a child and not being able to can lead to identity disruptions, particularly for women who try to have children for many years, who strongly desire to have a child, or who see infertility as stigmatized or beyond their control (DeGarmo and Kitson 1996; Thoits 1991, 2006). The psychosocial distress of infertility and involuntary childlessness has been well documented (Becker 2000; Greil et al. 2010; Johnson and Fledderjohann 2012; King 2003; McQuillan et al. 2003; Sandelowski 1993). In addition, a number of scholars have applied theories of self-process to infertility and involuntary childlessness (Loftus and Andriot 2012; Matthews and Martin-Matthews 1986;

Palmer-Wackerly and Krieger 2015). Matthews and Martin-Matthews (1986) suggest that for most people, parenthood is so central to their identities that their transition to non-parenthood is real and stressful even though no objective change in status occurs. They see infertility as an unanticipated role blockage that leads to identity shock. Others describe infertility as a failed life course transition that leads to a destabilized self (Loftus and Andriot 2012) where women experience infertility as a personal failure (Miall 1986) and must manage this disrupted life course (Exley and Letherby 2001).

The extent to which infertility is perceived as an identity disruption should depend on the extent to which there is a perceived gap between the current and desired state. In the case of infertility, the severity of disruption can be measured by the strength and immediacy of fertility intentions and by whether one is experiencing primary (no previous pregnancies) or secondary (following a previous pregnancy) infertility. Greil and McQuillan (2004) divided infertile women into the “infertile with intent” (tried to conceive for at least twelve months without conception) and the “infertile without intent” (unprotected intercourse for a year or more without conception but not trying to conceive at the time). Women with primary infertility and infertility with intent (i.e., identity-relevant stressors) are more likely to report fertility-specific distress (Greil et al. 2011a, 2016) and to seek help than women without intent or with secondary infertility (Greil et al. 2013; White et al. 2006). Thus, for our sample, women who had a live birth between survey waves may no longer experience identity disruption because they perceive that they have “resolved” infertility. Many American women are aware that fertility declines with increasing age and might thus experience infertility as more identity threatening as they age. Age has been associated with infertility help-seeking (Farland et al. 2016; Greil et al. 2013) and fertility-specific distress (Greil et al. 2011b).

Resources play a role in the ability to construct selves that match social structural opportunities (Burke 2004; Stryker 1980). Because resources and the power to act derived from them are unequally distributed, some people are better able to verify identities than others (Burke 2004; Stets and Burke 2005; Stets and Cast 2007). People with greater resources have more options to align their behavior (e.g., getting pregnant) with their identity standards (e.g., giving birth to become a mother) (Burke and Stets 2009; McCall and Simmons 1978). On the other hand, if people cannot change their behavior in order to achieve the identity standard, they are likely to change the identity standard (e.g., no longer desire a pregnancy) (Burke 2006).

Prior research highlights the relevance of economic resources for processes of self-identification and help-seeking among infertile women. In the United States, fertility treatment is expensive; one study suggests costs ranging from \$15,388 to \$24,373, and pursuing treatment until a birth costs, on average, \$48,424 (Katz et al. 2011). Fifteen states mandate insurance company coverage of infertility treatments, but only some services are covered (Guendelman and Stachel 2011). Some women feel excluded from infertility services because of subtle and direct messages that infertility treatment is for wealthier white women and because they lack the cultural health capital necessary to pursue treatment (Shim 2010). Level of education indirectly influences access to economic resources and directly influences knowledge of health behaviors and options (Mirowsky and Ross 2015).

Therefore, women with more education are likely to have more knowledge about infertility and infertility treatments, thus increasing the odds of self-identifying a fertility problem before seeking medical help. Bell (2014) describes how lower-SES women are limited in their ability to access treatment because they lack access to informational resources and the ability to navigate the healthcare system possessed by middle-class women. We expect that women with more economic and cultural resources will be more likely to seek medical help to have a baby to create alignment between help-seeking behavior and self-identification. Because racism in the United States shapes access to cultural and economic resources, it may also be expected to be related to the ability to achieve alignment. Race has been associated both with fertility distress and help-seeking (Greil et al. 2011b, 2016).

Statement of the Problem

Prior research and sociological theory indicate that over time, there should be alignment between self-identification and behavior, but the likely temporal ordering between identity and behavior is less clear. Based on SI, we do not expect to find a single temporal relationship. Yet, we expect that more women self-identify as having a fertility problem prior to help-seeking than not self-identifying prior to help-seeking. Consistent with SI conceptions of self-process, we also expect to find increasing alignment between behaviors and identity over time. We expect that those who self-identify as having a fertility problem will eventually either pursue treatment or cease to self-identify, while those who seek help without self-identifying as having a problem will come to see themselves as having a fertility problem or stop seeking help. We also expect, however, that some women will retain a self-identification even after they discontinue treatment because of an inability to achieve identity verification. We also expect that the women with greater resources will be more likely to achieve alignment between identification and behavior than those with fewer resources.

METHODS

Sample

The National Survey of Fertility Barriers (NSFB) is a telephone interview probability-based sample of 4,787 U.S. women aged 25 to 45. Initial interviews were conducted between 2004 and 2007 (Wave 1), and three-year follow-up interviews were conducted between 2008 and 2010 (Wave 2). Census central office codes with high minority populations were oversampled. Internal review board approval was obtained from the institutions collecting the data. Wave 2 contains 2,136 participants, or 58 percent of those sought. Only 158 (6 percent) women refused to participate in the second interview; the remainder of the attrition was due to re-contact challenges (e.g., increase in cell-phone-only homes).

The analytic sample includes all heterosexual women ($N = 412$) who were interviewed at both waves and who provided answers to questions that indicated that they met criteria for medical infertility within five years of Wave 1 and/or between waves. Women were considered infertile at Wave 1 if they responded “yes” to either question: “Was there ever time when you were trying to get pregnant but did not conceive within 12 months?” and “Was there ever a time when you regularly had sex without birth control for a year or more

without getting pregnant?” Women were considered infertile at Wave 2 if they responded “yes” to either question: “Since we spoke with you last in [Month, Year], was there ever a time when you were trying to get pregnant but did not conceive within 12 months?” and “Since we spoke with you last in [Month, Year], was there ever a time when you regularly had sex without birth control for a year or more without getting pregnant?” Women who were avoiding pregnancy were excluded from the analysis, as were women who had been sterilized.

