

Newsletter **TREASURE**

Maternal Perinatal Stress and Adverse Outcomes in the Offspring: Maximising infants' development.



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the European Union



As we kick off the second year of the TREASURE project, I'm excited to introduce this newsletter as a space for all researchers involved to connect, share, and stay informed. Here, you'll find updates on each working group's progress, insights into our colleagues' research, expert opinions, upcoming TREASURE events, and much more.

A huge thank you to everyone who contributed to making this first edition possible! Your collaboration and dedication are what drive this project forward. If you'd like to be part of future editions, we'd love to hear from you—feel free to contribute to the section that best fits your interests.

We also encourage you to share this newsletter on social media and with anyone who might be interested in our work. The more people we reach, the greater the impact we can make together.

Sandra Garcia-Pintor. Science Communication Coordinator

- **TREASURE RESEARCH NETWORK**
- **2024 IN FOCUS: A YEAR OF CONNECTIONS AND DISCOVERIES**
- **TEAM SYNERGY: ACHIEVEMENTS OF OUR WORKING GROUPS**
- **KNOWLEDGE ON THE MOVE: STSM EXPERIENCIES**
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About TREASURE

High levels of maternal perinatal stress are associated with negative effects in the offspring. The adverse impact maternal stress can have in the infants' health is:

- In the short term (prematurity, low infant birthweight).
- The long-term (neuroinflammation, autism).
- The very long-term (transgenerational effects).

During pregnancy, high levels of maternal stress can cross the placenta and reach the fetus. Mediators responsible for the impact of maternal stress in the developing fetus include cytokines, tryptophan, cortisol, catecholamines, reactive oxygen species, oxidative stress and microbiota. These mediators, along with epigenetic mechanisms, are involved on the adverse consequences high levels of maternal stress can have in the offspring.



In order to improve fetal development and boost infant's health throughout their lifespan, the TREASURE project aims to consolidate a multidisciplinary and international network of scientists, clinicians, students, stakeholders, Non-Governmental Organisations (NGOs) and Enterprises to achieve impact through a three-fold main objective:

- Discovering, reviewing and disseminating scientific evidence on minimize, reduce and prevent the impact of maternal perinatal stress on fetal development, and to improve psychological, medical and neural development in the offspring during their life-span.
- Bridging knowledge, evidence and experience between scientific disciplines, and bringing international research groups together to increase knowledge exchange between countries.
- Forming international coalitions to efficiently translate scientific knowledge into clinical guidelines and best practices across Europe to improve the health of children, and reducing economic cost appearing from high levels of maternal perinatal stress.

Visit our website to stay
informed about our project
<https://www.treasurecost.eu>



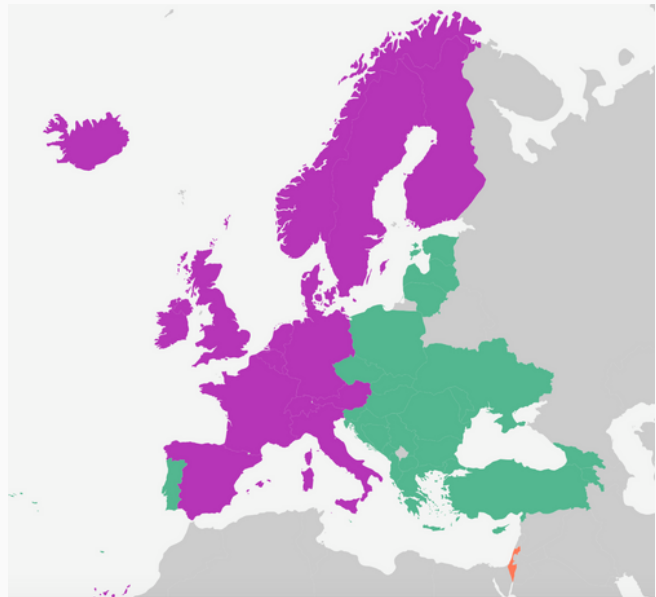
TREASURE Research Network

COST is an EU funded programme that supports the establishment of international researcher networks.

COST is committed to bringing out excellence and inclusiveness in science Europe-wide and clearingaway obstacles by offering low-barrier entry research networks and creating interdisciplinary research cooperation opportunities for researchers.

The COST inclusiveness policy is developed about three main elements:

1. Geographical spread.
2. Career stage: involving young researchers.
3. Gender balance.



Our project current membership figure

Total number of members:	460 members
Countries Full COST:	38 Full COST
Country partners:	1 South África
International partner:	6 Argentina, Colombia, India, Indonesia, United States, Kazakhstan.
Cooperating country:	1 Israel
Near Neighbour Country:	1 Tunisia
Management Committee members:	63 members
Gender Balance:	374 - Female / 86 - Male
Young Research Innovators (YRI) Balance:	199 - YRI / 261 - NYRI
Inclusiveness Target Countries (ITC) Balance:	204 ITC / 256 NITC

If you're interested in our project, you can join us through the following link:

<https://www.cost.eu/actions/CA22114/>

2024 in Focus: A Years of Connections and Discoveries

Kick off Meeting: Brussels - November 2023



Our first in-person meeting took place at the COST headquarters in Brussels. This meeting marked the official launch of our collaboration, filled with excitement and enthusiasm as team members met in person for the first time.

