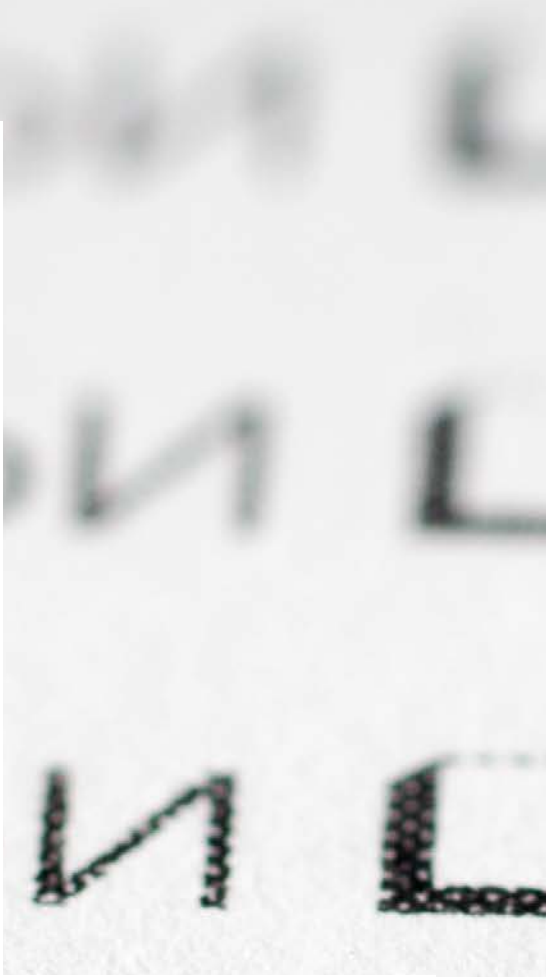
Future-Proofing the Fertility Health of Young Adults

Dr Mary Lee Barron

Scientia

FUTURE-PROOFING THE FERTILITY HEALTH OF YOUNG ADULTS

While the long-term health risks posed by poor lifestyle choices are widely recognised, the specific effects of modifiable and non-modifiable behaviours on reproductive health have been less well explored. Moreover, a gender-specific knowledge gap reportedly exists concerning fertility health. To investigate this, **Dr Mary Lee Barron** and her colleagues in the School of Nursing at Southern Illinois University, USA, utilised a survey-based evaluation tool to determine the current public fertility health knowledge level with a particular focus on university-aged males.



Education Around Risks to Fertility

Despite the potentially serious consequences, the effects of modifiable behaviours on future fertility health remain poorly understood. The extent of fertility knowledge amongst adolescents and young adults is typically limited to avoiding sexually transmitted infections and preventing pregnancy or to the subjects taught as part of sex education in schools, such as the biology of reproduction and conception. Furthermore, whilst there is some demonstrable knowledge regarding, say, age-related fertility decline, this is often insufficient, and assisted reproductive technologies are inaccurately assumed to be a compensatory quick fix in circumstances where infertility arises because of purposefully delaying conception.

The age at which information regarding fertility health is usually delivered is far from ideal since younger adolescents are unlikely to be receptive to advice which they will feasibly deem irrelevant. Indeed, it is feared that future reproductive goals may be compromised due to inadequate and poorly timed fertility health information being conveyed to young adults. This contrasts with the extensive education on the impact of unhealthy lifestyle habits on general health, although the habits in question (substance misuse, excess body weight, poor nutrition) are as damaging to fertility health as they are to overall health. In addition, several studies have indicated a lack of education relating specifically to male factor infertility issues, and previous assessments of fertility health knowledge in university students have exposed gender-specific failings, with males being underrepresented and less knowledgeable than females overall.

To this end, Dr Mary Lee Barron in the School of Nursing at Southern Illinois University, USA, alongside her esteemed associates Dr Diana Lithgow (Western University of Health Sciences), Dr Gail Wade (University of Delaware), and Dr Georgia Mueller-Luckey (Southern Illinois University), evaluated the comprehension levels of current university students surrounding the risk factors associated with fertility health, with a particular focus on young adult males.

Implementing a Validated Knowledge Scoring Tool

The team recruited students attending several universities across the USA to maximise representation of the young adult population and for whom fertility issues had greater pertinence. A reliable short screening tool, the Fertility Health Knowledge Survey (FHKS), previously developed and validated by the same researchers, was employed. Dr Barron and colleagues asked students to score a variety of statements relating to either male, female, or joint fertility facts, as well as answering some questions relating to their desires and plans for children of their own. Additionally, information regarding their race, age, gender, and educational institution was requested. Data were analysed according to correct/incorrect answers and compared between different age ranges and genders. Personal intentions regarding the students' own plans for children were also considered and sub-analysed according to gender. Together, this would provide the researchers with a comprehensive overview of students' understanding of the modifiable and non-modifiable risk factors associated with future fertility outcomes.

Examining Knowledge and Attitudes

Dr Barron and colleagues discovered that, perhaps unsurprisingly, participants aged 23 years or older answered more questions correctly than those aged 17–22 years. For certain questions regarding modifiable lifestyle habits, such as the effect of smoking tobacco or marijuana on sperm quality and the positive effect of moderate exercise on female fertility, the older participants were significantly more knowledgeable than their younger counterparts.