Two primary measures used in this study are 1) self-identifying as having a fertility problem and 2) medical contact. *Self-identification* was coded for women who answered “yes” or “maybe” at both waves to either: “Do you think of yourself as someone who has, has had, or might have trouble getting pregnant?” or “Do you think of yourself as someone who has or has had fertility problems?” Women who answered “no” to both questions were considered not to have self-identified as having a fertility problem. *Medical contact* was also measured at both waves as a dichotomous variable comparing those who have “ever been to a doctor or a clinic to talk about ways to help” have a baby, and may have continued to tests and/or treatment, to those who did not have any interaction with medical professionals about fertility issues. We recognize that it is possible that some women may have talked to a doctor or a clinic to about ways to help have a baby without actually being concerned about infertility. For example, they may have asked about prenatal vitamin supplements or about ovulation tracking to better determine when they were ovulating. We therefore ran sensitivity analyses (not shown here) using “had infertility testing” as the measure of medical contact and found that our results were not significantly different.

We also include measures of identity-relevant and resource-relevant characteristics. Women who described themselves as trying to become pregnant at the time of their infertility episode were classified as having *strong fertility intent*, as compared to women who did not report trying to become pregnant. Respondents were classified as having *primary infertility* if they experienced a period of infertility before having any pregnancies, as compared to women who had at least one pregnancy before their first infertility episode. *Live birth* indicated whether a woman had a live birth between waves (1 = yes; 0 = no). *Age and education* were both measured in years. Due to sensitivity to income questions, *family income* was first constructed as an ordinal scale ranging from 1 (less than \$5,000) to 12 (\$100,000+) and then converted into a continuous scale using the midpoint of each category.

Race/ethnicity was measured using the two standard Census questions (U.S. Census Bureau 2011) shown to be commonly accepted classification procedures—individuals who reported multiple races were classified giving first priority to identification as “Hispanic” and second priority to identification as “Black.” Dummy variables were constructed for *Black*, *Hispanic*, and *Asian* compared to *White*. Due to small cell counts and similarities between those in the white and “other” group on measures such as importance of motherhood, education, and family income, we combined these two groups and made them the reference category. All variables measuring descriptive characteristics were measured at Wave 1.

Analytic Strategy

First, we estimated a contingency table to classify women as self-identifying as having a fertility problem or not and as having made medical contact or not at both waves (Table 1). Because this table has 16 cells, many with small sample sizes, data interpretation is challenging. Thus, we reduced the number of categories via latent class analysis (LCA) in Mplus (Muthén and Muthén 2010). LCA is a statistical method for identifying unmeasured class membership among subjects using observed variables, treating deviations from the classes as “error” (McCutcheon 1987). LCA differs from factor analysis in that it uncovers groups of cases with similar features rather than groups of variables that cluster together. Using latent class analysis provides a way to summarize the categorical data in a way that reduces the observed categories into latent classes that adjust for error and estimates the minimum number of classes that adequately reflect the patterns in the data. The latent classes make up a single, unordered categorical variable that best accounts for the correlation between the observed variables (the 16 cells) (Nylund, Asparouhov, and Muthén 2007). One of the early applications of LCA was interpreting 16-fold tables like the one used in this analysis (Duncan 1985).

We decided to summarize the two-wave data using LCA after first using a cross-lagged variable-focused analysis. We estimated a cross-lagged regression with the Wave 2 self-identification as having a fertility problem and medical contact variables as the dependent variables and the Wave 1 versions of the variables as the independent variables. The cross-lagged approach provided a way to estimate the influence of self-identifying at Wave 1 on self-identifying and medical contact at Wave 2 and the influence of medical contact at Wave 1 on self-identifying and medical contact at Wave 2, thus demonstrating mutual influence. This variable-oriented approach, however, did not provide a way to see if the more common pattern was to self-identify first or make medical contact to get pregnant first. We therefore decided to use person-centered LCA, which disaggregated the various combinations of self-identification and medical contact at both waves and allowed us to address our core question about the wisdom of assuming that self-identifying a problem tends to precede medical contact. In the last step of the analysis, we compared similarities and differences on individual characteristics by latent class membership using multinomial logistic regression.

RESULTS

Observed Patterns of Self-Identifying and Medical Contact at Waves 1 and 2

The contingency table showing all possible combinations of self-identifying and medical contact has cases in all 16 cells (Table 1). The cell with no shading contains women who neither made medical contact nor self-identified at either wave. The light gray areas contain women who made medical contact before they self-identified as having a problem. The medium gray areas contain women who either self-identified as having a fertility problem before making medical contact or without making medical contact at either wave. The darkest shading contains women who made medical contact and self-identified by the first wave.

About five times more women follow the expected temporal order and self-identify either before or without subsequently making medical contact (expected temporal order) ($N = 99$; 24.0 percent) than women who only consult a medical professional without self-identifying or before self-identifying as having a fertility problem (indicating inconsistency) ($N = 22$; 5.5 percent). Our results also show, however, that a fraction of women who go to a doctor for help do not think of themselves as having a fertility problem. For example, the 20 “early consulters” made medical contact prior to thinking of themselves as having a fertility problem. Therefore, some women seek medical help to get pregnant without thinking of themselves as having a fertility problem, indicating that their behavior is influenced by factors other than self-identification.

Latent Class Analysis

We used latent class analysis to reduce the 16 categories above to a more parsimonious set of categories. We ran latent class analyses for models assuming two through seven classes as compared fit statistics across models. The fit statistics suggest that either a five-class model or a six-class model represent acceptable fits to the data. We chose the six-class solution because it was more suitable to assessing our theoretically based expectations. The five-class model treats women who never self-labeled as having a fertility problem as the same as women who self-labeled at Wave 1 but not at Wave 2. Since we want to see whether perceptions and behavior come into alignment, the six-class model seems more suitable as it allows us to distinguish women whose perceptions and behaviors come into alignment from women whose perceptions and behaviors do not come into alignment (see Table 2).

We labeled Class 1 as “consistently involved.” This class includes 61 women (15 percent) who tended to report both medical contact and self-identifying as having a fertility problem at both waves, thus exhibiting alignment over time between self-identifying and medical contact. Class 2, “early consulters,” contains just 20 women (5 percent) who tended to report making medical contact without self-identifying as having a fertility problem at Wave 1. About half of these women remained in the same status (being out of alignment), and almost half switched to another category by Wave 2 (moving into greater alignment).