The day was packed with engaging activities, including brainstorming sessions where participants contributed ideas to shape the work of our different Working Groups. We also held the election of mandatory leadership positions, setting the foundation for the project's future.

Beyond the scientific discussions, social events allowed us to connect in a more informal setting, strengthening bonds among researchers from across Europe. It was the perfect start to an inspiring journey!

Core Group and Working Group Meeting: Nijmegen (Netherlands) - February 2024





This in-person meeting gathering provided an important opportunity for discussions on the project's direction and collaboration across different teams.

Participants attended insightful keynote lectures, where Prof. Carolina de Weerth shared her expertise on how early-life stress can influence the development of the newborn microbiota, and Prof. Ana Ganho introduced the COST Riseup-PPD project, offering valuable insights and inspiration.

A special thanks to **Prof. Carolina de Weerth** for hosting the meeting at her university and for her dedication in making this in-person event possible.

Core Group and Working Group Meeting: Cork (Ireland) - June 2024



This meeting provided an opportunity to continue advancing the established research lines, facilitating collaboration within the Working Groups both in person and online.

We had the privilege of attending two insightful keynote lectures. Prof. Sarah Kittel-Schneider highlighted the importance of parental mental health, emphasizing the risk of perinatal mental health challenges and their potential impact on parent-infant bonding—a topic that remains understudied. Prof. Marci Lobel shared her 30 years of expertise perinatal maternal stress research, providing invaluable knowledge to further guide our work.

A special thanks to **Prof. Sarah Kittel-Schneider** for hosting the meeting at University College Cork and for the outstanding organization that made this event a success.

Team Synergy: Achievements of Working Group 1

WG 1. Maximizing our understanding of maternal perinatal psychological and physiological stress (Conceptualization).

Lead: Prof Antje Horsch / Colead: Prof. Susan Ayers

Main Achievements 2024/2025

SG 1 - Definition of maternal stress.

Prof. Antje Horsch / Ms. Deborah Fort

Last year, we registered the protocol for our scoping review on OSF and developed a systematic literature search strategy, identifying 1,920 articles. Following the title and abstract screening, 71 articles were deemed potentially eligible. We are currently conducting full text screening and will finish this process in the next few days.

SG 4 - Secondary data analyses on physiological stress impact.

Ms. Isabel Jaramillo / Dr. Alejandro De la Torre-Luque

In our first year, we made significant progress towards Deliverable 1.4: Identification of biological and neuroendocrine predictors of maternal perinatal stress. In collaboration with WG2 and WG3, we collected metadata from 40 birth cohorts and narrowed them down to 17 based on studies assessing maternal biomarkers and perinatal stress. Our literature review highlighted inflammatory markers as key factors in maternal stress. Given the predominant focus on stress as a predictor of biomarkers in previous studies, we will conduct bidirectional longitudinal analyses to clarify whether inflammatory markers are not only an outcome of stress but also predict future stress levels. Having finalised a data sharing agreement with other subgroup leaders, the next steps will be to harmonise the maternal stress questionnaires and to upload a pre-registration of our study (OSF).

Upcoming milestone

Train people for the data extraction.

During the meeting in Madrid, we plan to draft a definition of maternal perinatal stress based on the data extracted until then. This draft definition will then be discussed with key stakeholders to achieve a consensus.

For data handling, we look forward to working with Luz M. Iribarne-Duran, Data Manager. She is supported by a Virtual Mobility Grant.

Team Synergy: Achievements of Working Group 2

WG 2 - Exploring intergenerational and transgenerational impact of maternal perinatal stress on the offspring through epigenetic and biomedical research

Lead: Prof. Mirjam Oosterman / CoLead: Prof. Elif Aysimi Duman

Main Achievements 2024/2025

SG 1 - Secondary data analysis from Birth Cohort studies.

Dr. Lea Takacs/ Prof. Livio Provenzi

The group is working on two papers two papers: (1) Stress in pregnancy and child social emotional development, primarily temperament (led by Lea) and (2) Stress in pregnancy and child motor and cognitive development (led by Livio). Metadata on cohorts are available – start contacting PI's regarding data once the data sharing agreement is finalized. In the meantime, the groups work on a preregistration of the papers. Questions/issue that needs attention: Need to find a person who takes care for data curation/harmonization.

SG 2 - Development of mathematical models.

Prof. Andreas Mayr/Dr. Alejandro De la Torre-Luque

The group decided on the methods: Statistical learning algorithms with data-driven variable selection. With regard to use of data, we decided not to wait for the harmonized database (consisting of multiple cohorts) but start working on one of the existing ones. The focus is on data from BASIC and U-BIRTH cohorts (Uppsala). Later also testing on other data from participats (cohort from Norway). Current status: Izdar Abulizu (PhD student from Andreas) should get access to the Uppsala databases, he will programm the algorithms to estimate the prediction model. We are on track with the work.

