Université Libanaise

École Doctorale
Sciences Et Technologies

Proposition d'un sujet de thèse en cotutelle

Université Libanaise

Nom : HOTEIT

Prénom : Maha

Titre (Prof, HDR, …) : Prof. Maha HOTEIT is the Director of the Masters' Program in Clinical Nutrition and Public Health-Lebanese University-Faculty of Public Health-Branch 1

Laboratoire : PHENOL (Public Health Nutrition Program-Lebanon) research center

Adresse Web :

Etablissement : Lebanese University-Faculty of Public Health-Branch 1

Adresse Web :

Domaines d'expertise :

Prof. Maha Hoteit, holding a PhD in Nutritional Sciences and Nutrigenomics, is the Director of the Master Program in Clinical and Public Health Nutrition and the founder of the Public Health Nutrition Program of Lebanon (PHENOL). She is a member of the National Scientific Committee for Food Safety of the Ministry of Public Health in Lebanon, and a consultant specialized in nutrition projects with the World Health Organization - Eastern Mediterranean Region (WHO-EMRO) and associated member with the "Agence Universitaire de la Francophonie-Moyen Orient" (AUF-Moyen Orient). Prof. Maha Hoteit is the member of a number of international projects and initiatives concerned with monitoring women's health, diets and Covid-19 repercussions. Author of private and joint research studies with local and international organizations on food security, improving a healthy lifestyle, nutritional supplements, health of pregnant women. She has more than 38 publications observed lights between 2014 and 2022. Main outcomes and topics were non-communicable diseases, fruits and vegetables intake, Mediterranean diet, smoking and body weight, physical activity and body markers, autism and nutrition, body image and healthy lifestyle, inflammatory bowel disease and nutrition, Vitamin D and Calcium supplementation in elderly, food composition tables for traditional dishes, food security, breastfeeding and pregnancy amid the COVID-19 pandemic.

Publications importantes en relation avec le sujet proposé :

1. Project: Effect of COVID-19 on Food Literacy in relation to perceived Stress and other Social Factors (in process)
2. Abi Khalil, H., Hawi, M., & **Hoteit, M.** (2022). Feeding patterns, mother-child dietary diversity and prevalence of malnutrition among under-five children in Lebanon: A cross-sectional study based on retrospective recall. *Frontiers in Nutrition*, *9*. https://doi.org/10.3389/fnut.2022.815000.
3. **Hoteit, M**., Mortada, H., Al-Jawaldeh, A., Ibrahim, C., & Mansour, R. (2022). Covid-19 home isolation and food consumption patterns: Investigating the correlates of poor dietary diversity in Lebanon: A cross-sectional study. F1000Research, 11, 110. https://doi.org/10.12688/f1000research.75761.1
4. Hoteit, M.; Al-Atat, Y.; Joumaa, H.; Ghali, S.E.; Mansour, R.; Mhanna, R.; Sayyed-Ahmad, F.; Salameh, P.; Al-Jawaldeh, A. Exploring the Impact of Crises on Food Security in Lebanon: Results from a National Cross-Sectional Study. *Sustainability* **2021**, *13*, 8753. https://doi.org/10.3390/su13168753
5. Hoteit, M., Mortada, H., Al-Jawaldeh, A., Mansour, R., Yazbeck, B., AlKhalaf, M., Bookari, K., Tayyem, R., Al-Awwad, N. J., Al Sabbah, H., Cheikh Ismail, L., Qasrawi, R., Abu Seir, R., Kamel, I., Dashti, S., Allehdan, S., Al-Mannai, M., Bawadi, H., Waly, M., & Regional CORONA COOKING Survey Group (2022). Dietary Diversity in the Eastern Mediterranean Region Before and During the COVID-19 Pandemic: Disparities, Challenges, and Mitigation Measures. *Frontiers in nutrition*, *9*, 813154. https://doi.org/10.3389/fnut.2022.813154
6. Correlates of Sub-Optimal Feeding Practices among under-5 Children amid Escalating Crises in Lebanon: A National Representative Cross-Sectional Study. (under review children mdpi journal)

Adresse Web de votre page personnelle : https://www.linkedin.com/in/maha-hoteit-45489a16/

Adresse mail : m.hoteit@ul.edu.lb

Partenaire à l'étranger :

Nom : Sacre

Wakim

Prénom : Yonna

Lara

Titre (Prof, HDR, …) :

Dr. Yonna SACRE is the Head of department of Nutrition and Food Sciences at Holy Spirit University of Kaslik.

Prof. Lara WAKIM is a Senior Researcher at Holy Spirit University of Kaslik.

Laboratoire : USEK Laboratory

Adresse Web :

Etablissement : Kaslik-USEK Main Campus- Joneih

Adresse Web :

Domaines d'expertise :

Dr. Yonna Sacre is currently the Head of the Human Nutrition and Dietetic Department and coordinator for continuing education at the Holy Spirit University of Kaslik, teaching different human and community nutrition courses. She has published several articles in scientific journals and act as a reviewer for several reputable public health and nutrition ones. She is a member of the Lebanese National Nutrition Exam Committee and technical nutrition committee at the Lebanese ministry of higher education and a member of the Lebanese Association of Nutrition and Dietetics and European association for atherosclerosis.

