
USJ 1875
Saint Joseph University of Beirut
Faculty of Pharmacy
Department of Nutrition
The Department of Nutrition
of the Faculty of Pharmacy
at Saint Joseph University of Beirut
is please to invite you to attend its
Fifth
Nutrition and Food Technology Conference:
Nutrition and Food
Evidence into Action
Thursday and Friday,
October 22 and 23, 2026
at the Medical Sciences Campus (CSM)
Auditorium C
Earn 8 CPEU crédits from LOD (Lebanese Order of Dieticians)
For registrations:
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Welcome Note

Dear participants, colleagues and students,

We live in an era where conflict and instability constantly threaten the balance of people's most precious resource: Food. We also live in an era of quick information and widespread misconceptions, where social media and instant answers often speak louder than science. In such times, providing the right information about what is most precious to us, our food, has never been more important.
It is with great pleasure that I welcome you to the Fifth Nutrition and Food Technology Conference: ***"EVIDENCE INTO ACTION"*** *of the Nutrition Department, at the Faculty of Pharmacy, taking place, on 22 & 23 October, 2026, medical sciences campus (CSM) of the Saint Joseph University of Beirut.*
Our theme, ***"Evidence into Action"*** *reflects a simple conviction: knowledge only matters when it reaches people's lives. It must become sound advice, safer food, and better health policies. This requires professionals trained in science and critical thinking, and research that responds to the realities of our communities.*
Over these two days, researchers, clinicians, food scientists, and industry partners will come together to share their work and contribute in turning evidence into practical solutions. No one can walk this path alone, and your presence is the best proof that science grows through collaboration.

I warmly thank the Rector, the Dean, the organizing and scientific committees, our speakers, sponsors and students, for making this conference possible.

I wish you all a stimulating and fruitful conference.
Warm regards

Nathalie Asmar Yaghi, L.D, PhD.
Head of Nutrition Department
Faculty of Pharmacy
Saint Joseph University of Beirut

Mot de bienvenue

Chers participants, chers collègues, chers étudiants,

Nous vivons à une époque où les conflits et l'instabilité menacent constamment l'équilibre de la ressource la plus précieuse pour l'être humain : l'alimentation. Nous vivons également dans un monde d'information instantanée et d'idées largement relayées, où les réseaux sociaux et les réponses immédiates résonnent parfois plus fort que les données scientifiques. Dans ce contexte, transmettre une information fiable sur ce qui nous est essentiel, notre alimentation, n'a jamais été aussi important.
C'est avec un immense plaisir que je vous souhaite la bienvenue au ***5e Congrès de Nutrition et de Technologie Alimentaire*** *du Département de Nutrition de la Faculté de Pharmacie, qui se tient les 22 et 23 octobre 2026 au Campus des Sciences Médicales de l'Université Saint-Joseph de Beyrouth.*
Notre thème, ***« Evidence into Action »****, traduit une conviction fondamentale : la connaissance n'a de véritable valeur que lorsqu'elle se transforme en actions concrètes au service des populations. Elle doit devenir un conseil éclairé, une alimentation plus sûre, des pratiques professionnelles fondées sur les preuves et des politiques de santé plus efficaces. Cela exige des professionnels rigoureusement formés à la science et à l'esprit critique, ainsi qu'une recherche capable de répondre aux réalités et aux besoins de nos communautés.*
Au cours de ces deux journées, chercheurs, cliniciens, spécialistes des sciences alimentaires et partenaires industriels se réuniront pour partager leurs travaux, échanger leurs expertises et contribuer à transformer les données scientifiques en solutions tangibles. Aucun acteur ne peut accomplir cette mission seul, et votre présence témoigne de l'importance de la collaboration dans l'avancement des connaissances et de leur impact sur la société.

Je tiens à adresser mes plus sincères remerciements au Recteur de l'Université, à Madame la Doyenne de la Faculté de Pharmacie, aux membres des comités d'organisation et scientifique, à nos conférenciers, à nos partenaires et sponsors, ainsi qu'à nos étudiants, dont l'engagement a rendu ce congrès possible.

Je vous souhaite à toutes et à tous un congrès riche en échanges, en découvertes et en perspectives nouvelles.

Bien cordialement,

Nathalie Asmar Yaghi, L.D., PhD
Chef du Département de Nutrition
Faculté de Pharmacie
Université Saint-Joseph de Beyrouth

Scientific Committee

Nathalie Asmar Yaghi, USJ
Nicole Fakhoury Sayegh, USJ
Cynthia Helou Abdelsater, USJ
Mireille Harmouche Karaki, USJ
Nour Helou Theokaris, USJ
Nasma Hamdi Najjar, USJ
Tatiana Papazian Wahanian, USJ

Organizing Committee

Nathalie Asmar Yaghi, USJ
Nicole Fakhoury Sayegh, USJ
Cynthia Helou Abdelsater, USJ
Mireille Harmouche Karaki, USJ
Mira Ammar Itani, USJ
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Joseph Matta, USJ
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SESSIONS & ABSTRACTS

PLENARY SESSION: Health preventive measures through food standards in the Lebanese Army

Dr. Khalil El Helou (USJ)

Department of Nutrition, Faculty of Pharmacy, Saint-Joseph University of Beirut (USJ)

Introduction (Objectives and Purposes)

A concise overview of the 2011 modernization of the Lebanese Armed Forces' food-supply technical specifications: rationale, development process, structure, and subsequent amendments that align military procurement and quality control with contemporary national and international food-safety standards.

The purposes of the presentation are to explain why the 2003 framework was replaced and the objectives of the 2011 modernization, to summarize the committee's methodology, to present key institutional partners, and expert contributions, to describe the three-chapter structure and major technical changes (unified template, packaging requirements, updated laboratory protocols), to highlight amendments made after 2011 and their drivers, to clarify roles and responsibilities: accessibility for administrative officers vs. mandatory technical oversight by LAF food experts, and to present the committee's outcomes and the significance of the January 17, 2011 report.

Materials & methods

The committee's methodology combined academic and institutional expertise. Benchmarks from the Lebanese Standards Institution (LIBNOR) and the Codex Alimentarius (FAO/WHO) were integrated. Senior faculty from the American University of Beirut (AUB) and Saint Joseph University (USJ), together with nutrition officers experienced in military food processing, bridged theoretical food science and practical logistical needs. This collaboration produced standards that were technically rigorous and consistent with modern microbiological and chemical safety protocols.

Results & discussion

The 2011 document is structured in three principal chapters to streamline military food services: (1) mandatory general instructions governing all procurement; (2) regional receipt materials covering fresh produce and animal-sourced products managed locally; and (3) centralized analyzed materials covering shelf-stable goods, dairy, oils, and canned products. A notable technical advancement was a unified template applied across all food categories to standardize evaluation. The standards also introduced modern packaging requirements for metal, plastic, and glass containers and removed obsolete laboratory tests in favor of contemporary analytical protocols.

Conclusion

A key balance was maintained between clarity for non-specialized officers and mandatory technical oversight: documents were made more accessible to administrative field personnel while interpretation of complex analytical data remained the responsibility of designated Lebanese Army food experts. The committee's formal report, submitted January 17, 2011, evaluated member performance across specialized roles, from animal-sourced product review to ensuring linguistic precision in technical documentation.

Keywords

Technical specifications, Quality control, Codex Alimentarius, LIBNOR, Microbiological analysis

Ultra-processed food consumption in Lebanon: evidence across the life course and implications for public health

Prof. Lara Nasreddine

Department of Nutrition and Food Sciences, American University of Beirut (AUB)

Ultra-processed foods (UPFs) are industrially manufactured products formulated primarily from food-derived substances, additives, and cosmetic ingredients, with little or no intact whole foods. The NOVA classification is the most widely used system for categorizing foods according to the nature, extent, and purpose of industrial processing. While UPF consumption has traditionally been highest in high-income countries, increasing evidence indicates a rapid rise in their consumption across low- and middle-income countries and populations undergoing nutrition transition.

In Lebanon, our research group has conducted a number of studies using representative surveys to assess UPF consumption among different age groups and examine its associations with health outcomes. Among adults, adherence to a minimally processed dietary pattern was associated with lower odds of metabolic syndrome, whereas high UPF consumption was associated with increased odds of depression, independently of adiposity. Findings among children further underscore the magnitude of the problem. In school-aged children and adolescents, nearly 40% of total energy intake was derived from UPFs, while among children under five years of age, UPFs contributed 47% of daily energy intake. Children whose UPF intakes fell within the second and third tertiles had significantly higher odds of overweight and obesity compared with those in the first tertile.