SG 3 - Systematic review of transgenerational impact.

Dr. Sara Cruz/Dr. Joanna Stecyna

The group works on a PROSPERO registration and a search strategy of the review. There is a good division of tasks.

Upcoming milestone

Izdar Abulizu (PhD student from Andreas) should get access to the Uppsala databases, he will programm the algorithms to estimate the prediction model. We are on track with the work.

In the systematic review, we will take the next step to analyze the retrieved papers. The work is proceeding according to the plan.

Team Synergy: Achievements of Working Group 3

WG 3 - Improving assessment approaches in perinatal maternal stress through psychological and biological measures.

Lead: Prof. Sarah Kittel-Schneider / CoLead: Prof. Maria Fe Rodriguez-Muñoz

Main Achievements 2024/2025

Systematic Review Progress:

SG 2 - Psychological markers of maternal perinatal stress with an impact on exposed children.

Dr. Ana Uka/Dr. Tugba Yilmaz/Prof. Ana Ganho/Ms. Mónica Sobral

Completed a Prospero protocol for maternal stress markers and initiated database searches in February 2025.

SG 3 - Markers of paternal perinatal stress with an impact on exposed children.

Prof. Sarah Kittel-Schneider/Dr. Rajesh Shigdel/Dr. Kristiina Uriko.

Finalized a Prospero protocol draft for meta-analysis, with plans to complete it by February 2025.

Secondary Data Analysis:

SG 4 - Secondary data analysis from Birth Cohort studies of perinatal stress.

Dr. Annaleena Holopainen/Dr. Jasminka Štefuljes

Initiated pre-registration on OSF for harmonizing birth cohort data, with plans to contact cohort principal investigators by January 2025.

Clinical Feasibility Study:

SG 5 - Survey of clinicians of the acceptability and feasibility to use markers/assessments in the daily routine.

Dr. Demet Gülaldi/Dr. Tugba Yilmaz/Dr. Ayça Demir Yıldırım/Dr. Imran Gokcen Yilmaz-Karaman

Drafted a survey protocol to assess clinician acceptance of perinatal stress biomarkers, pending input from other subgroups.

Upcoming milestone

Finalize Prospero protocols for paternal stress biomarkers (Subgroup 3) by February 2025.

Publish OSF pre-registration for birth cohort analysis (Subgroup 4) by mid-February 2025.

Begin data collection from international cohorts in March 2025

Team Synergy: Achievements of Working Group 4

WG 4 - Optimising the perinatal period to reduce the adverse impact on the offspring.

Lead: Prof. Anna-Lena Zietlow / CoLead: Prof. Pelin Dikmen Yildiz

Main Achievements 2024/2025

SG 1 - Qualitative Interviews with families & partners.

Prof. Nicola Carone / Dr. Johanna Petzoldt

Task: To identify potential social, cultural, and psychological factors associated with a reduction of maternal perinatal stress through the development of a quali-quantitative survey for mothers (Survey 1), partners & family members involved in childcare (Survey 2) across diverse countries.

SG 2 - Development of a psycho-educational toolkit for families.

Dr. Anna Georg / Dr. Magdalena Chrzan / Dr. Katharina Hartmann

Task: To develop a toolkit for partners and families based on identified social, cultural and psychological factors (e.g., resilience) associated with a reduction of maternal perinatal stress.

Subgroup 2 is working on a systematic review on psychological interventions for partners and families in the peripartum period.

SG 3 - Critical assessment of methods improving the parent-infant relationship.

Prof Sónia Brandão / Prof. Anat Talmon / Dr. Ewa Gieysztor

Task: Critical appraisal of methods to improve the parent-infant relationship.

Subgroup 3 is working on two tasks: scoping review of assessment instruments for parent-child relationships in the first year and a systematic review of interventions promoting these relationships postpartum.

SG 4 - Interventions reducing perinatal maternal stress.

Ms Lea Krumpholtz / Prof. Edi Vaisbuch

Task: To synthesize the best practices for reducing maternal perinatal stress through non-pharmacological treatments.

Subgroup 4 is conducting a systematic review (meta-analysis) on non-pharmacological treatments to reduce maternal perinatal stress. Currently, pre-registration is in the final feedback loop.

Upcoming milestone

Currently SG 1 is working on to finalize the research protocol for the “Mothers survey” within two months.

The first draft of the preregistration form is almost completed, and Subgroup 2 aims to start the screening process in the next two months.

SG 3. For Task 1, the protocol was completed and currently they are planning to pre-register it and preparing for the screening process. For Task 2, development of the systematic review protocol is still ongoing.

SG 4. They aim to start preparations for the screening process next month and are currently planning the expert consensus/theoretical paper in collaboration with the WG leaders.

Team Synergy: Achievements of Working Group 5

WG 5 - Analysis of health economics

Lead: Dr. Fiona Lynn / CoLead: Prof. Neville Calleja

Main Achievements 2024/2025

This working group has been focused on two main activities (1) planning and conducting a systematic review of evidence on the economic burden of poor maternal perinatal mental health, and (2) supporting the training needs of the team in relation to health economics.