Prof. Lara Wakim is a prolific scholar who has been widely published through numerous articles in selective indexed journals, and has served on the editorial boards of many leading academic journals in food process engineering and food security. She has been honored, at the Lebanese Parliament, as Women Leader in Lebanese Universities and Research Pioneers, by the National Initiative for the Centennial of Greater Lebanon. She has been honored by the Lebanese Minister of Agriculture for her major accomplishments and outstanding leadership and performance in obtaining the American accreditation ABET for the Agricultural Engineering Diploma at USEK. She is Member of the National Advisory Board related to the WaterMedYin Project and the National Contact Point (NCP) for "Climate action, resource efficiency and raw materials" for the EU Commission Horizon 2020 Framework Programs.

Publications importantes en relation avec le sujet proposé :

Chami, M. E., Sacre, Y., & Matta, J. (2017). The prevalence of breakfast skipping and its association with lifestyle factors and weight in 11-15 years adolescents from selected Lebanese regions. Occupational Medicine & Health Affairs, 05(02). https://doi.org/10.4172/2329-6879.1000260

Adresse Web de votre page personnelle :

Adresse mail :

yonnasacre@usek.edu,lb

larahanna@usek.edu.lb

Description du sujet de thèse proposé :

Discipline : Ph.D. in Agricultural and Food Sciences

Titre et Résumé : Impact of Parents' and Children's Nutrition and Food Literacy on Household's Dietary Diversity, Anemia and Malnutrition in Lebanese Adolescents.

Sujet :

Description du sujet (contexte scientifique, description du problème, Objectifs, …) :

Food literacy is determined by complex interactions of an individuals' knowledge, skills, and self-efficacy required to plan, manage, select, prepare, and eat food. Food literacy has a critical role in shaping dietary behaviors; low food literacy could be a barrier to dietary diversity and nutrient adequacy. Parents and children's food/nutrition literacy are highly interrelated. It is suggested that if parents perform well in interpreting food-related information, planning for meals, selecting the healthiest food options, preparing the food in its safest and affordable version, managing food wastage, and focusing on improving the overall diet quality, their children do this as well. Food literate parents are more likely to have children with better food consumption patterns. Household food consumption, the frequency of consumption of different food groups by a household over a definite time, determines the health and nutrition status of their children, and it is a cornerstone of food literacy analysis. Amid the threat of transitioning to nutrient-poor diets in the MENA region, the younger generation is most vulnerable to the substantial backslashes of the current situation. A recent study by Hoteit, M. et al. (2021) found that more than half the Lebanese population had poor food consumption scores and that 9 in every 16 households eat less than two meals per day, plunging Lebanese people into high vulnerabilities. A less diversified diet is associated with chronic nutrition outcomes, including micronutrient deficiencies. The dietary diversity is a recommended valid dietary assessment indicator that has been shown to reflect micronutrient intake (particularly iron). Thus, a less diversified diet urges the need to diagnose possible iron-deficiency anemia among vulnerable population. Anemia diagnosis is confirmed when blood tests indicate low hemoglobin levels based on age and gender. Even though household food security, in its availability and access components, is a significant determinant of nutritional status, being food illiterate impedes the adequate utilization of the available food. Malnutrition in early years predicts disease risk later in life. Assessing malnutrition and its correlates among Lebanese adolescents is momentous to pave the way for effective public health- and nutrition-based interventions and policies.

Objectives

1. To evaluate food and nutrition literacy of parents and adolescents.
2. To assess the household food consumption patterns as an indicative score of dietary diversity at the household level.
3. To assess the nutritional status of Lebanese adolescents through anthropometric measurements and blood hemoglobin measurement.
4. To investigate the association between food and nutrition literacy and food consumption patterns at the household level.
5. To examine the association between food and nutrition literacy and the malnutrition prevalence among Lebanese adolescents.
6. To determine the triple interaction between food literacy, food consumption patterns, and malnutrition among Lebanese adolescents.

At each governorate, a research team will coordinate with many healthcare centers, municipalities, and pediatricians to discuss the current research objectives. A further debate regarding the eligibility criteria of the target population and the required minimum sample size will take place. Afterward, healthcare centers, municipalities, and pediatricians will assist in reaching the target population through a well-planned and designed protocol. The eligible participants will be invited to arrive at the study location where a well-trained research team will be available. The research team will be trained to be sure that all members are fully competent in the skills needed to implement the research program (anthropometric measurements, administration of questionnaires, point of care testing for hemoglobin measurements, handling urine samples).

Materials and Methods

- A representative sample size of Lebanese adolescents (10-19 years old) from recruited Lebanese households.
- Administration of food literacy questionnaire for parents
- Administration of nutrition literacy questionnaire for adolescents.
- Administration of food consumption patterns questionnaire to evaluate household's dietary diversity.
- Conducting anthropometric measurements for the recruited adolescents (weight, height, MUAC, waist circumference, hip circumference, skinfold thickness measurements).
- Measuring blood hemoglobin level using Compolab point of care check machine.
- Collecting urine samples from the recruited adolescents.