Class 3, the “consistently uninvolved,” is the largest class ($n = 133$, 32 percent). Although they met the medical criteria for infertility, these women generally did not self-identify and did not make any medical contact at either wave, thus exhibiting alignment between identity and behavior over time. Class 4, who “consistently identified,” contains 38 women (9 percent) who generally self-identified as having a fertility problem but did not make medical contact at both waves. In the United States, where fertility problems are medicalized and biological motherhood is highly valued, perceiving a problem but not seeking medical help to get pregnant suggests misalignment between behavior and self-identification. The women in Class 4 therefore do not support the SI prediction that women will seek to align perception and behavior—in this case by either no longer self-identifying as having a fertility problem or seeking medical help to get pregnant.

Class 5, “medical dropouts,” contains the second largest group ($n = 121$, 29 percent). Women in this category generally self-identified as having a fertility problem at both waves but made medical contact only at Wave 1. Therefore, women in Class 5 were initially

aligned, yet by the second wave, self-perception and medical contact were inconsistent. Finally, Class 6, “early identifiers,” consists of 39 women (10 percent) who initially tended to self-identify (Wave 1), but who generally no longer self-identified and occupied various medical contact statuses at Wave 2.

Classes 2 (early consulters) and 6 (early identifiers) are of special interest because women in these categories had non-aligned statuses at Wave 1 and provide an opportunity to see whether behavior and expectations move into alignment over time. We examine these groups more closely in Table 3. Of the 20 women in Class 2 (early consulters), only six (30 percent) remained out of alignment by Wave 2, with the remaining 70 percent moving into alignment: five (25 percent) had come to see themselves as having a fertility problem and 9 (45 percent) discontinued medical contact. Of the 39 women in Class 6 (early identifiers), none remained in the same status at Wave 2 relative to Wave 1. Most women moved into alignment as 25 (64 percent) ceased self-identifying as having a fertility problem and had still not made medical contact by Wave 2. Another 11 (28 percent) moved into alignment by both self-identifying as having a fertility problem and reporting medical contact at Wave 2. Only three women (7 percent) reported medical contact without self-identifying.

Overall, nearly half of the women (47 percent) were contained in Classes 1 (consistently involved) and 3 (consistently uninvolved), both of which displayed consistent self-identification and behavior over time. Women in Classes 2 (early consulters) and 6 (early identifiers) (14 percent of the sample) began with perception and behavior misaligned; many, but not all, moved to alignment between self-identification and behavior by Wave 2. Women in Class 4 (consistently identified) (9 percent of the sample) were out of alignment at both waves; they self-identified as having a fertility problem but did make medical contact. An additional 29 percent of women (Class 5—medical dropouts) initially experienced alignment but then moved to misalignment by Wave 2 because their behavior was no longer in sync with their self-identification.

Characteristics Associated with Latent Class Membership

Table 4 displays characteristics of the total sample as well as characteristics of women in each of the latent classes. We selected Class 1 (consistently involved) as the reference category because using it allowed for meaningful and easily interpretable comparisons. In the interests of saving space, we review only the descriptive statistics for the total sample and then proceed immediately to the multivariate analysis. More than half (58 percent) of all respondents reported strong fertility intent at Wave 1, and about a fourth (28 percent) had primary infertility at the time of their first infertility episode. About a fifth of the sample (19 percent) experienced a live birth between waves, but the proportions differ considerably by latent class (from 8 percent to 39 percent). Average age for the overall sample was near the midpoint of the range of ages (25–45) (overall mean = 35.4). The average levels of education (mean = 15.4) and income (\$72,450) are fairly high. Sixty-four percent self-identified as white and 20 percent as black, with fewer identifying as Hispanic (12 percent) or Asian (4 percent).

Table 5 presents the results of multinomial logistic regression showing which characteristics are associated with class membership once other relevant variables are controlled for in the

model. Because the overall sample size is small and each of the classes is relatively small, we use caution in interpreting null results. Examining identity-relevant variables, we found that those with strong fertility intent have much lower odds of being in Class 3 (the consistently uninvolved; OR = .308, $p = .014$), Class 4 (consistently identified; OR = .037, $p = .002$), and Class 6 (early identifiers; OR = .095, $p = .004$) compared to women in Class 1 (the consistently involved). Thus, women with strong intent to have a child appear to be more likely to seek help than those who do not seek treatment regardless of whether they self-identify as having a fertility problem. Women with primary infertility had much lower odds of being in Class 3 (consistently uninvolved; OR = .131, $p = .000$) compared to women in Class 1 (the consistently involved). Women in all the other classes also had lower odds of having primary infertility, but these differences were not significant. Women who had a live birth between waves had much lower odds of being in Class 4 (consistently identified; OR = .204, $p = .028$) compared to women in Class 1 (consistently involved). Women in all the other classes also had lower odds of having a live birth between waves, but these differences were not significant. After other variables were controlled, age was not significantly associated with class membership. Thus, overall, there is some evidence that infertile women who feel the discrepancy between ideal and real more acutely are more likely to make medical contact.

An increase of one year of education was associated with slightly lower odds of being in Class 5 (consistently identified; OR = .807, $p = .003$) and Class 6 (early identifiers; OR = .761, $p = .008$) compared to women in Class 1 (consistently involved). Thus, there is some limited evidence that women with greater cultural resources are more likely to make medical contact and to bring identity and behavior into alignment. The only class that differed significantly from Class 3 (consistently uninvolved) on education was Class 1 (consistently involved); women in Class 1 were more educated than women in Class 3. Although we found differences in income by class membership in the descriptive data (Table 4), income was not significantly associated with class membership in the multivariate analysis. There were also no statistically significant findings for race/ethnicity. We do not find evidence economic resources are significantly related to making medical contact or bringing identity and behavior into alignment, but it is possible that this is due to small cell counts.

CONCLUSION

Consistent with some theoretical help-seeking models and SI, the general trend for our sample was for self-identification to precede medical contact, and towards identity and behavior aligning over time (e.g., doing both or doing neither). Therefore, we provide support for prior cross-sectional research (e.g., White et al. 2006) and theoretical models (e.g., Andersen 1995) that put perception of a problem temporally prior to help-seeking. Our results, however, also show that a fraction of women who go to a doctor for help do not think of themselves as having a fertility problem. Physicians have considerable authority to diagnose (label) and thus facilitate the process of self-change, but most women seek medical help after self-identifying a problem (Jutel and Nettleton 2011). These results are consistent with Leyser-Whalen et al.'s (2018) recent interview study, finding that people shifted their self-perceptions of infertility as they integrated new medical knowledge from testing and treatment with their previously held fertility self-perceptions and definitions of infertility.