This presentation will synthesize the available evidence on UPF consumption in Lebanon, discuss the biological and behavioral mechanisms through which UPFs may promote adiposity and impair metabolic health, and reflect on the implications of the ongoing conflict and rising food insecurity for UPF consumption among vulnerable population groups.

Anthropometric, Lifestyle, and Dietary Factors Associated with Pubertal Development in Lebanese Children and Adolescents: A Cross-Sectional Study

Dr. Paula Hajj Boutros

Department of Nutrition and Dietetics, Faculty of Health Sciences, Modern University for Business and Science (MUBS).

Abstract

Associations of Ultra-Processed Food Consumption and Mediterranean Diet Adherence with Weight Status among Lebanese Children: A Cross-Sectional Study

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Background: Childhood obesity, rising ultra-processed food (UPF) consumption and declining adherence to the Mediterranean diet (MD) are major public health concerns. Evidence on how they relate in Middle Eastern pediatric populations remains scarce.

Objective: To examine the associations of UPF consumption and MD adherence with weight status among Lebanese children and adolescents.

Methods: A multicenter cross-sectional study enrolled 525 children and adolescents aged 8–16 years from pediatric outpatient clinics in Beirut. Weight and height were measured, and weight status was classified using WHO BMI-for-age z-scores. Dietary intake was assessed with a culturally adapted 87-item food frequency questionnaire. UPFs were classified using the NOVA system, and MD adherence was evaluated with the KIDMED 2.0 index. We used ROC analysis and multivariable logistic regression adjusted for sociodemographic, lifestyle and energy-intake covariates.

Results: Mean age was 12.7 ± 2.5 years (50.3% boys), and 29.6% of participants were overweight or obese. UPFs contributed 44.2% of daily energy intake, and 50.4% of participants showed moderate MD adherence. In the primary energy-adjusted model, the percentage of energy from UPFs was not associated with overweight/obesity (aOR = 0.994, 95% CI: 0.971–1.017). Higher total energy intake was associated with overweight/obesity (aOR = 1.002 per kcal, 95% CI: 1.001–1.002). Each one-point increase in KIDMED 2.0 score was associated with 15% lower odds of overweight/obesity (aOR = 0.853, 95% CI: 0.776–0.938). In a secondary analysis, an absolute UPF intake of at least 1280 kcal/day (the ROC-derived cutoff;

AUC = 0.677) was associated with more than threefold higher odds of overweight/obesity (aOR = 3.62, 95% CI: 2.23–5.89). Findings were robust in a sensitivity analysis.

Conclusions: Higher MD adherence was independently associated with lower odds of overweight/obesity. The association with UPFs appeared to be driven by the absolute energy supply rather than by their share of the diet. Interventions that limit UPF-derived energy and promote traditional Mediterranean eating patterns are warranted among Lebanese youth.

Keywords: Children; adolescents; obesity; ultra-processed foods; Mediterranean diet; NOVA classification; KIDMED 2.0.

Dietary Sources, Estimated Intake, and Health Risks of Industrial Trans-Fats in Lebanon: Findings from the Lebanon National Food Consumption Survey (Lebanon-FCS)

Prof. Maha Hoteit

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Abstract

Background and Objectives: This study aimed to assess industrially produced trans-fatty acids (iTFAs) consumption in a nationally representative sample of the Lebanese population and characterize the associated risk of CHDs. Validated food frequency questionnaires (FFQs) and two non-consecutive 24-hour recalls were used to collect dietary intake between January 2022 and August 2024 for 2,462 Lebanese participants of all ages. Food composition databases were used to determine the iTFA content of food items. Data were analyzed using IBM SPSS Statistics 25 via descriptive statistics, ANOVA, and chi-square tests at a 95% confidence Interval.

Results: The mean iTFA intake was 0.65% of total energy intake (TEI) and ranged from 0.54% to 1.02% TEI. Adolescents consumed the highest iTFA, while the elderly had the lowest (p<0.001). iTFA consumption exceeded the optimal intake level across all age groups and genders. The results highlight a critical need for modernizing Lebanese food processing protocols. The dominance of "fried potatoes" and "baked goods" as iTFA sources points to a reliance on traditional hydrogenated shortenings for rheological properties.

Conclusion: Reducing iTFA through mandatory industrial reformulation—transitioning to high-stability oils or inter-esterified fats—could lower CHD risk by up to 6.24% in adolescents. Strengthening national regulation and labeling of processing-derived fats is essential to align the Lebanese food supply with international safety standards.

A transformative step in weight management: bridging medical and nutritional care

Dr. Nada Ghorayeb

Endocrinology Medical center at Hotel Dieu de France (HDF), Saint-Joseph University of Beirut (USJ)

Obesity is a complex, relapsing chronic disease driven by biological and metabolic adaptations that strongly resist sustained weight loss. While lifestyle modification remains foundational, incretin-based therapies like semaglutide represent a transformative advance by regulating appetite and silencing intrusive "food noise". Evidence from the STEP clinical trial programme demonstrates substantial, durable weight loss with semaglutide, where over 80% of lost tissue is fat mass, preserving muscle function. Beyond weight reduction, trials such as SELECT establish significant systemic benefits, including a 20% relative risk reduction in major adverse cardiovascular events. Crucially, pharmacotherapy is designed as an adjunct to—not a replacement for—structured lifestyle interventions. A multidisciplinary bridge between medical providers and dietitians is essential to maintain dietary quality, prioritize adequate protein and fiber, and mitigate nutrient deficiencies. Expert dietary counseling also plays a pivotal role in managing transient gastrointestinal adverse effects through gradual titration and tailored eating strategies. Ultimately, integrating modern pharmacotherapy with personalized medical nutrition therapy and regular physical activity ensures optimal, high-quality, and sustainable patient outcomes.

PLENARY SESSION: From health claims to consumer choice: The role of sensory evaluation in the future of functional foods

Prof. Ammar Olabi

Faculty of Agricultural and Food Sciences, American University of Beirut

In today's nutrition landscape, the role of functional foods is growing in importance, shifting from basic nourishment to products that support health, disease prevention, and overall well-being. Functional foods are no longer limited to fortified products or added nutrients; they are increasingly linked to broader trends, including gut health, healthy aging, immunity, metabolic health, personalized nutrition, and a renewed interest in natural and traditional food ingredients.

Drawing on my background in food science and sensory evaluation, I will focus on an essential question: how can we develop functional foods that are not only scientifically sound and nutritionally beneficial, but also acceptable, enjoyable, and practical for consumers? Health benefits alone are not enough to ensure adoption. Taste, texture, aroma, appearance, familiarity, cultural relevance, and trust all play a central role in whether people will include these products in their daily diets.

The presentation will showcase the trends in functional foods and highlight the role of sensory evaluation as a bridge between nutrition science, food product development, and consumer behavior. It will also explore opportunities to develop functional foods inspired by regional and traditional food systems, including dairy products, fermented foods, and other locally relevant ingredients. The future of functional foods depends not only on the health claims they carry, but on their ability to meet consumer expectations and become part of sustainable, enjoyable, and healthy eating patterns.

Fat Taste Perception and Obesity: Evidence from the First Lebanese Study

Dr Nathalie Asmar Yaghi

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Co-Authors

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Background: Orosensory fat taste perception (oleogustus) contributes to the detection of dietary fatty acids and may influence eating behavior. This exploratory study is the first to examine oral fat-taste sensitivity, food preference, and habitual dietary intake in young Lebanese adults.

Methods: In this cross-sectional study, 117 Lebanese adults aged 18–40 years were recruited between June 2024 and December 2025. Oral sensitivity to linoleic acid was assessed with a sip-and-spit three- alternative forced-choice procedure using 13 concentrations; fat-taste detection thresholds were obtained for 108 participants. A receiver-operating-characteristic-derived cut-off of 9 µmol/L defined high (HFS; n=83) and low (LFS; n=25) fat-taste sensitivity. Food preference was assessed with a 20-item questionnaire and habitual intake with a 97-item food-frequency questionnaire grouped into 19 predefined categories. Dietary patterns were derived by principal component analysis (PCA) with Varimax rotation, and Benjamini–Hochberg false-discovery-rate (FDR) correction was applied within each comparison family.

