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The efforts by Kudesia and colleagues (1) to create and validate a fertility awareness survey is a vital development in the field of reproductive health care. The 29-item Fertility and Infertility Treatment Knowledge Score (FIT-KS) was created to measure fertility awareness and infertility treatment knowledge in the general population and among medical trainees. Using a combination of existing questionnaires, consultation with specialists in test construction, and clinical recommendations of an expert panel of 15 reproductive endocrinologists, the FIT-KS is the first of its kind in the United States. The authors should be commended for their foresight and attempts to address a significant gap in the field as most fertility awareness studies use non-validated instruments.

In July 2017, the revised "International Glossary on Infertility and Fertility Care" was published simultaneously in *Fertility &* Sterility and *Human Reproduction* (2). The first agreed upon definition of fertility awareness was included as, "the understanding of reproduction, fecundity, fecundability, and related individual risk factors (e.g. advanced age, sexual health factors such as sexually transmitted infections, and life style factors such as smoking, obesity) and non-individual risk factors (e.g. environmental and work place factors); including the awareness of societal and cultural factors affecting options to meet reproductive family planning, as well as family building needs" (2). The inclusion of fertility awareness in the glossary solidifies its importance as a global issue that should be given significant consideration by health care professionals and researchers. In this regard, the FIT-KN provides a meaningful tool that can be used to address a timely and highly relevant issue for the advancement of the field.

A substantial body of literature from studies throughout the world over the past decade have shown that fertility awareness is lacking in groups likely to delay childbearing such as undergraduate/graduate university students and medical students, as well as in the general population. Participants in these studies consistently overestimate the chances of getting pregnant when having unprotected intercourse, the age at which fertility markedly declines, and the success rates of Assisted Reproductive Technologies (ARTs) - particularly in women over the age of 40. A misunderstanding of these basic reproductive facts can lead to uniformed decision-making which can put women at risk for age-related infertility.

A diagnosis of infertility is linked with a host of psychological stressors including depression, anxiety, and significant emotional distress. While fertility awareness in and of itself will not guarantee a couple or individual will avoid infertility, possessing accurate fertility-related information is essential in making informed decisions that can maximizing one's reproductive potential. Knowing basic facts about reproduction – such as how fertility is impacted by age, the risks of miscarriage during one's reproductive years, and how sexually transmitted infections (STIs), smoking, and obesity impact fertility – is an essential component of knowledgeable reproductive decision-making.

One of the most important findings in Kudesia's article is that few women in the general population have a complete understanding of human fertility, and instead possess a "fractured knowledge" of fertility issues. There are several possibilities for why this phenomenon occurs.

First is the lack of education regarding the full spectrum of fertility awareness, such as the relationship between advanced age and fertility, in sexual education curriculua which mainly focus on pregnancy prevention and the impact of STIs. Second is the common misperception that advances in science have extended the biological clock. Media coverage of women having children well into their 40s may contribute to this inaccurate myth.

A third possibility, and one in which the readers of this commentary have significant influence in producing a solution, is the lack of patient/physician discussions regarding fertility issues. A recent study of 1,000 U.S. women found that 75% indicated that their health care provider was their preferred source of information for reproductive health; however, less than 25% had discussed reproductive and fertility issues with their doctor (3). Unsurprisingly, participants also possessed significant knowledge gaps and misconceptions related to pregnancy and infertility. An increase in patient/physician discussions about fertility issues could significantly increase the fertility awareness among patients in the general population.

While discussions with health care providers are an effective way to improve reproductive health education among women of childbearing age, an increase in discussions on fertility is only one part of the solution. Recent studies examining the fertility awareness of health care professionals have found an alarming result – that medical students, obstetrics and gynecology residents, and even practicing gynecologists lack a complete understanding of fertility awareness (4). As obstetricians and gynecologist are the front-line providers of women's health care throughout the world, a lack of accurate fertility knowledge is a troubling scenario as patients could make potentially life-altering reproductive decisions based on inaccurate information. Because the FIT-KS can be used to assess fertility awareness in both the general population and among medical providers, its functional value and contribution to the field becomes even more pronounced.

The findings that health care providers lack fertility awareness highlights the need for improvements in medical education and residency training programs, particularly in obstetrics and gynecology. Adding curricular modules in residency training as well as in continuing medical education (CME) for practicing physicians can increase awareness in doctors which can then be passed onto patients. Such changes need not be extensive or require an overhaul to current offering. A recent intervention study by Will and colleagues found that even a one-hour educational information session on age-related fertility and elective fertility preservation for medical students and residents improved fertility knowledge and changed fertility attitudes in participants (5).

Intervention studies such as these, particularly if coupled with longitudinal research designs, are greatly needed to assess the effectiveness of our efforts to increase fertility awareness over time, both in the general public and among health care providers. The FIT-KN can be used in these studies as a pre, post, and follow-up measure.

Two recommendations for further development of the FIT-KS which were beyond the scope of Kudesia's article are 1) the need to validate the FIT-KS on a sample of men, and 2) the need to

validate the FIT-KS in countries other than the United States. Because the majority of child-bearing decisions are made jointly by couples, knowing how men view fertility issues is an important piece in the decision-making puzzle. Furthermore, infertility and fertility awareness are global issues and a standardized measure which can provide linkages between countries is greatly needed.

In summary, the creation and validation of the FIT-KS is an important development in the field of reproductive health care. It is vital that we improve fertility awareness in the general population and among health care providers to ensure that patients have an accurate and complete knowledge of fertility issues which will enable them to make the most informed reproductive decisions possible.

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