Almost half of the women in our sample were either consistently involved or consistently uninvolved in medical contact to achieve pregnancy. Nonetheless, another half changed between waves. Self-identifying as having a fertility problem is not a permanent state for many women. Rather, consistent with SI, identities seem to be (re)shaped through processes of interpreting contextual information (e.g., tests, treatments, getting pregnant or not) and interactions with significant others, including medical professionals. Identity Control Theory suggests that when women change, they will change in the direction of aligning their behaviors and identities (Burke and Harrod 2005; Burke and Stets 2009). Our data support the conclusion that there is a tendency over time for women's self-identity and medical contact behaviors to become more aligned.

One group does not conform to the alignment pattern: the 121 women in Class 5 (medical dropouts) who reported medical contact and self-identified at Wave 1, yet discontinued contact but still self-identified by Wave 2. Although identities are likely to change when people cannot act in ways to restore consistency between identity and behavior (Burke 2006), Class 5 clearly shows that a number of women move in the opposite direction. The fact that women in Class 5 are significantly less educated than the women in Class 1 (consistently involved) lends some support to the idea that those with fewer resources might be less able to achieve identity verification. Having a baby could conceivably be a reason for stopping medical contact between waves, yet very few women (8 percent) in Class 5 (medical dropouts) had a baby between waves, particularly compared to Class 1 (39 percent; consistently involved). More evidence (using larger samples with more observations over a longer time period) is needed before we can draw firm conclusions about the relationship between resources and identity verification.

SI suggests that women who are not mothers (i.e., experience primary infertility) but who are trying to be mothers (i.e., have strong fertility intent) will have the strongest sense of identity disruption because of a greater discrepancy between current status and desired identity. Our results indicate that both women who experience primary infertility and those who experience infertility with intent are more likely to self-identify as having a fertility problem and to make medical contact for infertility.

Using panel data that included those who have, and have not, made medical contact for help with fertility problems is the only way to address questions of temporal sequencing, thus allowing us to observe a tendency toward consistency between behavior and identity over time. This study was based on longitudinal analysis; however, we still faced challenges to establishing temporal order. We were limited to looking at two waves of data collected three years apart. Many women in our sample both self-identified as having a fertility problem and reported medical contact at Wave 1. It was therefore impossible to determine temporal order for these women. In addition, the Wave 2 interview asked if women had contacted a doctor at any time between interviews; therefore, we could not determine whether those who had a baby between waves did so after contacting a doctor again after the first interview or after they had the baby. A more ideal approach would be to use a calendar method asking participants to identify months that they did or did not talk to a doctor and the timing of births.

Moreover, all the women in our sample were infertile according to the medical criterion of twelve months of regular, unprotected, heterosexual intercourse without conception, but we do not know whether all of these women have an actual physical condition that prevented them from becoming pregnant. In some cases, it may be their partners who have the physiological impairment. Thus, it is possible that some of these women do not think of themselves as having a fertility problem because they think of their partner as the one with the fertility problem. Couple influences are also important in shaping responses to infertility (Greil et al. 2018). Future research should therefore attend to the coupled nature of the infertility experience.

Some cells have few cases; therefore, we must use extreme caution in generalizing. This is an issue especially for the multivariate analysis. On the other hand, it seems possible, given the number of associations with high odds ratios that were not significant, that we might have found even more confirmation of our expectations had we had access to a larger sample. Our sample has more women with higher education than the general population, thus potentially failing to capture the experiences of less-educated women.

Despite limitations, we advance understanding of the dynamics of the relationship between self-identification as having a fertility problem and making medical contact. Our findings support the notion that the experience of infertility may be conceptualized as identity disruption. We discovered that more women self-identify only, or before, making medical contact than the other way around, but that some women do make medical contact only, or first. In addition, we found that, as SI suggests, identity and behavior do tend to align over time. We also found some evidence that women with a greater sense of identity disruption may be more likely to both self-identify as having a fertility problem and to seek medical help.

Our findings have implications for understanding the dynamics between identity and medical behavior beyond infertility. There are numerous non-life-threatening health conditions that have discretionary medical treatments (e.g., incontinence, erectile dysfunction, social anxiety, and obesity). In addition, there are other social situations in which the temporal ordering of identity and behavior is difficult to tease out, such as delinquency (Oyserman and Markus, 1990), criminal desistance (Paternoster and Bushway 2009), and career change (Ibarra 2005). We find that people who experience a large gap between current status and desired identity will be both more likely to identify as having a problem and to take action to resolve that problem. And although the conditions affecting the temporal order between identity and behavior remain unclear, our findings also suggest that many individuals will act over time to reduce the discrepancies between identity and behavior.

Acknowledgments

This research was supported by a grant (R01-HD044144; Johnson PI) entitled, "Infertility: Pathways and Psychosocial Outcomes" funded by the Eunice Kennedy Shriver National Institute of Child Health and Human Development (NICHD). An earlier version of this manuscript was presented at the 2011 annual meeting of the Midwest Sociological Society, St. Louis, MO.

Biography

Arthur L. Greil is professor emeritus of sociology at Alfred University. He has written extensively on psychosocial aspects of infertility and is on the research team responsible for conducting the National Study of Fertility Barriers. He is the author of several literature reviews on infertility as well as a book, *Not Yet Pregnant: Infertile Couples in America* (Rutgers University Press, 1991). He has also written on fertility intentions, infertility help seeking, pregnancy loss, and the importance of motherhood. His mailing address is Division of Social Sciences, Alfred University, 1 Saxon Drive, Alfred, NY 14802. His email address is fgreil@alfred.edu.

Katherine Johnson is assistant professor of sociology at Tulane University. Her research focuses on the sociology of reproduction and explores themes such as stratified reproduction, postmodern family building, motherhood, and medical and technological interventions into reproduction. For the past five years, she has been carrying out the *Working and Nursing Study*, which addresses working women's experiences of breastfeeding vis-à-vis issues of gender, race, and class in the workplace. Her work has appeared in both academic and practitioner-targeted journals. Her mailing address is Department of Sociology, Tulane University, 220E Newcomb Hall, New Orleans, LA 70118. Her email address is kjohns25@tulane.edu.