Results: Among 86 participants with complete paired data, 8 of 21 prespecified preference–consumption pair correlations remained significant after FDR correction (Spearman ρ=0.282–0.463; all $q \leq 0.025$), the strongest being knefeh with Lebanese-dessert consumption (ρ=0.463, $q<0.001$). Nine of the 97 individual food items differed between groups before correction, but none afterwards (smallest q=0.097). PCA of the 19 predefined food categories (n=86) yielded five patterns explaining 50.35% of the variance; none differed between sensitivity groups (n=86) or was associated with LFS after adjustment for age and sex. A post hoc PCA of 16 preselected items (n=86) yielded three patterns explaining 40.60% of the variance, of which a vegetable and olive pattern scored higher in HFS participants (p=0.001, q=0.003) and was associated with lower odds of LFS (OR=0.28, 95% CI 0.10–0.76; q=0.036).

Conclusion: Reported preference corresponded to habitual consumption for 8 of 21 food pairs, indicating a food-specific rather than uniform relationship between liking and intake. Fat-taste sensitivity was not associated with individual food consumption or with patterns derived from predefined categories. An exploratory analysis of preselected foods identified a vegetable and olive pattern linked to higher sensitivity, a direction that larger and longitudinal studies are well placed to confirm. Combining fat-taste testing with dietary-pattern analysis may help identify individuals at risk of energy-dense diets.

Exploring the relationship between hedonic hunger, eating attitudes/behavior link to emotional regulation, social media use, and mukbang addiction among youth

Dr Marie Hokayem

Holy Spirit University of Kaslik (USEK)

Introduction (Objectives and Purposes)

Background: Hedonic hunger is a multifaceted concept defined by the urge to consume palatable foods without biological need, driven by reward mechanisms. Although linked to maladaptive eating behaviors, it remains underexplored, particularly within digital food environments. This study examines its relationships with eating behaviors/attitude, emotional dysregulation, social media impact, and Mukbang participation among Lebanese youth aged 18–25, while exploring associated sociodemographic and lifestyle factors.

Materials & methods

Methods: This cross-sectional study involved 309 Lebanese young adults aged 18–25. Participants completed an online questionnaire including the power of food scale (PFS), Mukbang addiction scale (MAS), eating attitude test (EAT-26), difficulty in emotion regulation scale (DERS-16), and scale of the effects of social media on eating behaviors (SESMEB) addition to information on socio-demographic, economic and lifestyle data. Data were analyzed using one-way ANOVA, Pearson correlation, and PROCESS-based mediation and moderation analyses.

Results & discussion

Results: A positive association was found between hedonic hunger and social media influence ($r = 0.54$, $p < 0.001$). Social media use was also correlated with Mukbang consumption ($r = 0.48$, $p < 0.001$).

Emotional dysregulation was associated with both social media use ($r = 0.30$, $p < 0.001$) and Mukbang consumption ($r = 0.26$, $p < 0.001$). Mediation analysis indicated that social media mediates the relationship between hedonic hunger and Mukbang addiction.

Conclusion

Conclusion: The findings shed light on the impact of hedonic hunger on young Lebanese adults and its strong association with increased social media use, contributing to problematic Mukbang consumption.

This underscores the need for interventions promoting healthier eating habits, particularly in the context of growing food-related media exposure among young adults.

Five keywords

Keywords: Young Lebanese Adults, Hedonic Hunger, Mukbang Show, Emotional dysregulation, Social Media influence

Assessment of Dietary Patterns and Quality of Life Among Lebanese Pregnant Women in Beirut and Mount Lebanon According to Gestational Diabetes Status

Dr. Rana Mahfouz

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Introduction (Objectives and Purposes)

Gestational Diabetes Mellitus (GDM) is one of the most common pregnancy complications globally estimated at 14% and 11% in Lebanon. Evidence on the association between dietary patterns and quality of life (QOL) among Lebanese pregnant women according to their GDM status remains limited.

The study aimed to assess quality of life (QOL) and dietary patterns among pregnant women with GDM and compare them to pregnant women without GDM aged between 18-49 years.

Materials & methods

400 Lebanese pregnant women with and without GDM were recruited using a convenient sampling method from gynecology clinics in Beirut and Mount Lebanon. A multi-sectional validated questionnaire assessing dietary patterns, quality of life, and sociodemographic characteristics was used to analyze lifestyle characteristics of our sample. Descriptive and analytical statistics (t-tests, chi-square, one-way ANOVA, Pearson correlation and multivariable linear regression) studied the association between dietary patterns and QOL among GDM and non GDM cases with statistical significance at a $p<0.05$.

Results & discussion

GDM prevalence was 5.3%, with 44% adherence to USDA recommendations, and 91% adequate minimum dietary diversity (MDDW). GDM cases reported lower general satisfaction ($p=0.026$), emotional scores ($p<0.001$), and total QOL score ($p=0.001$); with higher pre-pregnancy BMI ($p<0.001$), more pregnancy complications ($p<0.001$) and higher likelihood to be in the 3rd trimester ($p<0.001$). Adequate dietary diversity was linked to higher general satisfaction ($p=0.037$), social ($p=0.047$), and physical ($p=0.003$) quality-of-life domains. Multivariable regression indicated that higher grain intake was negatively associated with social support, social domain and physical QOL, whereas higher protein intake was positively associated with social and physical QoL

Conclusion

Dietary habits among pregnant women were poor with lower adherence to the USDA requirements, despite adequate diversity. QOL was lower in GDM cases, particularly emotional wellbeing, and satisfaction. These findings underscore the need for integrated prenatal care with culturally appropriate nutrition and psychosocial support to improve maternal outcomes.

keywords: Pregnancy, *Gestational diabetes mellitus, Quality of Life, Dietary patterns*, *maternal nutrition*

Nutritional Education, Knowledge, and Needs of Caregivers of Patients Undergoing Hemodialysis in Lebanon

Dr. Rana Rizk

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Introduction (Objectives and Purposes)

Informal caregivers are crucial in supporting patients undergoing hemodialysis, particularly in implementing complex dietary recommendations. However, limited evidence exists regarding caregivers' nutritional knowledge and nutrition education requirements globally and locally. This study explored their nutritional knowledge, and nutrition education challenges, needs, and preferences.

Materials & methods

An explanatory sequential mixed-methods study was conducted among informal caregivers of adult patients undergoing hemodialysis in Lebanon. Quantitative data were collected using a structured questionnaire. Descriptive statistics were performed. Subsequently, focus group discussions were conducted with a subset of caregivers to further explore and contextualize the quantitative findings. Qualitative data were analyzed using thematic analysis. Quantitative and qualitative data were triangulated.

Results & discussion

253 caregivers from nine units in five governorates completed the survey, and nine participated in three focus group discussions. Caregivers demonstrated varying levels of renal nutrition knowledge, with notable gaps in overall knowledge and specific dietary domains: protein requirements and sources, hidden sources of salt and salt-free flavoring methods, sources of added potassium and non-dietary causes of hyperkalemia, sources of added phosphorus, and hidden sources of fluids. Common challenges included the complexity of the renal diet, inconsistency in dietary information, patient non-adherence, and difficulty in understanding and implementing the dietary instructions; some caregivers reported growing confidence over time. Participants expressed a need for education on dietary sources such key nutrients, guidance on managing low appetite and gastrointestinal symptoms, and information on supporting patients' preferences while promoting adhering. Preferences included receiving structured, written, clear, personalized, and dynamic nutrition education, with ready-to-use

planning tools, particularly from a dietitian. Qualitative findings confirmed these findings and highlighted reliance on Browsers and Artificial Intelligence as a source of information.

Conclusion

Informal caregivers of patients undergoing hemodialysis experience significant renal nutrition knowledge gaps and express a need for tailored nutrition education. These findings support the development of caregiver-centered educational interventions.

Five keywords
Renal Dialysis; Caregivers; Health Knowledge, Attitudes, Practices; Health Education; Needs Assessment

The Effects of a Nutrition Education Program on Nutritional Knowledge, Eating Habits, and Performance of Military Athletes from Lebanon

Prof. Nour El Helou

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Introduction (Objectives and Purposes)

A longitudinal controlled intervention study aimed to assess the impact of a nutrition education program on Lebanese athletes' nutritional knowledge, eating habits, body composition, and performance.