Sample Size

A single population formula was used to determine the sample size. Accordingly, the formula for sample size determination used was: $n= [p (1-p)] * [(Z_{\alpha/2})^2 / (e)^2]$, where n denotes the sample size, $Z_{\alpha/2}$ is the reliability coefficient of standard error at 5% level of significance= 1.96, p represents the probability the youths who were unable to practice preventive measures of the diseases (50%, no previous study found), and e refers to the level of standard error tolerated (5%) as stated by Hosmer and Lemeshow. Based on this formula, it was determined that a sample size of 400 respondents would be sufficient to identify differences by respondent characteristics.

Governorate		Age 10-19 years	
		%	N
Population estimations 2018-2019			400
Beirut	43	5.5	22
Mount Lebanon	292	37.1	148
North Lebanon	113	14.4	58
Akkar	67	8.5	34
Beqaa	49	6.2	25
Baalbeck-Hermel	45	5.72	23
South Lebanon	107	13.6	54
Nabatieh	70	8.9	36
Total	787	99.9	400

Résultats attendus :

1. Food Literacy of parents is positively correlated with the nutrition literacy of their adolescent children.
2. Food literacy shapes food consumption patterns at the household level.
3. Undernutrition and over-nutrition are more prevalent among adolescents with inadequate nutrition literacy, and those who belong to households with poor food consumption patterns.
4. Anemia is more prevalent and severe among adolescents with inadequate nutrition literacy, and those who belong to households with poor food consumption patterns.

Bibliographie :

1. Taleb, S., & Itani, L. (2021). Nutrition literacy among adolescents and its association with eating habits and BMI in Tripoli, Lebanon. *Diseases, 9(2)*, 25. https://doi.org/10.3390/diseases9020025
2. Ayer, Ç., & Ergin, A. (2021). Status of Nutritional Literacy in adolescents in the semi-rural area in Turkey and related factors. Public Health Nutrition, 24(12), 3870–3878. https://doi.org/10.1017/s1368980021002366
3. Kahssay, M., Mohamed, L., & Gebre, A. (2020). Nutritional status of school going adolescent girls in awash town, afar region, Ethiopia. Journal of Environmental and Public Health, 2020, 1–9. https://doi.org/10.1155/2020/7367139
4. Butcher, L. M., Platts, J. R., Le, N., McIntosh, M. M., Celenza, C. A., & Foulkes-Taylor, F. (2020). Can addressing food literacy across the life cycle improve the health of vulnerable populations? A case study approach. Health Promotion Journal of Australia, 32(S1), 5–16. https://doi.org/10.1002/hpja.414
5. Doustmohammadian, A., Omidvar, N., Mohammadi, N. K., Eini-Zinab, H., Amini, M., Abdollahi, M., Amirhamidi, Z., & Haidari, H. (2019). Low Food and Nutrition Literacy (FNLIT): A barrier to dietary diversity and nutrient adequacy in school age children. https://doi.org/10.21203/rs.2.14552/v1.
6. Kamruzzaman, M., Rahman, S. A., Akter, S., Shushmita, H., Ali, M. Y., Billah, M. A., Kamal, M. S., Elahi, M. T., & Paul, D. K. (2021). The anthropometric assessment of body composition and nutritional status in children aged 2–15 years: A cross-sectional study from three districts in Bangladesh. PLOS ONE, 16(9). https://doi.org/10.1371/journal.pone.0257055.
7. Estecha Querol, S., Iqbal, R., Kudrna, L., Al-Khudairy, L., & Gill, P. (2021). The double burden of malnutrition and associated factors among South Asian adolescents: Findings from the Global School-Based Student Health Survey. Nutrients, 13(8), 2867. https://doi.org/10.3390/nu13082867.
8. Koca, B., & Arkan, G. (2020). The relationship between adolescents' nutrition literacy and food habits, and affecting factors. Public Health Nutrition, 24(4), 717–728. https://doi.org/10.1017/s1368980020001494.

Mots clés :

Food literacy; nutrition literacy; dietary diversity; malnutrition; Lebanese; adolescents

Possibilité de financement (Justificatif éventuel) :

Project funded by Agence Universitaire de la Francophonie (30,000 Euro eq to 10,000 Euro per year over 3 years)

Profil Scientifique du candidat :

- holding a Master's degree in Community nutrition and Public Health with a Bachelors' degree in Nutrition and Dietetics.

RESEARCH AREAS OF INTEREST

- Development and evaluation of population-based interventions addressing dietary behaviors related to obesity and chronic disease in diverse populations, including children and youth.
- Parenting and family influences on children's obesogenic behavior and weight status, and family-based obesity prevention.
- The relationship between different food environments (neighborhood, work, school), food choices, and health outcomes, particularly among vulnerable populations at high risk for diet-related diseases.
- Chronic disease management through dietary behaviors.

Publications:

1. At least 2 to 3 publications related to the field requested, in peer reviewed journals.

- À joindre un fichier PDF détaillant le sujet. (Enclosed)