Interestingly, for questions involving non-modifiable factors such as the decline in fertility after the age of 35 and 40 years in females and males, respectively, the younger participants displayed superior knowledge, albeit to a lesser degree. This finding illustrates the need for quality education regarding the modifiable risks affecting fertility health to be delivered earlier. This would help mitigate the multiple impacts resulting from the simultaneous formation of undesirable habits and the increased responsibility for their health and general well-being upon leaving the parental home. Responses regarding the plans for future children revealed that the purported ideal number of children was comparable between males and females. However, the planned ages at which the first and last child would be conceived differed significantly, with male respondents citing the ideal age as older than the female respondents.

One of the most encouraging findings in this study was that the percentage and topic of correctly answered questions were comparable between the male and female participants. This contrasts with similar earlier studies in which males were deemed less knowledgeable than females overall and demonstrated a poor understanding of male factor infertility. That said, the scores achieved within the correctly answered questions did differ, whereby the male cohort answered the questions correctly with decreased frequency, indicating that there is an opportunity to improve men's comprehension of fertility-related matters.

Closing the Gender Gap

In this elegant study, gender-specific fertility health knowledge differences were not evident, demonstrating that previously reported knowledge gaps had narrowed. Furthermore, there were some similarities regarding the topics in which comprehension deficits existed, indicating that the common perception that men and women would know more about male and female fertility issues, respectively, may be somewhat misguided. That said, the findings reported by Dr Barron and the team did suggest that, in some areas, women were more well-informed regarding female fertility issues than men. This is hardly surprising given that female fertility topics are immensely more studied than male topics, participation in such studies has historically been unquestionably female-dominated, and those that do involve men continue to have limited male-related inclusions. Whilst great strides have clearly been made in this emotive area of medicine, there is scope for further improvement which will empower young people, and particularly men, to take control of their health and minimise the risk of damaging their fertility in later years.

Determining the optimal time at which young people are taught about fertility health and the potential consequences if this is compromised will help to improve knowledge and inform best educational practices. Clearly, educational materials about fertility matters should be widely available on university campuses, and a determined effort should be made to promote the inclusion of young men. Extensive implementation of the FHKS during routine clinical investigations and in research settings could assist in elucidating the true level of fertility health awareness and enable the application of corrective measures without delay. Additionally, the FHKS could provide a robust framework for supplying young adults with the information necessary to preserve their long-term general and reproductive health.

Perhaps most importantly, emphasising the correlation between preventing chronic health conditions and maximising fertility potential in later adulthood may be the key to achieving a healthier and more enlightened future generation, a powerful legacy for Dr Barron and her resolute colleagues.

Meet the Researchers

Dr Mary Lee Barron
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During the earliest days of her admirable career, Dr Mary Lee Barron served as a staff nurse in the United States Naval Reserve, and rose to Lieutenant Commander. Dr Barron enjoyed a plethora of clinical roles in a variety of settings, with a focus on obstetrics and gynaecology. Prior to her recent retirement, Dr Barron was the recipient of several esteemed awards, including the March of Dimes Missouri Nurse of the Year. Dr Barron now lends her extensive knowledge and experience to fertility health research and continues to assist patients with natural family planning via her own successful fertility education service.

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FURTHER READING

ML Barron, D Lithgow, G Wade, GH Mueller-Luckey, Fertility Health Knowledge in US Adults: Men Narrowing the Knowledge Gap, *American Journal of Men's Health*, 2022, 16(5), 15579883221117915. DOI: https://doi.org/10.1177/15579883221117915

ML Barron, D Lithgow, G Wade, G Mueller-Luckey, Measuring Fertility Health Knowledge in University Students: Development and Testing of a Survey Tool, Journal of Nursing Measurement, 2020, 28(1), 43–59. DOI: https://doi.org/10.1891/JNM-D-18-00060

ML Barron, Fertility literacy for men in primary care settings, Journal of Nurse Practitioners, 2013, 9, 155–160. DOI: https://doi.org/10.1016/j.nurpra.2012.10.002

ML Barron, Fertility literacy for women in primary care settings, Journal of Nurse Practitioners, 2013, 9, 161–166. DOI: https://doi.org/10.1016/j.nurpra.2012.11.001

Dr Diana Lithgow
Western University of Health Sciences, Pomona, CA, USA

Dr Diana Lithgow is a Family Nurse Practitioner serving the underinsured population at a Community Clinic with Women's Health, contraception, infertility and breast cancer as her focus. She complements her clinical practice with teaching graduate nursing students, as a tenured Professor of Nursing. Dr Lithgow was awarded the 'California NP of Distinction' by the California Association of Nurse Practitioners, and the 'California NP of the Year Award for Achievement in Excellence' by American Academy of Nurse Practitioners.

Dr Gail H Wade
University of Delaware School of Nursing, Newark, DE, USA

Dr Gail Wade is Professor Emerita at the University of Delaware. She holds a PhD and an MS in addition to her clinical qualifications. Dr Wade's research and service has been dedicated to health promotion and risk reduction across the lifespan. With a grant from the March of Dimes, she was the primary investigator to develop a Women's Health Program on Preconception Health. This project led to the Preconception Peer Educator Program, in collaboration with the National Office of Minority Health and supported by the Delaware Healthy Mothers and Infant Consortium.

Dr Georgia Mueller-Luckey
Southern Illinois University Illinois, IL, USA

Dr Georgia Mueller-Luckey is an Assistant Professor in Family and Community Medicine at the Southern Illinois University School of Medicine. Armed with a PhD and an MS, her research involves exploring rural-urban health disparities, evaluating educational tools, and clinical health outcomes. She utilises collaborations and multidisciplinary efforts to address health disparities through clinical, educational, and population health initiatives.