Materials & methods

A sample of 198 athletes was divided into an intervention group (IG) and a control group (CG). The intervention group followed a 4-month intensive nutrition education program set to ensure sufficient time for meaningful learning and behavior change, while remaining short enough to maintain participant engagement and minimize dropout. The athletes' nutritional status and performance were assessed before and after the intervention using a validated food frequency questionnaire, knowledge and eating habits questionnaires, four 24-h recalls, a beep test to estimate VO2 max, and one-repetition maximum tests to measure muscle strength. Paired-sample t-tests, McNemar's test, and Mixed Factorial Anova test were conducted to examine the effects of the nutritional education program on nutrition knowledge, hydration status, eating habits, and performance within both groups.

Results & discussion

The nutritional knowledge score increased in both groups after the intervention, with a significantly greater improvement of 23% observed in the IG (from 62.6% to 77.1%; $p < 0.001$). The IG also demonstrated a notable improvement in eating habits compared to the CG ($p < 0.001$). Following the intervention, body fat percentage decreased from $21.3\% \pm 6.0\%$ to $18.8\% \pm 6.0\%$ ($p < 0.001$), and waist circumference significantly decreased in the IG ($p < 0.001$). The IG increased their consumption of vegetables ($p < 0.001$) and yogurt ($p = 0.002$) and decreased their intake of sugars ($p < 0.001$) and sunflower oil ($p = 0.002$). Improvements in both aerobic and strength performance were observed in the IG ($p < 0.001$).

Conclusion

The nutrition education program led to significant improvements in athletes' nutritional knowledge and eating habits, which consequently resulted in enhanced performance.

Five keywords

Athletes, sports nutrition, nutritional knowledge, eating habits, performance.

Fuel. Heal. Return. Nutrition Strategies in Long-Term Injury

Nelda Nader

RD, MSc, IOC Diploma, ISAK Level 3 Instructor

Despite the growth of sports nutrition research, evidence specific to injured athletes remains scarce: of 159 sports nutrition trials, consensus statements, and systematic reviews published in the past decade, only three address injury and just one targets rehabilitation. Yet physiology is well described. Reduced mechanical loading and growth-factor signaling drive a catabolic shift — FOXO and MuRF1 activation with suppressed Akt/mTOR signaling — producing muscle loss, fat infiltration, impaired tendon structure and function, reduced mitochondrial oxidative capacity, anabolic resistance and a negative net muscle protein balance that persists even after size partially returns. Strength asymmetries of up to 27% remain measurable weeks after anterior cruciate ligament reconstruction.

This presentation outlines a multidisciplinary model in which sports nutrition sits alongside physiotherapy, sports medicine and pharmacology as evidence-based adjunct therapy rather than folklore. Nutritional strategies are mapped onto the rehabilitation stages from inflammation and atrophy through tissue repair, muscle growth, strength and return to performance.

Four keys are examined: energy balance (injury does not lower energy needs; requirements may rise by ~20% with ambulatory aids and the stress response), protein (countering anabolic resistance, with the dose-response and total daily intake debate, and the protein bracket from 0.8 to 2.0 g/kg BW), carbohydrate (its role in muscle protein synthesis and personalized load modification), and supplementation (prioritizing deficiencies, vitamin D, and the antioxidant paradox). Evidence for whey/leucine, creatine, omega-3, collagen, tart cherry and caffeine is graded across six rehabilitation stages. Finally, five critical windows of injury — pre-surgery, non/partial weight-bearing, loading, transition and simulation — are translated into practical prescriptions. The conclusion is that basics work in a high-performance environment: energy availability, adequate protein and carbohydrate.

Keywords: Injury, Sports Nutrition, Rehabilitation, Sports Supplements, ACL, immobilisation.

The Association Between Sleep Health and Weight Loss Intervention Outcomes: A Longitudinal Study Among Lebanese Overweight Dieters

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Introduction (Objectives and Purposes)

Inadequate sleep can hinder weight loss success, yet the role of intervention adherence in this relationship remains unclear. This study examined associations between baseline sleep characteristics and weight loss, body composition changes, and adherence to dietary and exercise recommendations at 1 and 6 months.

Materials & methods

A total of 104 overweight/obese Lebanese participants (age, 21.21 ± 2.74 years; BMI, 30.64 ± 4.50 kg/m^2) completed a 6-month weight loss intervention. Baseline sleep quality and duration were assessed using the Pittsburg Sleep Quality Index. Weight and body composition were measured monthly. Dietary adherence was assessed via 3-day monthly food records, and exercise adherence via the monthly International Physical Activity Questionnaire.

Results & discussion

Multiple linear regression analyses and general linear models adjusted for age, gender, baseline adiposity and smoking status showed that better baseline sleep quality (lower PSQI score) was associated with greater percentage weight loss at 1 month (β =−0.293; p=0.002) and 6 months (β=−0.044; p=0.042); the 6-month association was fully attenuated after adjusting for adherence factors (β =−0.014, p = 0.294). Sleep duration showed no independent association with weight loss. Poor baseline sleep quality was associated with less percentage waist circumference loss at 6 months (β =−0.349, p = 0.001), but was unrelated to percentage changes

in fat mass or fat-free mass. Sleep duration was associated with greater percentage fat-free mass gained (β=0.152, p=0.020) and greater percentage fat mass lost (β=0.130, p=0.025), but was unrelated to percentage waist circumference loss. Notably, better sleep quality predicted higher adherence to diet (β= −0.210; p=0.037) and exercise (β= −0.313; p=0.001).

Conclusion

Sleep quality, but not duration, was associated with greater weight loss at 1 and 6 months, highlighting a role for sleep in weight management success. Better sleep quality may also improve adherence to diet and exercise recommendations, potentially explaining its association with weight loss outcomes.

Five keywords
Sleep duration; sleep quality; weight loss; body composition; treatment adherence.

Nutritional Status: The Silent Risk of Falls in Hemodialysis Patients

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Background: Falls are frequent among patients receiving hemodialysis and may contribute to injury and reduced quality of life. Nutritional compromise and muscle loss may increase vulnerability.
Objectives: This study investigated associations between nutritional status, clinical characteristics, and falls in adults receiving maintenance hemodialysis.
Materials & methods: This prospective, single-center study followed 68 adults on dialysis for ≥3 months over two years, recording fall incidents. Nutritional status was assessed biannually using anthropometry, weight changes, handgrip strength, nutrition-focused physical examination, and GLIM criteria. Clinical, biochemical, demographic, and dialysis- related variables were collected. Bivariate and multivariate analyses identified factors associated with falls.
Results & discussion: Mean age was 66.5 ± 13.3 years, mean body mass index was 26.0 ± 5.65 kg/m², and 48.5% of participants were female. Overall, 38.2% experienced falls; among these, 46% fell once, 46% twice, and 8% three times. Bivariate analyses identified associations with age (p=0.003), age at dialysis initiation (p=0.009), albumin (p<0.001), potassium (p=0.001), transportation arrangements (p=0.019), ambulation status (p=0.001), and orthostatic hypotension (p=0.008). NFPE scores did not reach statistical significance in bivariate analysis (p=0.057). In
multivariate analyses, albumin (p=0.015), NFPE scores (p=0.020), ambulation status (p=0.001), and orthostatic hypotension (p=0.035) remained associated with falls. Potassium did not reach statistical significance (p=0.053).
Conclusion: Nutritional and functional indicators, including low albumin, muscle loss, impaired mobility, and orthostatic hypotension, were associated with falls in hemodialysis patients. Integrating nutritional, muscle, and mobility assessments into routine care may improve fall risk identification. Further interventional studies are warranted.

Five keywords: Hemodialysis; Falls; Malnutrition; Muscle Loss

Unmasking Hidden Gluten: Evaluating the Compliance of Gluten-Free Products in Lebanon and the United Arab Emirates

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Introduction (Objectives and Purposes)
Adherence to a strict gluten-free (GF) diet is essential for individuals with celiac disease and gluten-related disorders; however, gluten contamination in products labeled or perceived as GF remains a public health concern. This study aimed to determine gluten levels in GF products marketed in Lebanon and the United Arab Emirates (UAE), and to identify associated risk factors, including product category, country of origin, labeling practices, and food safety management system certification (FSMSC). Additionally, in Lebanon, the study assessed the consumption frequency of noncompliant products among GF consumers.

