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To cite this Article / Käytä viittauksessa alkuperäistä lähdettä:

Tuomi, J. (2021) Introduction. Teoksessa Tuomi, J. (toim.) Preconception health and care - Handbook for education. Tampereen ammattikorkeakoulun julkaisuja, sarja B, raportteja 135, s. 6 - 12.

URL: <http://urn.fi/URN:ISBN:978-952-7266-60-1>

Introduction

*Jouni Tuomi, PhD, Principal Lecturer, Health Promotion
Tampere University of Applied Sciences
Finland*

In the Erasmus+ Strategic Partnership project “Preconception Health of Youth, bridging the gap in and through education”, our intention was to bring lifelong fertility counselling to a new level by creating tools for educators to train health care professionals to be equipped in guidance and counselling of their clients and patients.

The first aim was to bridge the gap in health care education. Fertility protection and preconception health and care were not clearly stated in curricula. The other gap was that it is not an essential part of health promotion. Presently, after completing secondary school, youth are not being systematically counselled until they decide to have children. Preconception health is recognized as a critical component of life health development of women and men in reproductive age. Preconception health and care focus on men and women before pregnancy. The years before pregnancy are of great importance to fertility, healthy pregnancy and to the health of the baby.

The increase in wellbeing in Europe and throughout the world has brought up a notable need to strengthen young adults’ preconception health, which has in its part, significantly decreased. This growing societal problem also is evident in developing countries as the gap between different people groups is vast. The shift in culture and lifestyle has brought the increasing problem into light with force. Infertility is a major societal problem. The challenge and need can only be met with input

into good quality higher education. E.g. Lancet published in its Series three articles, which “calls for a social movement to achieve political engagement for health in this particular phase in life” (Lancet 2018).

Young adults (aged 18–30) postpone having children without proper knowledge about how age and cumulative health problems and lifestyle choices strip natural fertility. Infertility treatments and pregnancy complications increase and the number of children in families remain smaller than what was wished for. The birth rate decreases and some couples remain childless against their will. Delayed parenthood can be a choice for some couples, but socioeconomic problems and / or educational and cultural inequality may play their part in the inability for couples to receive reliable information to support their decision and lifestyle choices. Good fertility health is in the core of life course health development, even if the choice is not to have children. Good pre-pregnancy health of the mother-to-be, and also the father-to-be, have been reported in numerous research as crucial for the health of the unborn child. In addition, it affects the ability of the couple to conceive, the safety of the pregnancy, and the child’s health in the long run. As a long term effect, this also applies to the health of the next generation and even the following ones.

Preconception health has been researched and recognised in medicine, midwifery and e.g. in social sciences; it has been declared as a serious issue that influences health in the long run. Current educational programs of health professionals are inadequate, inconsistent, and scattered. Therefore, health professionals lack information in how to counsel their clients in this subject. Even in the current health care structure there is no system to resolve the growing problem of people who are kept in the dark when it comes to their sexual and reproductive

health and fertility awareness. It is nowhere to be found in health care or nursing education either. When EU-directives for nurse and midwife education were written, this problem was not recognised, and it is completely absent in directives concerning midwifery. The common directives for nurses are disease centred. Now it is time to turn the focus on life course health development education and training in fertility health.

The preconception health focus has previously been on unwanted pregnancies and sexually transmitted infections. Today, other issues would deserve more attention. As important, unless more, is to focus on protecting natural fertility. The guidance is directed towards girls and women. Equally important, for maintaining good fertility, are boys and men, who have previously been neglected, and now need to be reinstated.

The subject is highly sensitive, therefore empowering health professionals, to execute quality guidance and knowledge, is curial. The preparedness to guide fertility awareness and counsel how to retain reproductive abilities, when postponing parenthood, contains evidence-based knowledge, competencies, and skills.

In this project, we intended to develop necessary knowledge and training for health professionals, to be equipped for adequate counselling. We have developed digital material that allows distance learning, independent learning or can be offered as a module or integrated in many subjects throughout all the studies for nurses, midwives, public health nurses, and school nurses etc.

Over the past 20 years, many reviews and summaries have been published around the world on which are the key themes of preconception health and care. One key starting point can be found in a supplement published in the American Journal of Obstetrics & Gynaecology (AJOG) in 2008, in which 17 articles

examine preconception care. One article, by Jack et al. (2008) summarises the subjects of the supplement. In the last chapter of this book, Delbaere (Chapter 30) describes and comments the article of Jack et al. (2008), as if as a kind of summary for the texts of our book. For example, WHO (2012) also published a 13-point list of themes of preconception care. The difference between the AJOG and WHO is mainly that WHO emphasises the global perspective. The table of contents of books on the subject (e.g. Shawe et al. 2020) also gives a picture of the vast scope of the topic. A Google search also pictures a wide range of outlines, mainly along the lines defined by AJOG (2008) and WHO (2012).

One of the project's outputs was the Preconception Health and Care (PCHC) model (Figure 1), which is symbolised as Honeycomb model. The model is primarily intended as a tool for teaching and learning for health care teachers and students and it guided our choices. The model aims to parse the preconception health and health care area, adapted to nurses and nursing care. We have used it to structure the digital teaching and learning platform we have created. At the beginning of the project, there was much discussion about which perspective on the outputs is chosen – nursing care, health promotion or medicine. A significant part of the PCHC research is medical.

The main themes of the Honeycomb-model (Figure 1) are: understanding reproduction, age and fertility, lifestyle factors, infection risks, pre-existing medical conditions, environmental factors, occupational environment and social environment. The idea behind the model is that it is constantly expanding and deepening as more researched evidence about the impact and importance of preconception and pregnancy emerges. E.g. in 2008 preconception health was not known or understood the way it is today.