In our first year, we made progress on Deliverable 5.1 by developing a systematic review protocol for our review titled "Economic burden of poor maternal perinatal mental health: a systematic review of cost of illness studies and economic evaluations". The protocol has been registered with PROSPERO and systematic searches for relevant literature have been completed both in bibliographic databases and within a search for grey literature. We identified a total of 3655 records and the team is currently conducting title and abstract screen to assess the eligibility for inclusion in the review. WG5 is a multi-disciplinary team that includes 44 members. Along with health economists, we have content specialists i.e. those who are experts in caring for, supporting and/or conducting research with women in the perinatal period and have an interest in tackling maternal perinatal stress and improving outcomes for mothers and their infants. To support content experts, we have delivered training sessions related to an introduction to health economics, as well as a focus on cost-of-illness studies, and in using web-based platforms that support systematic reviewers.

Upcoming milestone

The plan for the forthcoming year will focus on conducting the systematic review of economic evidence (Deliverable 5.1) and commencing work on the construction of a decision-analytic model for assessing the value for money of alternative strategies for preventing and/or treating maternal perinatal stress (Deliverable 5.2). We also plan to set up a stakeholder engagement group to help advice on model development. Further training sessions will be provided on the quality assessment of cost-of-illness studies and on data extraction for economic profiles.

Team Synergy: Achievements of Working Group 6

WG 6 - Communication, dissemination and knowledge transfer

Lead: Prof. Jean Calleja-Agius / Ms. Lucija Prepust

Main Achievements 2024/2025

Design and development of the TREASURE website.

Creation of TREASURE's social media accounts.

Regular updates on social media and the website.

Task 6.1. Draft and implementation of the Science Communication Plan:
This task was carried out during Grand Period 1.

Preparation and publication of a Newsletter.

Upcoming milestone

Task 6.2 Organise two International Conference:
Organize the first international conference during Grant Period 3.

Task 6.4 Organise open access events for the general public:
Host open-access events for professionals, the general public, and decision-makers.

KNOWLEDGE ON THE MOVE: STSM EXPERIENCIES.

What are STSMs?

Short-term scientific missions (STSM) are exchange visits between researchers involved in a COST Action, allowing scientists to visit an institution or laboratory in another COST Member state participating to TREASURE. These scientific missions may last up to six months. Their aim is to foster collaboration in excellent research infrastructures and share new techniques that may not be available in a participant's home institution or laboratory.

How to apply?

TREASURE is actively encouraging members to apply for STSMs. The application process for the second edition of the STSM is now open. You can find all the instructions on our website, social media or by emailing us at.

www.treasurecost.eu

treasurecostaction@gmail.com

Here are the participants of the first edition of the STSM

Tiago Miguel Pinto. Lusófona University. Lisbon, Portugal. Participant in: WG2, WG3, WG4.

Sergio Martínez Vázquez. Jaén University. Spain. Participant in: WG3, WG6

Sema Yildirim. University of Balıkesir. Turkey. Participant in: WG1, WG2, WG3, WG4.

Amira Cerimagic. OR "Immuno Centar". Sarajevo, Bosnia & Herzegovina. Participants in: WG2, WG6.

Jean Callega Agius. Malta University, Malta. Leader WG6. Participant in: WG1, WG2, WG3, WG4.

“Discover our colleagues' experiences on the following pages—they won't leave you indifferent! Be inspired to take part in the STSM program, a fantastic opportunity to expand your knowledge while exploring new places and cultures.”

KNOWLEDGE ON THE MOVE: STSM EXPERIENCIES.

Déborah Fort's STMS Experience at Vrije Universiteit Amsterdam.

Where did you carry out your STSM?

I had the privilege of conducting my Short-Term Scientific Mission (STSM) at the Vrije Universiteit in Amsterdam, under the guidance of **Prof. Mirjam Oosterman**.

How would you describe your experience?

From the moment I arrived, I was warmly welcomed by Prof. Oosterman and the entire research team. Their openness and willingness to share knowledge made it easy for me to integrate into this new environment, creating a truly supportive and inspiring atmosphere.

This STSM was an invaluable opportunity to expand my expertise in maternal perinatal mental health, particularly in exploring its association with children's developmental outcomes. I also enhanced my statistical skills by working with a new database, which provided fresh perspectives on data analysis. My discussions with Prof. Oosterman were especially enlightening, offering deep insights into the complexities of this field—particularly the diverse range of actors involved in children's development and the variety of assessment tools available.

One of the key outcomes of this STSM will be the publication of a study examining the effects of an intervention, designed to prevent childbirth-related posttraumatic stress symptoms in mothers, on infant developmental outcomes. Prof. Oosterman's expertise greatly contributed to refining the quality and rigor of this research, making this collaboration both productive and intellectually stimulating.

What recommendations would you give to future STSM participants?

To maximize the benefits of your STSM, I highly recommend thorough preparatory work before your visit. Identifying key elements of your project that could be enhanced through collaboration will help you make the most of your time.