Julia McQuillan is professor and chair of sociology at the University of Nebraska. She conducts research on social inequality in health (focusing on fertility and infertility) and in STEM fields with interdisciplinary research teams and funding from the National Institutes of Health and the National Science Foundation. She collaborates on publications for journals in multiple disciplines. Her work uses social psychological theories, employs multiple methodologies, and is designed to advance theories of social inequality and intervention efforts design to increase equity. Her mailing address is Department of Sociology, University of Nebraska-Lincoln, Lincoln, NE 68588-0324. Her email address is jmcquillan2@unl.edu.

Karina M. Shreffler is professor of human development and family science at Oklahoma State University. Her research interests include fertility intentions, adverse reproductive events, and psychosocial consequences for individuals and families. She is currently at work on a large study of women with rapid repeat unintended pregnancies. Her mailing address is Department of Human Development and Family Science, 1115 Main Hall, Tulsa, OK 74106. Her email address is karina.shreffler@okstate.edu.

Michele Lowry is assistant professor of criminal justice studies at Alfred University where she has received an Excellence in Teaching award. Dr. Lowry is also a licensed psychologist who oversees the forensic mental health services for a neighboring county. Her research interests include infertility, violence, and criminal behavior. She has published several articles using data from NSFB. Her email address is Division of Social Sciences, Alfred University, 1 Saxon Drive, Alfred, NY, 14802. Her email address is lowry@alfred.edu.

Ophra Leyser-Whalen is an associate professor of sociology at the University of Texas at El Paso. She is a mixed-methods researcher focusing on the sociology of reproduction, particularly exploring issues related to infertility and sterilization. Ophra's work is published

in social science, interdisciplinary, and clinical journals. Her mailing address is Department of Sociology and Anthropology, UTEP, 500 W. University Ave., El Paso, TX 79968. Her email address is oleyserwhalen@utep.edu.

REFERENCES

- Abbey Andrea, Andrews Frank M., and Jill Halman L. 1994 "Psychological Predictors of Life Quality: How Are They Affected by Infertility, Gender, and Parenthood?" *Journal of Family Issues* 15(2):253–71.
- American Society for Reproductive Medicine. 2008 "Definitions of Infertility and Recurrent Pregnancy Loss." *Fertility and Sterility* 90:S60. [PubMed: 19007647]
- Andersen Ronald M. 1968 *A Behavioral Theory of Families' Use of Health Services*. Chicago: University of Chicago, Center for Health Administration Studies Englewood Cliffs, NJ: Prentice Hall.
- Andersen Ronald M. 1995 "Revisiting the Behavioral Model and Access to Medical Care: Does it Matter?" *Journal of Health and Social Behavior* 36(1):1–10. [PubMed: 7738325]
- Becker Gay. 2000 *The Elusive Embryo: How Women and Men Approach the New Reproductive Technologies*. Berkeley: University of California Press.
- Becker Howard S. 1973 *Outsiders: Studies in the Sociology of Deviance*. New York: Free Press.
- Bell Ann V. 2014 *Misconception: Social Class and Infertility in America*. New Brunswick, NJ: Rutgers University Press.
- Blumer Herbert. 1969 *Symbolic Interactionism: Perspective and Method*. Englewood Cliffs, NJ: Prentice Hall.
- Burke Peter J. 2004 "Identities and Social Structure: The 2003 Cooley-Mead Award Address." *Social Psychology Quarterly* (67(1):5–15.
- Burke PJ 2006 Identity Change." *Social Psychology Quarterly* 69(1):81–96.
- Burke Peter J., and Harrod Michael M. 2005 "Too Much of a Good Thing?" *Social Psychology Quarterly* 68(4):359–74.
- Burke Peter J., and Stets Jan E. 2009 *Identity Theory*. Oxford: Oxford University Press.
- Anjani Chandra, Copen Casey E., and Stephen Elizabeth Hervey. 2014 "Infertility Service Use in the United States: Data from the National Survey of Family Growth, 1982–2010" *National Health Statistics Reports* 73. National Center for Health Statistics 2014.
- Conrad Peter. 2007 *The Medicalization of Society*. Baltimore: Johns Hopkins University Press.
- DeGarmo David S., and Kitson Gay C. 1996 "Identity Relevance and Disruption as Predictors of Psychological Distress for Widowed and Divorced Women." *Journal of Marriage and the Family* 58(4):983–97.
- Duncan Otis Dudley. 1985 "New Light on the 16-Fold Table." *American Journal of Sociology* 91(1):88–128.
- Dye Jane Lawler. 2008 "Fertility of American Women: 2006" *Current Population Reports*, P20–558. Washington: U.S. Census Bureau.
- Ereshfsky Marc. 2009 "Defining 'Health' and 'Disease'." *Studies in the History and Philosophy of Biological and Biomedical Sciences* 40(3): 221–27.
- Exley Catherine, and Letherby Gayle. 2001 "Managing a Disrupted Lifecourse: Issues of Identity and Emotion Work." *Health* 5(1):112–32.
- Farland Leslie V., Collier Ai-ris Y., Correia Katharine F., Grodstein Francine, Chavarro Jorge E., Rich-Edwards Janet, and Missmer Stacy A. 2016 "Who Receives a Medical Evaluation for Infertility in the United States?" *Fertility and Sterility* 105(5):1274–80. [PubMed: 26785253]
- Goffman Erving. 1959 *The Presentation of Self in Everyday Life*. New York: Anchor Books.
- Greil Arthur L. 1991 *Not Yet Pregnant: Infertile Couples in Contemporary America*. New Brunswick, NJ: Rutgers University Press.