Materials & methods
A cross-sectional market screening was conducted, analyzing GF stock-keeping units (SKUs) in Lebanon (n = 115) and the UAE (n = 178). Gluten was quantified using the RIDASCREEN® R5/R5 Gliadin ELISA method, with >20 ppm classified as noncompliant. In Lebanon, a qualitative food-frequency questionnaire (FFQ) was administered to 66 GF consumers to assess intake of noncompliant products.

Results & discussion
In Lebanon, 9.6% of SKUs exceeded 20 ppm, with higher noncompliance in local products (18.5%) compared to imports (1.6%). Bread and snack/bars were the most affected categories. In the UAE, 1.7% of samples exceeded 20 ppm, while 6.7% showed detectable gluten (5–20 ppm). Contaminated products included rice cakes and oats, with risks linked to whole-grain ingredients and labeling inconsistencies. Across both settings, FSMSC-certified products were still found to be noncompliant, suggesting implementation gaps. Retail practices, such as misplacement of non-labeled products in GF sections, may also influence exposure risk. In Lebanon, FFQ results showed regular consumption of contaminated products, including 8 daily and 11 weekly intake events, particularly concerning as most respondents were celiac or purchasing for celiac relatives.

Conclusion
Although overall compliance was high, both markets show persistent risks in specific product categories, labeling accuracy, and certification effectiveness. Strengthened regulatory oversight, dedicated production lines for high-risk foods, and improved consumer education are essential to reduce exposure among medically vulnerable populations.

Five keywords
Gluten-free products; Celiac disease; Food safety; Gluten contamination; ELISA

PCB and OCP in Lebanese Dairy Products: National Contamination Patterns and Health Risk Assessment

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Concentrations of PCBs and selected OCPs, including DDTs, HCHs, hexachlorobenzene (HCB), endosulfan, methoxychlor, and dieldrin, were determined, and dietary exposure and associated health risks were assessed. PCBs were detected at concerning levels, with 40.6% of samples exceeding the applicable European maximum level and a national mean concentration of 39.26 ng/g fat. The highest PCB contamination was observed in Kesserwan, North Lebanon, and South Lebanon, with spatial patterns suggesting potential contributions from industrial and combustion-related activities.

OCP contamination was also widespread. ΣDDTs exceeded the applicable maximum residue limit in 100% of samples, with a mean concentration of 376.79 ng/g fat, followed by endosulfan (70.32 ng/g fat) and β-HCH (65.32 ng/g fat). Elevated OCP concentrations were particularly observed in Bekaa, Baalbeck-Hermel, South Lebanon, and North Lebanon, potentially reflecting historical and/or ongoing agricultural and environmental contamination.

Dietary exposure and health risk assessment indicated potential concerns associated particularly with PCBs, ΣDDTs, and ΣHCHs. Overall, the findings reveal distinct regional contamination patterns and highlight the need to strengthen national surveillance of persistent organic pollutants in dairy products. Systematic monitoring, enhanced regulatory oversight, and identification of major contamination sources are essential to support evidence-based risk management and protect consumer health.

Salt, Acrylamide, and Nutrition: How to Optimize Lebanese Bread

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Introduction (Objectives and Purposes)
Double-layered flatbreads are widely consumed staple foods in Mediterranean and Middle Eastern countries, providing an appropriate vehicle for nutritional and technological improvement. Reformulation using alternative cereal flours, sodium reduction, and control of process-related contaminants may contribute to healthier and more sustainable products. This study aimed to improve double-layered flatbread through three complementary approaches: partial substitution of refined wheat flour with durum and freekeh flours, reduction of sodium chloride (NaCl) with partial replacement by potassium chloride (KCl), and investigation of acrylamide formation during flatbread processing.

Materials & methods
Flatbreads prepared with 100% wheat flour (control), 45% durum flour (D45), and 30% freekeh flour (F30), were evaluated for flour characteristics, dough rheology, nutritional composition, color, texture during storage, and sensory properties. Additional trials investigated different levels of NaCl reduction and KCl substitution and their effects on flatbread quality. Acrylamide was assessed in selected formulations to investigate its formation in relation to formulation and thermal processing.

Results & discussion
D45 demonstrated the most favorable rheological performance, with high dough stability, low softening, and extensibility comparable to the control. F30 exhibited the highest water absorption and produced flatbread with the highest dietary fiber and moisture contents; however, reduced extensibility, increased bitterness, and bitter aftertaste affected its technological and sensory performance. D45 maintained textural and sensory characteristics closer to the control, providing a favorable balance between nutritional enrichment and product quality. Salt-reduction/KCl-substitution and acrylamide investigations further addressed the nutritional and safety aspects associated with flatbread reformulation and processing.

Conclusion
Combining alternative cereal flours with sodium-reduction strategies and acrylamide assessment represents a comprehensive approach for developing nutritionally improved, technologically acceptable, and safer double-layered flatbreads. Further optimization of NaCl/KCl ratios and acrylamide mitigation strategies is required while maintaining processing performance and consumer acceptance.

Five keywords: Double-layered flatbread; Durum; Sodium reduction; Potassium chloride; Acrylamide.

Technological Challenges in Healthy Snack Manufacturing

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Introduction (Objectives and Purposes)

The growing awareness of nutrition and health among consumers has led to a shift in snack preferences toward healthier and cleaner-label products, with increasing interest in reduced sugar, improved nutritional profiles, higher protein content, and more natural ingredients.
In response to these changing expectations, food manufacturers are increasingly developing and reformulating snack products to offer healthier alternatives while maintaining the quality and characteristics expected by consumers.

Materials & methods

However, transitioning to healthier snack formulations presents significant technological challenges. Developing a healthier product goes beyond simply replacing one ingredient with another, as each ingredient contributes specific functional properties to the formulation.

Results & discussion

As an industrial example, a granola reformulation replacing sugar and palm oil with sorbitol, maltitol, and coconut oil achieved acceptable overall quality, although differences in texture were observed. As preferences and reformulation continues to evolve, there is also a shift from polyol-based sweeteners toward more natural, clean-label alternatives such as allulose, monk fruit and coconut sugar. However, these ingredients differ in sweetness, functionality, and processing behavior and replacing or removing an ingredient can influence several characteristics of the final product simultaneously.

Conclusion

Finally, successful laboratory development does not always guarantee successful industrial production. Differences in equipment, processing conditions, mixing, baking, can significantly influence product performance.
Therefore, healthy snack development requires a balance between nutritional improvement, sensory quality, technological functionality, processability and economic feasibility.

Five keywords

Reformulation, healthy snacks, scale-up, clean label, functional ingredients.

The Interplay of Energy Poverty and Food Insecurity: How Social, Cultural, and Political Dynamics Shape Household Nutrition

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Introduction (Objectives and Purposes) :
Energy poverty (EP) is a major barrier to sustainable development, yet its relationship with food
insecurity (FI) remains understudied. In Lebanon, an unprecedented economic, political, and social crisis has led to widespread FI, severe fuel shortages, and extreme EP, which may contribute to negative coping strategies related to food access. This study examines the impact of EP on household food consumption, including dietary shifts and meal-skipping behaviors.

Materials & methods:
A nationally representative survey of 931 households was conducted to assess the extent of EP in
Lebanon. The structured survey covered four key areas: (1) sociodemographic data, (2) housing and expenses, (3) coping strategies, and (4) migration. Additionally, insights from five groups of Key Informant Interviews were used to validate and contextualize the survey findings.

Results & discussion:
Our findings indicate a strong association between EP and FI. Households that allocate a significant share of their income to energy, particularly those spending over 50% due to hyperinflation and currency devaluation, reported substantial reductions in food purchases and a higher prevalence of meal-skipping.
Both adults and children in energy-poor households exhibited these coping behaviors. Nearly all EP households engaged in dietary compromises, including shifts to cheaper, less nutritious food, and meal reduction.

Conclusion:
As one of the first empirical studies in Lebanon to examine the intersection of EP and FI, this research highlights a systematic collapse and contributes to a growing body of literature on the socioeconomic consequences of energy deprivation. The critical “heat-or-eat” in Lebanon’s context, “power-or-eat”, threatens to inflict long-term malnutrition and developmental and cognitive impairments on the next generation through chronic dietary sacrifices. The findings underscore the urgent need for targeted policy interventions that address both energy accessibility and food insecurity in Lebanon.

