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## Same medicine, different reasons: Comparing women's bodily experiences of producing eggs for pregnancy or for profit



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#### ABSTRACT

Women doing *in vitro* fertilization (IVF) to have a child describe it as painful and emotionally draining. Egg donors undergo the same medical regimen for a different reason — to produce eggs for another woman in exchange for thousands of dollars — and describe it as quick and relatively painless. Medical researchers typically compare bodily responses by variables such as gender, age, and health status. We use the case of "egg production" to propose a new factor that may be an important source of variation in bodily experience: an individual's *reason* for undergoing the medical intervention in the first place. Using cluster analysis to analyze an original survey of 50 IVF patients and 62 egg donors from the United States, we find two distinct kinds of bodily experiences — "less intense" and "more intense" — and the intensity of one's experience is associated with one's reason for producing eggs: either to become pregnant or to donate them for money.

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#### 1. Introduction

Clinicians treating patients encounter wide variation in bodily responses to the same medical intervention. To study this variation, the standard approach is to apply some stimulus, e.g. medication or surgery, and assess differences in individual reactions, comparing by gender, race, age, body mass index, smoking status, etc. Here, we propose a new, potentially significant source of variation in bodily experience: an individual's *reason* for undergoing the intervention in the first place. Such reasons can vary widely and might include preventing disease, treating disease, and/or earning money.

Indeed, singular medical interventions are often deployed to different ends. One might remove a uterus (hysterectomy) to prevent cancer, treat fibroids, or transition genders. A living kidney donor may direct the organ to a loved one or a stranger. A woman can birth a child she intends to raise, place for adoption, or provide to a recipient paying for surrogacy. In each example — hysterectomy, kidney donation, childbirth — it is possible that individuals' bodily reactions are affected by their end goals, whether preventative, therapeutic, non-health-related, altruistic, and/or

remunerative. On the assumption that a particular intervention will have the effects it has, regardless of *why* the patient is doing it, social scientists and clinicians have not posed the following question: Does an individual's bodily experience of a medical intervention vary based on their reason for doing it?

We use the case of "egg production" to compare women's bodily experiences of generating eggs for *in vitro* fertilization (IVF) based on whether they are attempting pregnancy or donating eggs for money. Qualitative research suggests these two groups — IVF patients and egg donors — have profoundly different bodily experiences, with infertile women describing it as all-consuming, painful, and depersonalizing (Becker, 2000; Franklin, 1997; Thompson, 2005). In contrast, egg donors, who undergo the same medical regimen but are paid and not attempting a long-awaited pregnancy, offer blasé descriptions of it as quick, easy, and relatively painless (Almeling, 2011; Konrad, 2005).

To facilitate the direct comparison of women's physical, emotional, and cognitive experiences of egg production, we developed an original survey (n = 50 IVF patients and 62 egg donors). Cluster analysis reveals two distinct kinds of bodily experience — "less intense" and "more intense" — and the intensity of one's experience is associated with one's reason for producing eggs. We conclude by calling on researchers to attend to individuals' end goals as a potentially significant source of variation in bodily

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experiences of medical interventions.

#### 2. Variation in bodily experience

Bodily experience is not dictated solely by biology. It is the complex outcome of interactions between a wide range of biological, psychological, sociocultural, and historical processes (e.g. DelVecchio Good et al., 1994; Shilling, 2007). As a result, individuals can have widely divergent experiences of the same bodily event. In this section, we distinguish approaches to this variation in clinical research, which tends to focus on individual characteristics (DNA, disposition) from that in social science, which tends to examine more macro sociocultural and historical processes.

Clinical researchers have long been aware of powerful interactions between mind and body. One striking example is Henry Beecher's comparative studies of injured soldiers and car crash victims. An anesthesiologist during WWII, he was surprised by men who suffered grievous wounds on the battlefield reporting very little pain. He hypothesized it may result from their enormous relief at finding themselves in the infirmary, alive (1946). After returning to his post at Harvard, Beecher studied civilians who survived car accidents, which produce similarly terrible wounds but involve a sudden wrenching from everyday life, finding they reported much higher pain levels than the soldiers (1956). Following the war, there was an explosion of research on pain as a complex "psychobiological phenomenon" (Wailoo, 2014: 33, quoting John Bonica). In the 1960s, Melzack and Wall developed the "gate control theory," defining pain as a "linguistic label for a rich variety of experiences and responses" (1965: 978). Melzack went on to design the McGill Pain Questionnaire, which quantified individual experiences and enabled statistical comparisons; it is still widely used today. Related clinical research on the powerful effects of emotion and cognition on physical responses include studies of the placebo effect (e.g. Kaptchuk and Miller, 2015), biofeedback (Basmajian, 1989), and mindfulness (Brown and Ryan 2003). Psychologists have also explored the obverse, examining how bodily materiality affects emotional and cognitive responses (e.g. Kahneman et al., 1993).

