(B = 0.030, p = 0.309). When frailty was defined with the Fried definition, the associations were not statistically significant. When women with dementia were excluded from the sample, only the association of total years of menstruation with the frailty index retained its statistical significance.

Conclusions: Our study indicates a negative association between menopause age and total years of menstruation with frailty, when the definition by Rockwood and Mitnitski was used, possibly because this definition also takes into account psychosocial factors, such as depression, anxiety and sleep problems, conditions that are also affected by menopause.

https://doi.org/10.1016/j.maturitas.2019.04.110

O36

Web-based applications to promote women's Health

Andrea Giannini [1],*, Elissabetta Micelli [2], Marta Caretto [2], Paolo Mannella [2], Tommaso Simoncini [2]

[1] University of Pisa, Pisa, Italy
[2] University of Pisa, Clinical and Experimental Medicine, Pisa, Italy

Objective: Menopause, a natural biological process in women's aging, leads to a rapid increase in fat mass and a redistribution of body fat from the periphery to the abdomen: abdominal obesity and oestrogen decline predispose to adverse metabolic changes and high risk of developing cardiovascular diseases. It could be necessary to encourage lifestyle measures in addition to therapeutic interventions. As more and more women start to use smartphones, they may provide a tool to help improve their health and fitness. The Vita Nova project consists in the development of a mobile app to accompany and coach women during menopause. The main objective is to investigate the user profiles and personas, as methodological tools to inform the design and development of Consumer health technologies devices for menopause self-care.

Methods: For this design, we used the principles of the Persuasive Systems Design model (PSD) and the Just-in-Time Adaptive Interventions (JITAI) framework, together with participatory techniques and demographic data analysis. To achieve personalization and adaptability, JITAI focuses on four key components: decision points (when), intervention options (what), tailoring variables (whom), and decision rules (how). Moreover, fuzzy logic (FL) is used to tackle the inherent vagueness of health-related concepts.

Results: An initial set of 75 tailoring variables have been defined, 49 come from the bio-clinical domain (e.g., menopause onset, smoking, physical activity, dietary habits, symptoms); 16 from the socio-economic domain (e.g., marital status, income level, employment status); and 10 from the psychological domain (e.g., coping mechanisms, change willingness). The resultant profiles and personas is leveraged to improve the design, development and implementation plans of a smartphone application to assist pre- and post-menopausal women self-management.

Conclusions: The Vita Nova project has recently emerged as an innovative solution in the design of smartphone apps to promote health-related behavioural changes and personas during the interaction design process of a menopause self-care app. A pilot study is ongoing in order to assess preliminary the plausible impact of the prototype on women's quality of life, adapting to their needs to promote health-related behavioural changes in pre-and post-menopause by tailoring recommendations to reduce their cardiovascular and metabolic risks.

https://doi.org/10.1016/j.maturitas.2019.04.111

O37

Premature ovarian failure (POF): what do we know about our patients? Preliminary results (protocol code IIBSP health-IOP- 2012-109. clinical trials.gov ID: NCT02068976)

Marta Bailón Queiruga [1],*, Misericordia Guinot Gasull [1], Jordi Tomás I. Massaguer [2], Beatriz Roca Comella [3], Plácido Llaneza Coto [4]

[1] Hospital de la Santa Creu i Sant Pau, Barcelona, Spain
[2] Hospital Universitari Mutua de Terrassa, Terrassa, Spain
[3] Hospital de Terrassa, Terrassa, Spain
[4] Hospital Universitario Central de Asturias, Oviedo, Spain

Objective: The main objective is to evaluate the epidemiological characteristics of patients affected by POF. This communication updates the information lend by the first 208 cases registered since 2014.

Material and methods: This is a prospective observational study in which takes part 12 centers all over Spain.

Inclusion criteria: high gonadotropin (FSH > 40 mIU/mL) and low oestrogen (Estradiol < 20 pg/ml) in in two determinations separated at least 1 month before age 39.

Basal evaluation: medical history, hormonal determination (FSH,LH,E2,PRL,TSH) and biochemical profile.

Complementary studies: immunological study including antithyroid, antiphospholipid and antinuclear antibodies (ANA), among others. Karyotyping and determination of FMRI permutations to detect molecular changes related to X-Fragile syndrome. Finally, measure of bone mineral density (BMD) by dual energy X-ray (DXA).

Results: The mean age of diagnosis was 36,39 years old and mean patients BMI was 24,79 kg/m^2.

Basal clinic characteristics were: 22,6% of patients had familiar history of POF, mainly first-degree relatives (72,4%); 9,13% suffered an autoimmune disease, although positive antibodies were found in 16,8% of the participants (mainly anti-thyroglobulin and antiperoxidase); 14,90% underwent chemotherapy and/or radiotherapy for oncological processes, especially hematological malignancies.

A bilateral oophorectomy or ovarian cystectomy was performed in 13,94% of patients.

79,4% of patients presented climacteric symptoms, being hot flashes the most frequently referred.

The genetic evaluation disclosed 2,88% cases of chromosomal alteration corresponding to Turner Syndrome variants and 6.73% cases of abnormal count of Fragile X pre-mutations.

In 107(55,7%) cases none of the mentioned studies detected any potential cause of POF, being considered as idiopathic.

More than 80% of patients were treated with hormonal replacement therapy (HRT). Among patients without treatment, it is worth mentioning rejection due to fear of adverse effects, a history of hormone-dependent cancer or thrombophilia.

Conclusions: As in the literature the etiopathology of the majority of POF remains undetected, even though, the prevalence of family association suggests undetected genetic causes. It is well known that autoimmune and iatrogenic are the most frequent recognized causes of POF, also reflected in our results. It is important the HRT in this population to prevent future complications.

https://doi.org/10.1016/j.maturitas.2019.04.112