- Greil Arthur L., Johnson Katherine M., McQuillan Julia, and Shreffler Karina M. 2013 “The Importance of Social Cues for Medical Helpseeking: The Case of Infertility.” *Sociological Inquiry* 83(2):209–37.
- Greil Arthur L., Ophra Leyser-Whalen Julia McQuillan, Shreffler Karina M., Lowry Michele, and Johnson Katherine M. 2014 “Patterns of Seeing a Doctor and Self-Labeling as Infertile: A Longitudinal Analysis of a Representative Sample of U.S. Women.” Paper presented at annual meeting of the Eastern Sociological Society, Baltimore, MD, February 21.
- Greil Arthur L., and McQuillan Julia. 2004 “Helpseeking Patterns among Subfecund Women.” *Journal of Reproductive and Infant Psychology* 22(4):305–19.
- Greil Arthur L., Julia McQuillan Michele H. Lowry, Burch Andrea R., Slauson-Blevins Kathleen, and Shreffler Karina M. 2018 “Relationship Satisfaction among Infertile Couples: Implications of Gender and Self-Identification.” *Journal of Family Issues* 39(5):1304–25
- Greil Arthur L., McQuillan Julia, and Sanchez Delida. 2016 “Does Fertility-Specific Distress Vary by Race among a Probability Sample of Women in the United States?” *Journal of Health Psychology* 21(12):183–92. [PubMed: 24668642]
- Greil Arthur L., McQuillan Julia, Shreffler Karina M., Johnson Katherine M., and Slauson-Blevins Kathleen S. 2011a “Race/Ethnicity and Medical Services for Infertility: Stratified Reproduction in a Population-Based Sample of U.S. Women.” *Journal of Health and Social Behavior* 52:493–507. [PubMed: 22031500]
- Greil Arthur L., Shreffler Karina M., Schmidt Lone, and McQuillan Julia. 2011b “Variation in Distress among Infertile Women: Evidence from a Population-Based Sample.” *Human Reproduction* 14:2101–12.
- Greil Arthur L., Slauson-Blevins Kathleen, and McQuillan Julia. 2010 “The Experience of Infertility: A Review of Recent Literature.” *Sociology of Health and Illness* 32(1):140–62. [PubMed: 20003036]
- Guendelman S, and Stachel L 2011 “Infertility Status and Infertility Treatment: Racial and Ethnic Disparities” Pp. 93–177 in *Reducing Racial/Ethnic Disparities in Reproductive and Perinatal Outcomes*, edited by Handler A, Kennelly J, and Peacock N New York: Springer US.
- Hayford Sarah R. 2009 “The Evolution of Fertility Expectations over the Life Course.” *Demography* 46(4):765–83. [PubMed: 20084828]
- Ibarra Herminia, 2005 “Identity Transitions: Possible Selves, Liminality and the Dynamics of Career Change” No. 2005/51. Fontainebleu Cedex, France: Insead.
- Johnson Katherine M., and Fledderjohann Jasmine. 2012 “Revisiting ‘Her’ Infertility: Medicalized Embodiment, Self-Identification and Distress.” *Social Science & Medicine* 75(5):883–91. [PubMed: 22647565]
- Johnson Katherine M., Greil Arthur L., McQuillan Julia, and Shreffler Karina. 2018 “Fertility and Infertility: Toward an Integrative Research Agenda.” *Population Research and Policy Review*. 37(5):641–66.
- Jutel Annemarie, and Nettleton Sarah. 2011 “Towards a Sociology of Diagnosis: Reflections and Opportunities.” *Social Science & Medicine* 73(6):793–800. [PubMed: 21868144]
- Katz Patricia, Showstack Jonathan, Smith James F., Nachtigall Robert D., Millstein Susan G., Wing Holly, Eisenberg Michael L., Pasch Lauri A., Croughan Mary S., and Adler Nancy. 2011 “Costs of Infertility Treatment: Results from an 18-month Prospective Cohort Study.” *Fertility and Sterility* 95(3):915–21. [PubMed: 21130988]
- King Rosalind Berkowitz. 2003 “Subfecundity and Anxiety in a Nationally Representative Sample.” *Social Science & Medicine* 56(4):739–51. [PubMed: 12560008]
- Koropatnick Stephanie, Daniluk Judith, and Pattinson H. Anthony. 1993 “Infertility: A Non-Event Transition.” *Fertility and Sterility* 59(1):163–71. [PubMed: 8419202]
- Koropecjy-Cox Tanya, Romano Victor R., and Moras Amanda. 2007 “Through the Lenses of Gender, Race, and Class: Students’ Perceptions of Childless/Childfree Individuals and Couples.” *Sex Roles* 56(7/8):415–28.
- Leyser-Whalen Ophra, Greil Arthur L., Julia McQuillan Katherine M. Johnson, and Shreffler Karina M. 2018 “‘Just Because a Doctor Says Something, Doesn’t Mean that [it] Will Happen’: Self-