Additionally, take full advantage of the opportunity to meet and engage with a wide range of researchers at your host institution. These interactions can lead to valuable knowledge exchange, new perspectives, and potential future collaborations.

**“STSM was an
invaluable opportunity
to expand my expertise
in maternal
perinatal mental
health”**



Ms. Déborah Fort

**Institute of Higher Education and
Research in Healthcare, Lausanne.**

**WG 1 - Maximising our understanding
of maternal perinatal psychological
and physiological stress.**

**CoLead SG 1 - Definition of maternal
stress.**



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KNOWLEDGE ON THE MOVE: STSM EXPERIENCIES.

Exploring Perinatal Stress: the Hülya Tosun's experience in Université Paris Cité



Dr. Hülya Tosun

Kütahya University of
Health Sciences, Turkey

Participates in WG1, WG4,
WG5, and WG6.

Where did you carry out your STSM?

The STSM carried out at Université Paris Cité's Psychology, Midwifery Clinic and Nursing School from 16-20 September 2024 with **Prof. Jaqueline Wendland, Prof. Anne Chantry, Anne Millot.**

How would you describe your experience?

We did not encounter any difficulties during the study because our colleagues had designed a very effective program. During these meetings, we discussed the effects of perinatal stress on the mother and the baby, its consequences, and which methods could be practically used to prevent these problems. We agreed that culture, social support, and economic status had an effect on these problems. We accompanied our colleagues during patient evaluations. We discussed again that our profession has a key importance in reducing maternal and infant stress. In this context, we decided to conduct new research studies where we could evaluate differences and similarities between cultures. We have brought 2 new project studies to the ethics committee on this path. We hope that there will be valuable studies with guiding results.

**“Our profession has a
key importance in
reducing maternal and
infant stress.”**



What recommendations would you give to future STSM participants?

It is very important to choose a specific topic where expertise can be best evaluated and to make preliminary preparations on this subject. In order for STSM to be efficient, project proposals can be approached to partners. I think this preparation will make it easier for your partners to guide you more and open up their resources to you.

KNOWLEDGE ON THE MOVE: STSM EXPERIENCIES.

A Transformative STSM Experience: Sema Yıldırım at the University of Granada.

I am Doctor Sema Yıldırım, and I have been working as a resident doctor in the Department of Child and Adolescent Psychiatry at Balıkesir University Faculty of Medicine for 1.5 years. In September 2024, I participated in a 13-day Short-Term Scientific Mission (STSM) at the University of Granada, Spain. First and foremost, I am very happy to have been accepted for this eye-opening experience.

This STSM was my first international research experience. There was no uncertainty about the process because, during the application stage, I prepared a detailed program outlining the tasks I would undertake, and my application was accepted accordingly.

My STSM experience in Spain was unforgettable. It was a great honor to work with **Professor Rafael Caparrós González** and his team. The hospitality and support of the University of Granada made my experience incredibly smooth.

Academically, I gained a wealth of new knowledge from Professor Rafael Caparros González, which allowed me to complete my study successfully.

With his guidance, support, and meticulous supervision, we submitted our study to a high-impact international journal, and it was published in a very short time.

Beyond the academic experience, I also gained valuable sociocultural insights. This was my first visit to Spain, and I fell in love with the city of Granada, with its fascinating history. I explored many beautiful places, immersed myself in Spanish culture, made new friends, and collected unforgettable memories.

First and foremost, thank you very much for this experience. I hope to participate in similar programs in the future. My advice to future STSM participants is:

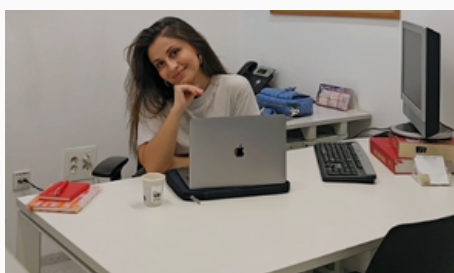
- Prepare a well-structured academic plan—this will make things much easier for you.
- Don't hesitate to apply! This is an invaluable experience.
- And lastly, make sure to explore, embrace new cultures, and enjoy discovering new places alongside your academic work!



Dr. Sema Yıldırım

*Balıkesir University
Çağış Campus
Turkey*

*Participates in WG1, WG2,
WG3, and WG4.*



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KNOWLEDGE ON THE MOVE: STSM EXPERIENCIES.

Bridging Disciplines: Exploring Gut Health in Maternal and Neonatal Well-being



Dr. Amira Cerimagic

*OR "Immuno Centar".
Sarajevo, Bosnia &
Herzegovina*

Participates in WG2 and WG6



Where did you carry out your STSM?

I conducted my Short-Term Scientific Mission (STSM) at the **University of Suffolk in Ipswich, United Kingdom**, as part of COST Action CA22114 – Synapse Network – Perinatal and Immunology Collaboration.

How would you describe your experience?

My STSM was a very enriching experience, providing the opportunity to engage with researchers and clinicians from various disciplines, including immunology, obstetrics, neuropsychology, and nutrition. Our discussions focused on the role of the gut microbiota in maternal and neonatal health, exploring how factors like delivery mode and breastfeeding practices influence long-term outcomes.

