

## PhD Thesis proposal<sup>1</sup>

General Information		
PhD Thesis Title	<b>Beyond diagnosis: understand etiology, raise awareness and meet the unmet needs of women with polycystic ovary syndrome in Lebanon</b>	
USEK Doctoral Degree	PhD in Agriculture and Food Sciences	
Research Unit	NA	
Laboratory	NA	
Axis		
PhD Supervisor	Name & Title : Dr Sophie Julien Email : sophiejulien@usek.edu.lb	University Address : Holy Spirit University of Kaslik- USEK
Co-supervisor (if applicable)	Name & Title : <u>Pending</u> Email :	University Address : Pending
Location (s)	Location 1: USEK	Work shift calendar /per year (%):
	Location 2: (if applicable)	Work shift calendar /per year (%):
Potential funding and scholarship	AUF-CNRS	

Applicant Profile and/or Special Requirements	<ul style="list-style-type: none"> <li>- Master in Clinical Nutrition or Public Health <u>AND</u> licensed dietician</li> <li>- Strong interest in endocrinopathy (including PCOS)</li> <li>- Experience in computational analysis (including statistical software platform like SPSS, GraphPad Prism), software developer questionnaire (including Qualtrics, QSurvey) and anthropometric measurements.</li> <li>- Fluency in English and French is a must</li> <li>- Full-time</li> </ul>
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Subject's national or worldwide Context, Objectives & Research lines
<p>Polycystic ovary syndrome (PCOS) is one of the most common endocrine disorders in women of reproductive age worldwide with common comorbidities such as infertility, obesity, type 2 diabetes, and psychological issues. The main causes of this syndrome remains largely unknown, but mounting evidence suggests that PCOS might be a complex heterogenous disorder with strong epigenetic and environmental influences, including diet and lifestyle factors. In this regards, dietary and lifestyle intervention are recommended as first-line therapy. However, evidence surrounding their positive impact are still uncertain specifically in Lebanon where prevalence of PCOS ranges from 10-20%.</p>

<sup>1</sup> Thesis proposal should not exceed two pages

This project intends at encompassing the entirety of PCOS spectrum from etiology, signs and symptoms, current pharmacological and holistic interventions to identify flaws preventing successful management of this debilitating disorder.

To address this research, it will be essential to first, contrast the usual lifestyle and habits of women with PCOS that of controls, along with a retrospective profile of clinic, socio-demographics and anthropometric inputs; second, investigate diagnostic criterion for PCOS in Lebanon and survey the treatment modalities with their successful outcomes and finally, identify variance in the level of quality of life through the Health-related quality of life (HRQoL) scale between women with PCOS that of controls suffering from infertility or not. All together, through a thorough and comprehensive analysis the doctorate research outcomes shall identify areas where misdiagnosis of PCOS relies on, and allow to articulate strategies for developing guidelines to successfully screen and manage women with PCOS and preventing risk of comorbidities.

The lack of commitment to abide on unified guidelines for a proper diagnose and to foster appropriate lifestyle interventions, and the rapid evolution of the disease, support the need for the implementation of standards and recommendations for the management of PCOS in Lebanon.

Word count limit : 290/300 words

<b>Outcomes (OCs) : What do we wish to achieve?</b>	
OC1:	To demonstrate that an adequate diet and lifestyle choices can improve symptoms and prevent risk of comorbidities associated with PCOS.
OC2:	To attest that differential environmental factors in Lebanon can explain the discrepancy of public health aspects of PCOS in women.
OC3 :	To identify areas where misdiagnosis of PCOS rely on and to articulate strategies for developing guidelines to prevent these issues.
OC4 :	To create and develop a Lebanese web-based cohort to study the associations of diet and lifestyle habits with public health problems.

<b>References (R) ( 5 most recent peer-reviewed publications)</b>	
R1:	de Lima Nunes R <i>et al.</i> Lifestyle interventions and quality of life for women with polycystic ovary syndrome: A systematic review and meta-analysis protocol. <i>Medicine (Baltimore)</i> . 2019 Dec;98(50):e18323.
R2:	Lin AW <i>et al.</i> Dietary and Physical Activity Behaviors in Women with Polycystic Ovary Syndrome per the New International Evidence-Based Guideline. <i>Nutrients</i> . 2019 Nov 8;11(11).
R3 :	Forslund M <i>et al.</i> Type 2 diabetes mellitus in women with polycystic ovary syndrome during a 24-year period: importance of obesity and abdominal fat distribution. <i>Hum Reprod Open</i> . 2020 Jan 15
R4 :	Escobar-Morreale HF. Polycystic ovary syndrome: definition, aetiology, diagnosis and treatment. <i>Nat Rev Endocrinol</i> . 2018 May;14(5):270-284.
R5 :	Witchel SF, Teede HJ, Peña AS. Curtailing PCOS. <i>Pediatr Res</i> . 2020 Jan;87(2):353-361. doi: 10.1038/s41390-019-0615-1.