For their part, social scientists have spent the last few decades conceptualizing embodiment, a "verb-like noun" (Krieger, 2005: 351) referring to the dynamic relationship between biological, psychological, sociocultural, and historical processes. Scheper-Hughes and Lock contend that scholars should "begin from an assumption of the body as simultaneously a physical and symbolic artifact, as both naturally and culturally produced, and as securely anchored in a particular historical moment" (1987: 7). Women's reproductive bodies have been a particular focus of social scientific research on embodiment. For example, Lock's comparative study of menopause in North America and Japan reveals that what had been considered solely a biological - and thus presumably universal event is marked by hot flashes and irritability for American women, while Japanese women typically do not experience those symptoms. Lock compares the two nations' histories (each has a distinct system of medical knowledge), cultures (beliefs about gender and aging), workforces, and diets. Together, these elements produce what Lock calls "local biologies," a conceptualization of bodily experience that challenges biological universalism and underscores the "dialectic ... between culture and biology" (1993: 39).

This brief foray into the extensive, multi-disciplinary literature on mind, body, and social context reveals numerous sources of variation in bodily experience, from the micro to the macro. However, narrowing our focus to *elective* medical interventions, namely those that individuals *choose* to undergo, we could not identify a single study examining whether variation in individuals' reasons for undergoing an intervention is associated with variation in bodily experiences.

Elective medical interventions can be distinguished from many of the topics discussed above. For example, clinicians studying the placebo effect do not allow patients to choose (or even know) whether they receive medicine or a sugar pill. People who turn to biofeedback or mindfulness certainly exhibit agency in their choice of therapy but do not generally choose their underlying condition (e.g. chronic back pain). Social scientists who point to the power of macro processes largely position individuals as a product of their time and place. Even those using ethnographic methods to excavate individuals' bodily experiences typically focus on biological processes over which people exhibit little control. One does not intend to begin menstruation or menopause, and while women may intend (or not) to become pregnant, they have little control over how the biological aspects of pregnancy unfold. Thus, we ask a new question about elective medical interventions: Do people who undergo the same medical intervention for different reasons have different bodily experiences?

A full theorization of reasons for elective medical interventions is beyond the scope of this article, but a provisional list includes health-related reasons, such as prevention, cure, or risk-reduction, and non-health-related reasons, such as changing one's body (e.g. cosmetic surgery), altruism (e.g. "contributing to science"), and/or remuneration. Any of these reasons may be combined with others, and there is no bright line between health and non-health-related reasons. Indeed, people often have complex rationales for anything they do, e.g. egg donors expressing motivations that are both altruistic and financial (Almeling, 2011). However, a general categorization of an individual's primary goal makes possible an assessment of whether differing reasons are associated with differing bodily experiences. Reasons are deeply infused with meaning, and just as symbolic interactionists have found in the realm of illness (e.g. Charmaz, 1991), the meaning of a particular medical intervention for a particular individual is likely to affect their bodily experiences.

#### 2.1. Bodily experiences of egg production

To examine the general question of whether there is a relationship between one's reasons and their bodily experiences, we use the case of egg production for IVF, an elective reproductive technology for conceiving children. We compare the experiences of two groups of women who produce eggs for different reasons. The first group -"IVF patients" - have been diagnosed with infertility and use the technology to attempt pregnancy. The second group - "egg donors" - are young, fertile women being paid to provide eggs to another woman, typically \$5000 to \$10,000 in the US. Put more abstractly, both groups undergo this medical intervention for non-healthrelated reasons: the first to become parents and the second to earn remuneration. Indeed, egg donors are "clinical laborers" (Cooper and Waldby, 2014), while IVF patients are understood as patients receiving treatment for infertility (Thompson, 2005). As we discuss in more detail below, parenthood, patienthood, and paid work are all associated with distinct meanings for individuals, and they result in different kinds of interactions between women and clinicians.

While their primary goals are different, IVF patients and egg donors follow the same protocol: several weeks of daily, self-injected fertility medications<sup>2</sup> followed by an outpatient egg

<sup>&</sup>lt;sup>1</sup> Two other groups who produce eggs are not included in this study: those freezing their own eggs for a future pregnancy and those providing eggs to stem cell scientists.

<sup>&</sup>lt;sup>2</sup> Egg donors are typically given slightly lower doses of the medications than IVF patients, but since they are young and fertile, their bodies usually have a stronger reaction (personal communications with Ina Cholst, MD and David Keefe, MD).

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