The key outcome of this STSM was the initiation of a rapid review on the impact of delivery mode and breastfeeding on newborn gut health. Additionally, future collaborations were discussed on integrating nutritional and microbiome research into perinatal health studies. The experience also opened discussions on potential long-term research projects and further academic exchanges.

**“Just go for it—
there’s nothing
to lose”**

What recommendations would you give to future STSM participants?

Dare to try. It might feel unusual to carve out your own path using the tools COST provides, but it is absolutely worth it. You will leave this experience enriched beyond what you expected. Just go for it—there’s nothing to lose.

KNOWLEDGE ON THE MOVE: STSM EXPERIENCIES.

Collaborating for Perinatal Health: A Great Experience at the London University.

During my two-week visit to the City of London University, I sought to forge connections between Jaén and London to enhance networks and embark on a project aligned with the TREASURE Cost Action. I was fortunate to be guided by **Rose Coates**, with whom I initiated the project titled "Stress Management Techniques during Pregnancy: A Scoping Review," which is still a work in progress. My base was at Myddleton Street in the Midwifery Department, where I had the opportunity to explore the simulation labs and observe university classes, gaining insight into the teaching facilities.

During my stay, I also attended the MAPS Summer Engagement Event, which showcased the work of emerging leaders, early career researchers, and PhD students within the Maternal and Perinatal Systems and Policy (MAPS) Research Group at King's College, London. This experience provided a valuable glimpse into the innovative research being conducted in the field.

To cap off my visit, I participated as an attendee at a COST Action meeting (CA22114) focused on Maternal Perinatal Stress and Adverse Outcomes in Offspring. The event, titled "Advanced Methods for Evidence Synthesis: An Introduction to Systematic Reviews" offered a crash course in the fundamentals of systematic reviews. While I was already familiar with some concepts, the session introduced me to new ideas that clarified my approach to selecting the type of review I should undertake in my research planning.

"My experience at MAPS was incredibly enriching, fostering meaningful collaborations and new research opportunities in perinatal health".



Mr. Sergio Martínez Vázquez

Jaén University. Spain.

Participates in WG3 and WG6



Body image changes during pregnancy and postpartum and their impact in the psychological aspect.

EXPERT PERSPECTIVES AND REFLECTIONS.

Body image is the perception, thoughts, and feelings that individual has about their own body, including its appearance, shape, and size. It can be influenced by personal experiences, cultural and societal standards, and media representations. Body image can be positive (body satisfaction) or negative (body dissatisfaction), affecting self-esteem and mental health.

During pregnancy, a woman's body undergoes numerous physiological changes to support fetal growth and prepare for childbirth, affecting multiple systems such as the cardiovascular, respiratory, endocrine, musculoskeletal, and gastrointestinal systems. In parallel with these biological adaptations, women also experience significant body image changes due to weight gain, hormonal shifts, and physical transformations. These physical alterations can, in turn, influence their psychological well-being and self-esteem, highlighting the interconnected nature of physiological and emotional changes during pregnancy.

Physical Changes and Their Impact on Body Image.

Weight gain and body shape changes: The natural increase in weight and changes in body proportions may lead to body dissatisfaction in some women. Breast enlargement and skin changes: Many women experience breast growth, stretch marks, and hyperpigmentation, which can influence their self-perception. Postural changes and swelling: Shifts in posture and fluid retention can further alter body perception.

Psychological and Emotional Aspects.

Body dissatisfaction vs. body appreciation: Some women struggle with body dissatisfaction, while others develop greater body appreciation as they associate changes with motherhood. Media and societal pressures: Unrealistic beauty standards and societal expectations may contribute to negative body image during pregnancy. Emotional well-being: Poor body image can be linked to anxiety, depression, and eating disorder risks.

Factors Influencing Body Image During Pregnancy.

Pre-pregnancy body image: Women who had body dissatisfaction before pregnancy may experience more challenges adjusting to bodily changes. Social support: Encouragement from partners, family, and healthcare providers can improve body satisfaction. Cultural and personal beliefs: Attitudes toward pregnancy and body changes vary across cultures and personal backgrounds.

Postpartum Body Image.

Post-pregnancy weight retention: Some women struggle with post-birth body changes, leading to continued body dissatisfaction. Breastfeeding and recovery period: Hormonal shifts, breastfeeding, and the postpartum healing process also affect body image.



Associate prof. PhD. Zrinka Puharić

MD, specialist for school children,
college prof., university specialist
in nutrition.