Five keywords:
Energy Poverty, Food Insecurity, Meal Skipping, Dietary Shifts, Dietary Coping Strategies.

Poverty, food insecurity, and hunger in chronically ill Lebanese adults post-2019

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Background: Chronic diseases are on the rise globally, affecting all regions and socioeconomic groups. Food insecurity may contribute to these conditions through inadequate nutrition and diseases

Objectives: This study examined how socio-demographic characteristics, food insecurity, hunger, and livelihood coping strategies relate to the occurrence of chronic diseases in two Lebanese districts, Keserwan-Jubail and North Lebanon, comparing the periods before and after 2019.

Materials and Methods: We conducted a cross-sectional study between March 2024 and April 2025. Using lists of eligible individuals supplied by local municipalities and the Ministry of Social Affairs, a systematic random sample of 200 Lebanese adults aged 18 to 64 was drawn from Keserwan-Jubail and North Lebanon. Researchers collected data through face-to-face interviews using a comprehensive questionnaire that included the Arab Family Food Security Scale (AFFSS), the Multidimensional Poverty Index, the Livelihood Coping Strategy Index, the Household Hunger Scale, and the Food Consumption Score.

Results: Approximately 81% of participants in North Lebanon governorate reported being diagnosed with a chronic illness after 2019, versus 56% in Jubail district. Severe food insecurity affected 52% of respondents in Jubail and 45% in North Lebanon. In Jubail, aging (OR = 1.08; 95% CI: 1.01–1.15), severe food insecurity/food security (OR = 2.89; 95% CI: 1.27–6.56), and high/low use of coping strategies (OR = 58.65; 95% CI: 2.88–1192.8) were independently associated with a higher likelihood of post-2019 chronic disease. In North Lebanon, the only independent predictor was high/ low use of coping strategy mechanisms (OR = 54.61; 95% CI: 1.05–2816.9).

Conclusion: Intensive coping strategy mechanisms were strongly associated with the rise in chronic health conditions after 2019 in the two districts. Further research is needed to determine whether early interventions that improve this behavior can lower long-term health risks.

Keywords: Food insecurity, chronic illness, economic crisis, Lebanon, prevalence.

Anxiety and lifestyle behaviors among Lebanese university students during armed conflict: a cross-sectional study

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Background: Political instability and armed conflict impose substantial psychological and behavioral challenges on young adults. University students may experience heightened anxiety alongside disruptions in eating behaviors (EB) and physical activity (PA) during periods of active conflict.

Objectives: This study aimed to examine the associations between anxiety, EB, PA, and conflict-related strain among Lebanese university students exposed to war-induced stressors, and to identify the main factors associated with anxiety.

Methods: A cross-sectional study was conducted among 401 students (mean age = 21 ± 2.2 years) during the most recent armed conflict in Lebanon (September- December 2024). Participants were recruited via snowball sampling from multiple Lebanese universities through an online survey distributed on social media platforms. Validated instruments were used, including the Generalized Anxiety Disorder-7 (GAD-7) scale, the short version of the International Physical Activity Questionnaire (IPAQ-SF), and an adapted EB questionnaire. Additional questions assessed sociodemographic and anthropometric measurements, conflict-related stressors, lifestyle changes, and other relevant factors.

Results: Clinically significant anxiety (GAD-7 ≥ 10) was observed in 43.6% of students and was more prevalent among females ($p = 0.006$). Anxiety was significantly associated with employment status ($p = 0.014$) and smoking status ($p = 0.016$), whereas EB, PA, and body mass index (BMI) showed no significant associations. In multivariable binary logistic regression, anxiety was associated with full-time employment (OR = 2.62; 95% CI: 1.20–5.73), direct exposure to bombings (OR = 2.77, 95% CI: 1.29–5.92), perceived academic functioning impairment (concentration or motivation) related to online classes (OR = 2.24, 95% CI: 1.00-4.99), stress-related changes in appetite (decreased appetite: OR = 3.63, 95% CI: 1.91–6.90; increased appetite: OR = 3.37, 95% CI: 1.88–6.04).

Conclusion: Anxiety was highly prevalent among Lebanese university students during active conflict and was primarily associated with war-related stressors, contextual academic and occupational pressures rather than with EB, PA, or BMI. These findings highlight the importance of context-sensitive mental health support within university communities during periods of socio-political instability and educational disruption.

Keywords: Anxiety, Conflict exposure, Political instability, Eating behavior, Physical activity, University students

Factors Associated with Frailty Among Older Adults in Lebanon During the 2019 Economic Crisis

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Introduction:
Frailty is a major geriatric syndrome associated with adverse health outcomes. This study aimed to assess the prevalence of frailty, its associated factors, and its relationship with dietary patterns among community-dwelling Lebanese older adults in the context of of the 2019 Lebanese economic crisis.

Methods:
A national cross-sectional study was conducted among 566 adults aged ≥60 years recruited across all eight Lebanese governorates. Frailty was assessed using the FRAIL scale and nutritional status using the Mini Nutritional Assessment–Short Form (MNA-SF). Dietary patterns were identified using K-means cluster analysis. Factors associated with frailty were examined using bivariate analyses and multivariable logistic regression.

Results:
Frailty prevalence was 23.1%, higher in men than women. Frailty was associated with several sociodemographic, nutritional, clinical, and functional characteristics. Two dietary patterns were identified: a higher food consumption pattern (34.5%) and a lower food consumption pattern (65.5%). The latter was associated with higher odds of frailty in the crude analysis (OR=1.676; 95% CI: 1.084–2.594; p=0.020), but not after adjustment. In the final multivariable model, poor nutritional status was the only factor significantly associated with frailty (OR=1.913; 95% CI: 1.206–3.032; p=0.006).

Conclusion:
Frailty affected nearly one-quarter of participants, and poor nutritional status was the only factor that remained independently associated with it. Although the lower food consumption pattern was associated with frailty in the crude analysis, this did not persist after adjustment. These findings support nutritional screening, particularly amid the economic crisis, and call for longitudinal studies.

Keywords: Frailty; Older adults; Dietary patterns; Economic crisis; Lebanon.

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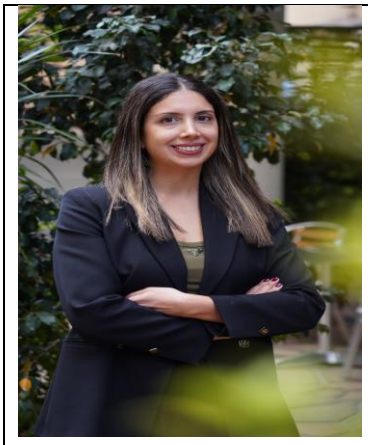
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Dr. Nasreddine's main research interests focus on dietary assessment and the investigation of diet-disease relationships. She has authored more than 155 publications in internationally renowned journals in addition to several book chapters. Her contributions to public health and community service closely align with her research interests, whereby she led the development and drafting of food-based dietary guidelines, conducted national population-based surveys, and developed various culture-specific nutrition education manuals. She was awarded the designated board professorship at AUB and won the Abdul Hameed Shoman Award for Arab Researchers. She has worked on numerous occasions as a nutrition consultant for the WHO, UNICEF and FAO.



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Her research and scientific consultancies focus on nutritional epidemiology, evaluation and development of data collection tools, dietary intake surveys, and food safety. She has published more than 100 of research papers in peer-reviewed scientific journals and has co-led and designed numerous national and international projects and surveys



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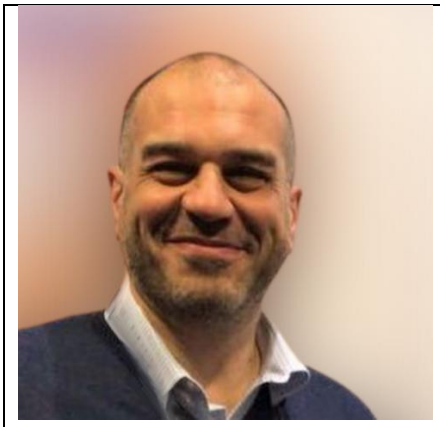
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His clinical and academic interests include chronic liver disease, metabolic dysfunction-associated steatotic liver disease (MASLD), portal hypertension, cirrhosis, hepatocellular carcinoma, and non-invasive assessment of liver fibrosis.