- Perception as Having a Fertility Problem among Infertility Patients.” *Sociology of Health & Illness* 40(3):445–62. [PubMed: 29280501]
- Loftus Jeni. 2009 “‘Oh, No, I’m Not Infertile’: Culture, Support Groups, and the Infertile Identity.” *Sociological Focus* 42(4):394–415.
- Loftus Jeni, and Andriot Angie L. 2012 “‘That’s What Makes a Woman’: Infertility and Coping with a Failed Life Course Transition.” *Sociological Spectrum* 32(3):226–43.
- Loftus Jeni, and Namaste Paul. 2011 “Expectant Mothers: Women’s Infertility and the Potential Identity of Biological Motherhood.” *Qualitative Sociological Review* 7(1):36–54.
- Lorber Judith, and Bandlamudi Lakshmi. 1993 “The Dynamics of Marital Bargaining in Male Infertility.” *Gender & Society* 7(1):32–49.
- Manzi Claudia, Vignoles Vivian, and Regalia Camillo. 2010 “Accommodating a New Identity: Possible Selves, Identity Change and Well-Being across Two Life Transitions.” *European Journal of Social Psychology* 40(6):970–84.
- Markus Hazel, and Nurius Paula. 1986 “Possible Selves.” *American Psychologist* 41(9):954–69.
- Martinez Gladys, Daniels Kimberly, and Chandra Anjani. 2012 “Fertility of Men and Women Aged 15–44 Years in the United States: National Survey of Family Growth, 2006–2010 National Health Statistics Reports 51. National Center for Health Statistics.
- Matthews Ralph, and Martin-Matthews Anne. 1986 “Infertility and Involuntary Childlessness: The Transition to Nonparenthood.” *Journal of Marriage and the Family* 48(3):641–49.
- McCall George J., and Simmons JL 1978 *Identities and Interaction: An Examination of Human Associations in Everyday Life*. New York: Free Press.
- McCutcheon Allan L. 1987 *Latent Class Analysis*. Newbury Park, CA: Sage.
- McQuillan Julia, Greil Arthur L., Shreffler Karina, and Tichenor Veronica. 2008 “The Importance of Motherhood among Women in the Contemporary United States.” *Gender & Society* 22:477–96. [PubMed: 20407592]
- McQuillan Julia, Greil Arthur L., White Lynn, and Casey Mary. 2003). “Frustrated Fertility: Infertility and Psychological distress among Women.” *Journal of Marriage and the Family* 65(4):1007–18.
- Mead George Herbert. 1934 *Mind, Self, and Society*. Chicago: University of Chicago Press.
- Miall Charlene E. 1986 “The Stigma of Involuntary Childlessness.” *Social Problems* 33(4):268–82.
- Mirowsky John, and Ross Catherine E. 2015 “Education, Health, and the Default American lifestyle.” *Journal of Health and Social Behavior* 56(3):297–306. [PubMed: 26272989]
- Muthén Linda K., and Muthén Bengt O. 2010 *Mplus User’s Guide*. Los Angeles: Muthén and Muthén.
- Nylund Karen L., Asparouhov Tihomir, and Muthén Bengt O. 2007 “Deciding on the Number of Classes in Latent Class Analysis and Growth Mixture Modeling: A Monte Carlo Simulation Study.” *Structural Equation Modeling* 14(4):535–69.
- Olshansky Ellen F. 1987 “Identity of Self as Infertile: An Example of Theory-Generating Research.” *Advances in Nursing Science* 9(2):54–63. [PubMed: 3099637]
- Oyserman Daphna, and James Leah. 2011 “Possible Identities” Pp. 117–45 in *Handbook of Identity Theory and Research*, edited by Schwartz S.h J., Luyckx K, and Vignoles VL New York: Springer.
- Oyserman Daphna, and Markus Hazel Rose. 1990 “Possible Selves and Delinquency.” *Journal of Personality and Social Psychology* 59(1):12–25.
- Palmer-Wackerly Angela L. and Krieger Janice L. 2015 “Dancing around Infertility: The Use of Metaphors in a Complex Medical Situation.” *Health Communication* 30(6):612–23. [PubMed: 25061825]
- Paternoster Ray, and Bushway Shawn. 2009 “Desistance and the ‘Feared Self’: Toward an Identity Theory of Criminal Desistance.” *The Journal of Criminal Law and Criminology* 99(4):1103–56.
- Pescosolido Bernice A. 1992 “Beyond Rational Choice: The Social Dynamics of How People Seek Help.” *American Journal of Sociology* 97(4):1096–138.
- Polis Chelsea Bernhardt, and Zabin Laurie Schwab. 2012 “Missed Conceptions or Misconceptions: Perceived Infertility among Unmarried Young Adults in the United States.” *Perspectives on Sexual and Reproductive Health* 44(1):30–8. [PubMed: 22405149]
- Sandelowski Margarete. 1993 *With Child in Mind: Studies of the Personal Encounter with Infertility*. Philadelphia: University of Pennsylvania Press.

- Shim Janet K. 2010 "Cultural Health Capital: A Theoretical Approach to Understanding Health Care Interactions and the Dynamics of Unequal Treatment." *Journal of Health and Social Behavior* 51(1):1–15. [PubMed: 20420291]
- Slauson-Blevins Kathleen S., McQuillan Julia, and Greil Arthur L. 2013 "Online and In-person Health-Seeking for Infertility." *Social Science & Medicine* 99:110–5. [PubMed: 24355477]
- Stets Jan E., and Burke Peter J. 2005 "New Directions in Identity Control Theory." *Advances in Group Processes* 22:43–64.
- Stets Jan E., and Cast Alicia D. 2007 "Resources and Identity Verification from an Identity Theory Perspective." *Sociological Perspectives* 50(4):517–43.
- Stryker Sheldon. 1980 *Symbolic Interactionism: A Social Structural Version*. Menlo Park, CA: Benjamin Cummings.
- Thoits Peggy A. 1985 "Self-Labeling Processes in Mental Illness: The Role of Emotional Deviance." *American Journal of Sociology* 91(2):221–49.
- Thoits Peggy A. 1991 "On Merging Identity Theory and Stress Research." *Social Psychology Quarterly* 54(2):101–12.
- Thoits Peggy A. 2006 "Personal Agency in the Stress Process." *Journal of Health and Social Behavior* 47(4):309–23. [PubMed: 17240922]
- Ulrich Miriam, and Weatherall Ann. 2000 "Motherhood and Infertility: Viewing Motherhood through the Lenses of Infertility." *Feminism & Psychology* 10(3):323–36.
- U.S. Census Bureau. 2011 2011 Statistical Abstract. http://www.census.gov/compendia/statab/cats/income_expenditures_poverty_wealth/household_income.html.
- White Lynn, McQuillan Julia, Greil Arthur L., and Johnson David R. 2006 "Infertility: Testing a Help-Seeking Model." *Social Science & Medicine* 62(4):1031–41. [PubMed: 16360257]
- Zola Irving K. 1973 "Pathways to the Doctor: From Person to Patient." *Social Science & Medicine* 7(9):677–89. [PubMed: 4749058]

Contingency Table for Self-Identifying as Having a Fertility Problem and Medical Consultation Status at Wave 1 and 2.

Table 1.

	Status at W1					Total	
	No Medical Contact		Medical Contact				
	No Identification	Identification	No Identification	Identification			
No Medical Contact	No identification	119	25	9	11	164	
	Column %	79%	33%	45%	7%	40%	
	Identification	22	38	3	99	162	
	Column %	15%	49%	15%	60%	39%	
	Medical Contact	No identification	2	3	3	1	9
		Column %	1%	4%	15%	1%	2%
Identification		8	11	5	53	77	
Column %		5%	14%	25%	32%	19%	
Status W2	Total N	151	77	20	164	412	
	Column Total	100%	100%	100%	100%	100%	
% Self Identify 1st (may or may not consult)						24.00%	
% Consult 1st (may or may not have self-concept)						5.50%	
% Insufficient information to establish temporal order						42.10%	
% Who do neither						29.00%	

Notes: W1 = Wave 1; W2=Wave 2.

National Survey of Fertility Barriers 2004–2010; women ages 25–45 who met criteria for infertility in the previous 5 years at wave 1 or 2.

Chi square=201.45***

Latent Classes of Self-Identifying as Having a Fertility Problem and Medical Consultation (Waves 1 & 2) among 412 Women in the United States with Infertility

Table 2.