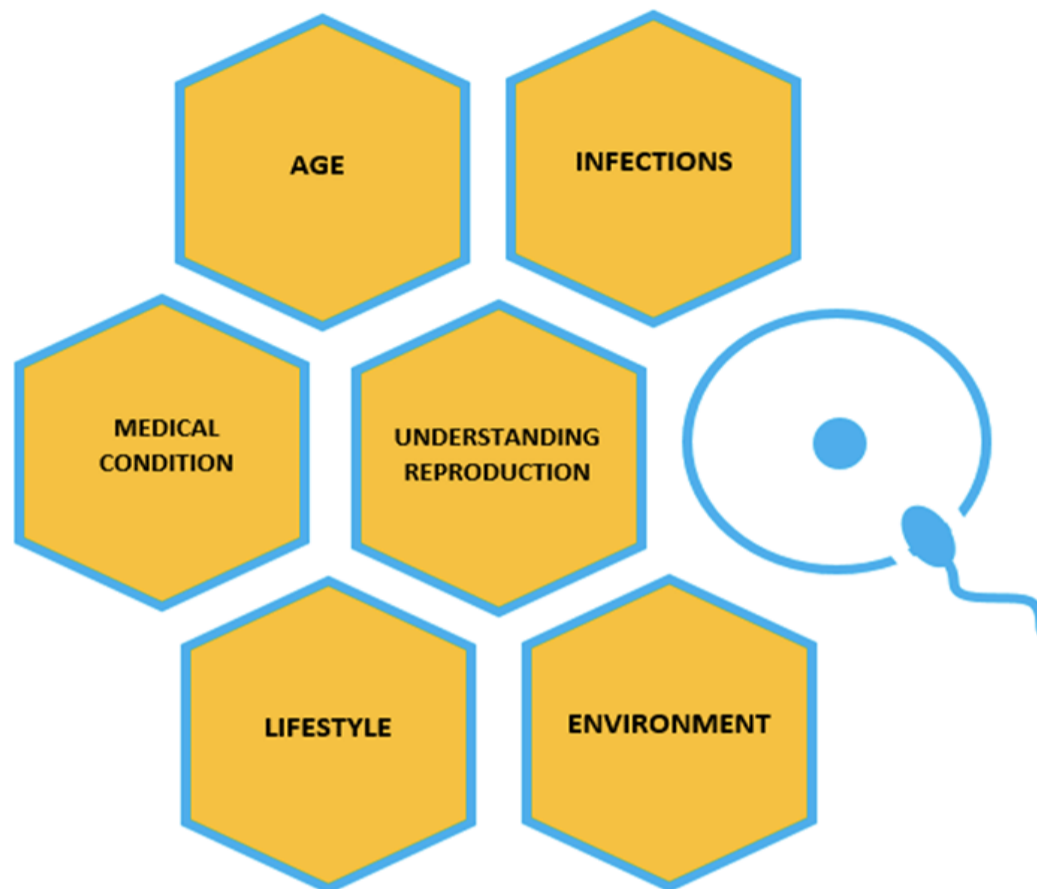


Figure 1. PCHC -model / the Honeycomb-model (<https://preco.tamk.fi/pchc-model/>)

This book is an independent output of the project, involving all project experts and people who volunteered for the project. The purpose of this handbook is to act as a tool and reinforcer for preconception health and health care learning and teaching. It also justifies the different tools of our digital learning and teaching platform. The digital learning and teaching tools and this handbook are placed on the same platform so that teachers and students alike easily find background information for different tools and, vice versa, easily find practical applications for self-study, teaching and guidance.

The book is divided into six main chapters. The first chapter describes the idea guiding the whole project where Preconception health is an essential part of life course health development and that life course health development is beyond health promotion. On the other hand, the articles highlight the multitude of

concepts: Preconception health, preconception care, preconception health and care, preconception health and health care. Each writer made their own choices.

The second chapter aims to increase understanding of the concept of preconception by looking at fertility from different perspectives. People do not always remember that age has an incontestable meaning in fertility. The third chapter looks at different lifestyle choices that may affect fertility. Critically one might add that investing in them does not unequivocally increase fertility, but poor choices can destroy fertility. The fourth main chapter focuses on pre-existing medical conditions. E.g people are quite unaware that already one sexually transmitted infection might cause infertility. The fifth main chapter looks at various environmental factors, from chemicals to violence, of which female circumcision is one example. In the final chapter, the focus shifts to guidance and counselling, not forgetting the possibilities of digitalisation.

This project was a three-year EU-funded project which, due to Covid-19, received an additional four months until the end of 2021. The project was led by Tampere University of Applied Sciences (TAMK; Finland) and strategic partners were the University of Ljubljana (UL; Slovenia), University of Primorska (UP; Slovenia), VIVES University College (VIVES; Belgium) and Carinthia University of Applied Sciences (CUAS; Austria). On behalf of the project, I would like to thank the EU for the project funding. I also thank all those who, as their volunteer work, lectured at the various conferences of the project. Thank you to all the professionals and students who contributed to this handbook.

I hope that the readers of the book will find issues that are important to them in the book and that the book will be used e.g. in nurse and midwife education. In addition, I hope that readers

would develop as much enthusiasm for promoting preconception health and care as we the authors of this book do have. Good reading moments.

All authors are responsible for their own articles.

The European Commission's support for the production of this publication does not constitute an endorsement of the contents, which reflect the views only of the authors, and the Commission cannot be held responsible for any use which may be made of the information contained therein.

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