Professor Yaghi is the author and co-author of numerous peer-reviewed publications in international journals and has contributed to national and international research collaborations in hepatology and gastroenterology. His research spans liver cancer, chronic liver disease and its complications, portal vascular disorders, metabolic liver disease, and clinical outcomes.

He is actively involved in medical education, clinical research, and the development of innovative models of multidisciplinary care. His current interests include precision medicine, clinical scoring systems, artificial intelligence, and the integration of structured clinical data into decision support and longitudinal patient follow-up.
He is also involved in developing integrated approaches linking hepatology with metabolic health, diabetes, obesity, nutrition, and cardiovascular risk.



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Her research work focuses on obesity related dysfunction, frailty, cognitive decline, malnutrition, in older adults in Lebanon, and eating behaviors.
She has extensive experience in clinical and community nutrition/dietetics. She collaborated on many projects with the private and public sector, promoting nutritional health through sustainable food practices.
She also spreads nutrition awareness, through a regular TV morning show since 2009.



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As Dean of the Faculty of Agricultural and Food Sciences (FAFS) at the American University of Beirut (AUB), Dr. Ammar Olabi is a leading academic and researcher dedicated to advancing sensory evaluation, food product development, and public health in Lebanon and the Arab region. With over two decades of experience spanning academia, research, and leadership, he has championed innovation in food sciences while addressing pressing health challenges, including obesity and excessive salt consumption.

Dr. Olabi's pioneering work integrates sensory science with product innovation to promote the development of high-quality, locally produced foods and enhance their economic potential in regional and international markets. He has led groundbreaking research that informed Lebanon's first policy paper on salt intake reduction and contributed to the improvement of dairy product quality to boost exports.

An accomplished scholar, Dr. Olabi has published extensively in prestigious international journals and played a key role in producing essential sensory evaluation tools, including the Arabic version of the 9-point hedonic scale and the localization of Compusense® sensory software. His leadership at FAFS is marked by fostering interdisciplinary collaboration, advancing sustainable food systems, promoting climate-smart agricultural practices, and preparing the next generation of scientists, innovators, and change agents.

Dr. Olabi earned his B.S. and M.S. in Nutrition and Food Sciences from AUB and his Ph.D. in Food Science from Cornell University, followed by post-doctoral research in dairy chemistry and processing.



Marie Hokayem, PhD

Assistant Professor

Holy Spirit University of Kaslik (USEK)

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Marie's academic career in 3 key universities USEK / USJ / LU started after the fulfillment of her bachelor degree and master's degree at USJ/Lebanon directly followed by her PhD in France 2013 (10July): **PhD obtained from the University of Montpellier I (UM1)** – Disciplinary field : **Nutrition, Physiology, Cellular and Molecular Biology and Biochemistry**, - Thesis subject: Influence of red grape polyphenols on oxidative stress in healthy subjects at high metabolic risk: relationship with the mechanisms of insulin resistance –Supervisors: Pr Antoine AVIGNON & Dr Karen LAMBERT CORDILLAC – Doctoral School CBS2 (Sciences Chimiques et Biologiques pour la Santé); Montpellier, France.

She is also a member of the Lebanese Order or Dietitians (LOD) since its creation in April 2022.

The nutrition-based courses she teaches in English and in French extend from the 1st year of bachelors in Nutrition to the final master's years counting: Fundamentals in Nutrition / Advanced Macro and Micronutrients /Medical Nutrition Therapy/Epidemiology and Research/ Health communication and promotion/Sports Physiology/ Food hygiene...

Throughout the years and currently, she has supervised and is supervising masters students seeking to complete their thesis in clinical and public health nutrition with varying subjects on eating behavior and associated risk factors, the relation of sleep and nutrition (children and young adults)/ overweight – obesity among Lebanese children and adolescents / food neophobia / impact of parent eating patterns on their child's eating behavior / linking multimedia platform use with body image and self-esteem / relationship between orthorexia – body image and self-esteem, Mediterranean diet adherence and psychological stress (anxiety and depression).

While supervising master thesis she is also an active member of master's thesis jury of examination (reviewer or president of committees) as well as a scientific reviewer for nutrition journals.



Rana Mahfouz, PhD

Assistant Professor

Department of Nutrition and Food Sciences, Faculty of Arts and Sciences, Holy Spirit University of Kaslik (USEK)

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Rana Mahfouz is an Assistant Professor of Nutrition in the Department of Nutrition and Food Sciences at the Faculty of Arts and Sciences. She joined USEK in 2025 as an Assistant Professor.

She has been an Administrative Coordinator, academic advisor, internship coordinator and reviewer in Nutrition and Dietetics, for 12 years, while completing her PhD in Nutrition and Food Sciences; studying 'Impact of consecutive crisis on malnutrition, anemia, food insecurity and adherence to Mediterranean diet among pregnant women.'' After receiving her master's in nutrition, Rana has also been teaching bachelor courses at the department of Nutrition and Food Sciences (Fundamental Nutrition, Current Topics in Food sciences and Nutrition, Nutrition in the Life Cycle); Since her PhD her course load involves master's students also (Advanced topics in Food Sciences and Nutrition). Moreover, she supervises, reviews and presides over Masters Nutrition students (Clinical and Public Health) in the scope of her research interest.

She is an active member of the Lebanese order of dietitians (LOD).

Her study interests involve a panoply of subjects in Clinical and Public Health nutrition including:

Pregnancy nutrition, diverse environmental factors impacting eating behavior during different life stages, relationship of food and mental health…



Rana Rizk, PhD

Assistant Professor

Nutrition and Food Science Department, Lebanese American University (LAU)

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Dr. Rana Rizk is an Assistant Professor of Nutrition and the Chairperson of the Nutrition and Food Science Department at the Lebanese American University. She earned a PhD in Health, Medicine, and Life Sciences from Maastricht University, The Netherlands, an MPH in Epidemiology and Biostatistics from the Lebanese University, an MS in Clinical Nutrition and a BS in Human Nutrition and Dietetics from the Holy Spirit University of Kaslik.

Her research focuses on the burden of chronic diseases and on the potential of nutritional interventions in improving outcomes and decreasing costs, leading to change in health policy and clinical practice.



Nour El Helou, PhD

Professor

Nutrition Department, Faculty of Pharmacy, Saint-Joseph University of Beirut (USJ)

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Professor - Nutrition Department at the Faculty of Pharmacy at Saint-Joseph University of Beirut (USJ).

Holds: M.Sc. in “Sports Nutrition and Physiology” from Saint-Joseph University of Beirut (USJ), and PhD in sports epidemiology from Université Paris Descartes (Paris V),

Research interests in Sports Nutrition and Physiology, and in Exercise Sciences.



Nelda Nader, *RD, MSc, IOC Diploma, ISAK Level 3 Instructor*

Sports Dietitian, Injury Rehabilitation & Performance Nutrition

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Nelda Nader is a sports dietitian with more than 20 years of experience in clinical nutrition and elite sport, specializing in injury rehabilitation, energy availability and return to performance. She currently works at Aspetar, a leading sports medicine and orthopedic hospital in Doha, alongside sports physicians and physiotherapists, to integrate nutrition throughout rehabilitation and return to performance. She also supports Olympic-sport athletes until competition and delivers nutrition services with major events such as the FIFA World Cup 2022.

Her research interests include bone stress injury, RED-S, body composition, muscle recovery and evidence-informed supplementation. She has developed nutrition pathways for injured athletes and contributed to research including the Aspetar Bone Stress Injury Prospective Registry, with publications in international journals.

A former clinical dietitian then, male academy sports nutritionist and experienced educator, Nelda is passionate in bridging the gap between sports nutrition research and what can realistically be implemented in clinical and performance settings.



Mira Al Fikany, LD, MSc

Nutrition Department, Lebanese International University (LIU)

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Mira Fikany is a clinical dietitian and a university lecturer with 15 years of teaching experience. She currently serves as the Assistant Chair of the Nutrition Department at the Lebanese International University (LIU), Bekaa campus. She holds a Bachelor of Science in Nutrition and Dietetics and a Master of Science in Human Nutrition from Saint Joseph University and is currently pursuing a PhD degree in Nutrition at Maastricht University in the Netherlands.

Her research focuses on the role of sleep in weight management, spanning the biological mechanisms linking sleep to appetite-regulating hormones, the associations between sleep and adherence to diet and exercise, and the impact of sleep on the outcomes of weight loss programs.