Scientific Progress in 2024

Publication in Scientific Journals

AUTHOR	FILIATION	TITLE	DOI
Rafael A. Caparros-Gonzalez	Associate Researcher University of Granada	Does Attachment and Prenatal Depression Affect Maternal Health-promoting Lifestyle during Pregnancy? A Cross-Sectional Study	https://doi.org/10.1016/j.cegh.2024.101904
Tuğba Yazıcı Topcu	Academician Karadeniz Technical University, Trabzon, Türkiye	Investigating Maternal Perception of Control and Support in the Postpartum Period and Influencing Factors in Childbirth: A Multiple Linear Regression Analysis Model	https://doi.org/10.1002/nop.2.70095
Songül Aktaş	Prof. Doctor (Midwife, Academician) Karadeniz Technical University, Trabzon, Türkiye	Investigation of the Effect of Risk Perception, Socio-demographic and Obstetric Factors on the Level of Decision Making of Pregnant Women Via the Internet: Multiple Linear Regression Analysis Model	10.4274/mnm.2024.24295
		Why mothers with midwifery-led vaginal births recommend that mode of birth: a qualitative study	https://doi.org/10.1080/02646838.2024.2328765
		The effect of pregnant women's health-seeking behavior and preference for mode of birth on pregnancy distress during the COVID-19 pandemic	https://doi.org/10.1080/07399332.2022.2153844

Scientific Progress in 2024

Publication in Scientific Journals

AUTHOR	FILIATION	TITLE	DOI
Dilek Kaloğlu Binici	Midwife, Nurse. Karadeniz Technical Universty, Trabzon, Türkiye	The Effect of Labor Dance in the First Stage of Labor on Labor Pain, Anxiety, Duration of Labor, and Maternal Satisfaction with Labor: A Randomized Controlled Study	https://doi.org/10.1089/jicm.2022.0818
Vivette Glover	Research Imperial College London	Maternal and paternal postpartum early mood and bonding	10.1080/02646838.2022.2159351
		Independent Prediction of Child Psychiatric Symptoms by Maternal Mental Health and Child Polygenic Risk Scores.	https://doi.org/10.1016/j.jaac.2023.08.018
Marianne Nieuwenhuijze, Patricia Leahy-Warren, Maria Healy, Songül Aktaş, Ruveyde Aydin, Jean Calleja-Agius, Josefina Goberna-Tricas, Eleni Hadjigeorgiou, Katharina Hartmann, Lena Henriksen, Antje Horsch, Ute Lange, Margaret Murphy, Annabelle Pierron, Rainhild Schäfers, Zada Pajalic, Corine Verhoeven, Dolores Ruiz Berdun & Sheima Hossain	Midwife, nurse and other profession	The impact of severe perinatal events on maternity care providers: a scoping review	https://doi.org/10.1186/s12913-024-10595-y

Scientific Progress in 2024

Publication in Scientific Journals

AUTHOR	FILIATION	TITLE	DOI
Annick Bogaerts	Associate Professor of midwifery KU Leuven	Intervention strategies to prevent mental health problems and improve resilience in employed parents from conception until the child is 5 years of age: a scoping review	10.1186/s12884-024-07043-4
Chiara Sacchi	Researcher, Psychologist University of Padova	In the pandemic from the womb. Prenatal exposure, maternal psychological stress and mental health in association with infant negative affect at 6 months of life	10.1017/S0954579423000093
Alkistis SKALKIDOU	Obstetrician/Gynecologist. Uppsala University	A two-wave survey study examining the impact of different sources of pregnancy information on pregnancy-related anxiety among Swedish women	0.18332/ejm/197169
		Trans-ancestry genome-wide study of depression identifies 697 associations implicating cell types and pharmacotherapies	10.1016/j.cell.2024.12.002

Scientific Progress in 2024

Publication in Scientific Journals

AUTHOR	FILIATION	TITLE	DOI
Alkistis SKALKIDOU	Obstetrician/Gynecologist. Uppsala University	Dropping out of a peripartum depression mHealth study: participants' motives and suggestions for improvement	10.1186/s12874-025-02462-z
		Peripartum depression symptom trajectories, telomere length and genotype, and adverse childhood experiences	10.1186/s12888-024-06115-1
		Association of Parental Prenatal Mental Health on Offspring Neurodevelopmental Disorders: A Systematic Review and Meta-Analysis.	10.1101/2024.09.12.24313571
		Personality vulnerability to depression, resilience, and depressive symptoms: epigenetic markers among perinatal women	10.48101/ujms.v129.10603
		Exploring User Experiences of the Mom2B mHealth Research App During the Perinatal Period: Qualitative Study	10.2196/53508

Scientific Progress in 2024

Publication in Scientific Journals

AUTHOR	FILIATION	TITLE	DOI
Alkistis SKALKIDOU	Obstetrician/Gynecologist. Uppsala University	A longitudinal multi-centric cohort study assessing infant neurodevelopment delay among women with persistent postpartum depression in Nepal	10.1186/s12916-024-03501-0
		Inflammatory biomarkers and perinatal depression: A systematic review	10.1371/journal.pone.0280612
		Investigating heart rate variability measures during pregnancy as predictors of postpartum depression and anxiety: an exploratory study	10.1038/s41398-024-02909-9
		Mid-pregnancy allopregnanolone levels and trajectories of perinatal depressive symptoms	10.1016/j.psyneuen.2024.107009
		Estrogen-modulating treatment among mid-life women and COVID-19 morbidity and mortality: a multiregister nationwide matched cohort study in Sweden	10.1186/s12916-024-03297-z
		Feeling better? - Identification, interventions, and remission among women with early postpartum depressive symptoms in Sweden: a nested cohort study	10.1192/j.eurpsy.2024.6