Class	Name	Description	N	Percent	Identity-Behavior
1	Consistently involved	Medical contact and identification at W1 & W2	61	14%	Aligned
2	Early consultants	Medical contact, no identification at W1; various statuses at W2	20	5%	Misaligned—Aligned <i>No identity</i>
3	Consistently uninvolved	No medical contact or identification at W1 & W2	133	32%	Aligned
4	Consistently identified	No medical contact, identified at W1 & W2	38	9%	Misaligned <i>No behavior</i>
5	Medical dropouts	Medical contact and identification at W1; no medical contact, identified at W2	121	29%	Aligned—Misaligned <i>No behavior</i>
6	Early identifiers	No medical contact, identified at W1; various statuses at W2	39	10%	Misaligned—Aligned
			253	62%	Total aligned W2
			159	39%	Total misaligned W2
			412	100%	Total

Notes: W1 = Wave 1; W2 = Wave 2.

National Survey of Fertility Barriers 2004–2010. Women in the United States ages 25–45 who met criteria for infertility at waves 1 and/or 2.

Table 3.
Status at Wave 2 for Women in Classes with Various Wave 2 Statuses (Classes 2 & 6)

Wave 2 Status	Class 2 Early Consulters		Class 6 Early Identifiers	
	Wave 1 Status			
	N	%	N	%
No medical contact, No identification	9	45%	25	64%
No medical contact, Identification	3	15%	0	0%
Medical contact, No identification	3	15%	3	8%
Medical contact, Identification	5	25%	11	28%
Total	20	100%	39	100%
Chi square	19.56***		31.40***	

Table 4.

Characteristics of Sample by Latent Classes.

<i>Independent Variables W1</i>	Total		Class 1		Class 2		Class 3		Class 4		Class 5		Class 6	
			Consistently Involved		Early Consulters		Consistently Uninvolved		Consistently Identified		Medical Dropouts		Early Identifiers	
	% or M	SD	% or M	SD	% or M	SD	% or M	SD	% or M	SD	% or M	SD	% or M	SD
	(N = 412)													
Infertile with Intent	58%		85%		60%	.016	26%	.001	53%	.001	83%	.665	54%	.001
Primary infertility	28%		54%		35%	.138	9%	.000	5%	.000	49%	.497	8%	.000
Live birth between waves	19%		39%		20%	.114	17%	.001	8%	.001	8%	.000	15%	.011
Age (25–45)	35.39	5.60	34.14	5.07	35.70	6.10	34.63	5.77	35.68	6.38	36.64	5.15	35.59	.966
Education (years)	15.44	2.63	16.92	2.91	15.50	2.42	14.92	2.57	15.08	2.59	15.58	2.34	14.62	.000
Income (in thousands)	72.45	40.48	89.70	40.43	64.88	44.14	63.84	37.89	59.38	42	79.88	39.03	67.84	.121
White	64%		74%		55%	.167	53%	.884	74%	.884	71%	.762	60%	.402
Black	20%		16%		25%	.390	25%	.370	24%	.370	15%	.789	15%	.893
Hispanic	12%		8%		15%	.376	16%	.070	0%	.070	11%	.587	18%	.143
Asian	4%		2%		5%	.401	6%	.733	3%	.733	3%	.516	5%	.318

Notes: National Survey of Fertility Barriers, U.S. Women ages 25–45 who have ever met medical criteria for infertility by wave 1.

Chi-square tests performed for categorical variables. ANOVA with Sidak post-hocs for continuous variables.

Probabilities refer to comparisons with Class 1 (Continuously Involved).

% provided for categorical variables; M and SD provided for continuous variables.

* $p < .05$ ** $p < .01$ *** $p < .001$.

National Survey of Fertility Barriers, U.S. Women ages 25–45 who have ever met medical criteria for infertility by wave 1.

Bolded cells indicate significant findings.

Table 5.

Multinomial Logistic Regression Using Latent Classes (N = 412).

Independent Variables W1	Early consultants				Consistently uninvolved				Consistently identified				Medical dropouts				Early identifiers			
	B	SE	OR	P	B	SE	OR	P	B	SE	OR	P	B	SE	OR	P	B	SE	OR	P
Infertile with Intent	-.04	.63	.964	.953	-1.18	.48	.308	.014	-3.29	1.08	.037	.002	.13	.38	1.139	.732	-2.35	.81	.095	.004
Primary infertility	-.99	.67	.371	.140	-2.04	.47	.131	.000	-.55	.55	.577	.318	-.05	.50	.955	.927	-.65	.54	.520	.228
Live birth between waves	-.42	.68	.656	.534	-.57	.44	.564	.195	-1.59	.72	.204	.028	-.68	.40	.509	.095	-.63	.59	.533	.288
Age (25—45)	.09	.05	1.096	.093	.05	.04	1.054	.173	.07	.05	1.071	.146	.10	.04	1.107	.005	.08	.05	1.082	.093
Education (years)	-.13	.11	.875	.246	-.17	.08	.842	.033	-.07	.10	.928	.466	-.21	.07	.807	.003	-.27	.10	.761	.008
Income (in thousands)	-.01	.01	.989	.106	.00	.01	.999	.113	-.02	.01	.983	.016	.00	.00	.997	.493	.00	.01	.995	.444
Black	.51	.68	1.660	.459	.41	.49	1.504	.409	.01	.59	1.009	.988	-.03	.48	.975	.958	-.03	.64	.972	.965
Hispanic	.82	.83	2.263	.328	.74	.61	2.095	.224	-.13	.87	509.81	.000	.978	.42	.59	1.519	.478	.86	.70	2.353
Asian	1.74	1.51	5.700	.248	1.55	1.16	4.710	.181	.49	1.51	1.634	.745	.97	1.22	2.649	.426	1.83	1.32	6.253	.164
Constant	-.53	2.38	.588	.823	3.73	1.66	41.645	.025	1.02	2.08	2.780	.623	.90	1.56	2.450	.565	2.50	2.08	12.131	.230
Constant																				
Nagelkerke's pseudo R square=.439																				

Notes: Reference category is Class 1 (Consistently involved).

* $p < .05$

**

 $p < .01$

 $p < .001$.

National Survey of Fertility Barriers, U.S. Women ages 25–45 who have ever met medical criteria for infertility by wave 1.

Bolded cells indicate significant findings.