Maria Jose Demirdjian, LD, MSc

Saint-Joseph University of Beirut (USJ)

Barbara Nassar Cancer Center in Lebanon

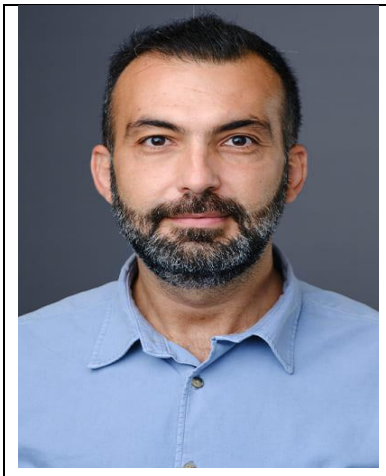
Email: mariademirdjian39@gmail.com

Maria Jose Demirdjian is a licensed dietitian, exercise physiologist, and PhD candidate in Public Health – Global Health Leadership at Saint Joseph University. She heads the Oncology Nutrition Department at the Barbara Nassar Cancer Center in Lebanon.

She holds a master's degree in Sports Nutrition and Exercise Physiology and teaches nutrition at university level.

She also works with national-level athletes, integrating nutrition and exercise to support health and performance.

Her research focuses on malnutrition, muscle health, and nutritional care in clinical populations.
Her work has received international recognition, including an award at the American Oncology Nutrition DPG Symposium.



Hussein Hassan, PhD

Professor

Department of Nutrition and Food Sciences, Lebanese American University (LAU)

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Dr. Hussein Hassan is Professor of Food Science and Technology and Director of Academic Compliance in the Office of the Provost at the Lebanese American University (LAU). A former advisor to the Ministers of Industry and Public Health, he holds a PhD in Food Process Engineering from McGill University, Canada, and BSc in Nutrition and MSc in Food Technology from AUB.

His research focuses on food safety, food processing, and sustainability, and he has authored more than 100 peer-reviewed publications. Dr. Hassan serves as an expert and consultant with UN agencies (FAO, UNDP, UNEP, ESCWA, UNIDO), Expertise France, USAID, and numerous local and international organizations.



Sandra Sarkis, PhD

Program Manager

Industrial Research Institute (IRI)

Email: sandra.sarkis@net.usj.edu.lb

Dr. Sandra Sarkis is a Program Manager at the Industrial Research Institute (IRI), Lebanon, with extensive experience in food safety, quality management, analytical chemistry, and chemical risk assessment. She holds a PhD in food safety, with research spanning chemical and microbiological contaminants, foodborne hazards, dietary exposure, and health risk assessment, with a particular interest in emerging and persistent contaminants in the food chain.

Her research interests include persistent organic pollutants (POPs), pesticides, heavy metals, emerging contaminants, dietary exposure assessment, and cumulative health risk evaluation. Her work focuses on generating contamination data and translating analytical findings into meaningful food safety, consumer health, and risk-management perspectives.

Alongside her research activities, Dr. Sarkis is an ISO auditor, consultant and research supervisor, with expertise in food safety, industrial chemical analysis, quality management systems, and laboratory practices. Her professional and academic work bridges analytical science, food safety, risk assessment, quality management, and applied research, with a strong focus on strengthening food quality and safety systems.



Christelle El Tomb, MSc

Head of Research and Development department

Crown flour Mills

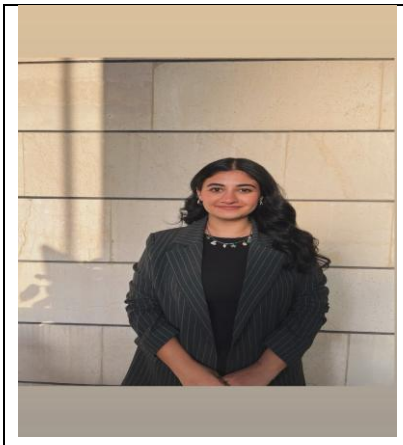
PhD candidate

Department of Nutrition, Faculty of Pharmacy, Saint Joseph University (USJ)

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Christelle El Tomb is the Head of Research and Development department at Crown flour Mills, where she has been contributing her expertise for the past twelve years. She holds a Bachelor's degree in Nutrition and a Master's degree in Food Technology from Saint Joseph University (USJ).

Currently, she is pursuing her PhD at the same institution, continuing to deepen her research in the field of food science and innovation. With a decade of hands-on experience in product development, Christelle specializes in the formulation and optimization of bakery products, ensuring quality, innovation, and market relevance.



Nivine Hachem, MSc

Research and Development unit, Difco Group

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Nivine Hachem is a USJ alumna, holding a Bachelor's degree in Nutrition and Dietetics and a Master's degree in Food Technology from Saint Joseph University of Beirut. She currently works in Research and Development at Difco Group, focusing on product development, reformulation, and process optimization. Her experience includes the development of cereals, cereal bars, granola, protein bars and pretzels. Through her work, she combines her background in nutrition with food technology to address practical challenges in industrial product development.



Lama Mattar, PhD

Associate Professor

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Dr. Lama Mattar earned her BSc and MSc in Nutrition and Dietetics from the American University of Beirut (AUB) and a PhD in Nutrition from the University of Pierre and Marie Curie, Paris. She later pursued a postdoctoral fellowship. She is currently an associate professor of nutrition and coordinator of the Honors Program at LAU.

Guided by the conviction that nutrition is central to disease prevention and treatment, Dr. Mattar has worked across clinical, academic and policy spheres to advance public health. Her clinical experience spans specialized units in the USA, Switzerland, France and Lebanon. She has also been a founding board member of the Lebanese Order of Dietetics and continues to champion interdisciplinary, evidence-based approaches to nutrition education and practice.



Nicole Fakhoury Sayegh, PhD

Associate Professor

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Dr. Nicole Fakhoury-Sayegh received her PhD in Nutritional Sciences from Saint Joseph University Beirut in 2015, her Masters in Public Health from AUB in 2005, and her Bachelors in Dietetics and Nutrition from AUB in 1985. She is a certified dietitian and was promoted to Associate Professor at the Faculty of Pharmacy, Department of Nutrition at Saint Joseph University Beirut in 2024. She is also a part-time teacher at Saint Esprit University of Kaslik since 2021.

She practices dietetics and clinical nutrition at her private clinic next to Hôtel Dieu de France, Beirut.

Her academic interests are liver diseases, especially fatty liver and gut microbiota. She has several national and international publications in this field.



Rawane Rawda El Balah, MSc

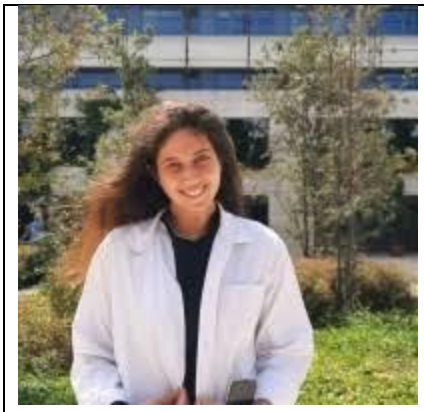
PhD Candidate

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Rawane Rawda El Balah holds a Master's degree in Human Nutrition from Saint-Joseph University of Beirut (USJ), and a Bachelor's degree in Nutrition and Dietetics from the same institution. She has over five years of experience in clinical dietetics and has also contributed to research activities at USJ.

Her research focuses on public health nutrition, eating behaviors, physical activity, and mental health among university students. She has investigated the impact of armed conflict on anxiety and lifestyle behaviors among Lebanese university students, with her findings published in *BMC Public Health*. She is also a PhD candidate in Nutrition at USJ.



Amina Zebiane, LD, MSc

Saint George Hospital University Medical Center in Beirut

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Amina Zebiane is a clinical dietitian at Saint George Hospital University Medical Center in Beirut, with a focus on critical care nutrition and nutrition support in the Intensive Care Unit (ICU) and Coronary Care Unit (CCU). She is also a preceptor in the hospital's nine-month clinical dietetics internship program, contributing to the clinical training and education of dietetic interns. She holds a Master's degree in Human Nutrition from Saint Joseph University of Beirut and a Professional Diploma in Sports Nutrition from Barça Innovation Hub – Universitas.