Scientific Progress in 2024

Publication in Scientific Journals

AUTHOR	FILIATION	TITLE	DOI
Alkistis SKALKIDOU	Obstetrician/Gynecologist. Uppsala University	Interactions of perinatal depression versus anxiety and infants' early temperament trajectories	10.1111/cdev.14041
		Association of Diabetes Mellitus in Pregnancy and Perinatal Depression	10.1097/PSY.0000000000001261
Sema Yildirim	Child and Adolescent Psychiatric Balikesir University	Natural Disasters as a Maternal Prenatal Stressor and Children's Neurodevelopment: A Systematic Review	10.1016/j.psyneuen.2024.107009
İlknur Yesilcinar	Obstetrics and gynecology nursing Izmir Katip Çelebi University	Anxiety during the pregnancy and affecting factors: a cross-sectional study	10.1007/s00404-022-06590-5
Lubica Lacinova	Biophysicist Centre of Biosciences, Slovak Academy of Sciences	Effects of pre-gestational exposure to the stressors and perinatal bupropion administration on the firing activity of serotonergic neurons and anxiety-like behavior in rats	https://doi.org/10.1016/j.bbr.2023.114796
Jesus Cobo	Psychiatrist i Corporacio Sanitària Parc Taulí - Universitat Autònoma de Barcelona	Incidence of Perinatal Post-Traumatic Stress Disorder in Catalonia: An Observational Study of Protective and Risk Factors	10.3390/healthcare12080826

Scientific Progress in 2024

Participation in Conferences During 2024.



44th SRIP Annual Conference-Dresden, Germany - 2024.

The TREASURE research team recently participated in the SRIP Conference, a key event dedicated to the psychological and behavioral aspects of human reproduction. We had the opportunity to present our project TREASURE with an oral communication titled **Maternal Perinatal Stress and Impact in the Offspring: Introducing EU COST Action TREASURE**. The authors of this oral presentation were:

Rafael A. Caparros-Gonzalez, Susan Garthus-Niegel, Susan Ayers, Elif Aysimi Duman, Neville Calleja, Jean Calleja Agius, Andri Christoforou, Pelin Dikmen Yildiz, Sandra Garcia-Pintor, Antje Horsch, Sarah Kittel-Schneider, Ester Leno-Duran, Fiona Lynn, Mirjam Oosterman, Lucija Prepušt, Maria Fe Rodriguez-Muñoz, Anna-Lena Zietlow, Maja Žutić.

Another member of our team who participated in the conference was: **Elif Balkan**.



29th WONCA Europe Conference-Dublin, Ireland - 2024.

Our colleague **Busra Bilik Sezer** participated in the European Congress of the World Organization of Family Doctors, where she presented her work titled **"Impact of Maternal Risk Factors on Infants Under One Year: A Study Using Electronic Health Records in a Primary Health Care Center Population."** Congratulations on contributing to advancements in perinatal health.



Presentation of Master's or Doctoral Thesis

Congratulations on successfully defending your Master's thesis or PhD dissertation! This is a remarkable achievement and a testament to your hard work and dedication. Wishing you continued success in your future endeavors.

Ozlem BAKAN DEMIREL. Faculty of Health Sciences of Marmara University, Turkey.

Sexual problems in women using contraceptive methods and the effect of education-counseling in accordance with the plissit model (Masters's thesis).

The Effect of Sexual Education and Counseling Based on PLISSIT Model on Sexual Functions of Couples during Pregnancy and Postpartum (Doctoral thesis in progress).

<https://dx.doi.org/10.1089/tmj.2023.0294>

Remziye CAN. Eskişehir Osmangazi Üniversitesi, Turkey.

Evaluation of Depression and Fatigue Levels of Women in Postpartum Period.

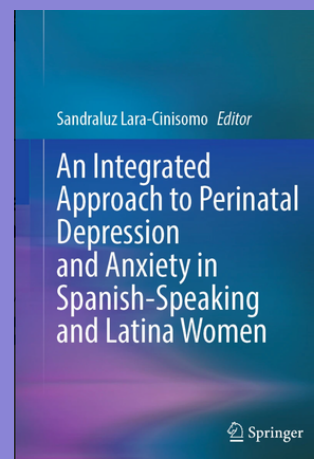
<https://drive.google.com/open?id=1Kmg4GjgXyftSsOlyhx1K1Zxiz9xmnrnO>

Scientific Progress in 2024

Book publication.

We would like to congratulate our colleague **Sandraluz Lara-Cinosomo** on the publication of this fantastic book, which makes a significant contribution to the literature by adopting an integrated perspective on perinatal depression and anxiety among Spanish-speaking and Latina women. These groups are often overlooked in research and face significant barriers to diagnosis and treatment.

This groundbreaking book compiles essential and timely insights into the factors associated with perinatal depression and anxiety among Spanish-speaking and Latina women. It delves into crucial themes, such as migration-related experiences. Additionally, it explores policies in Latin America aimed at addressing maternal mental health needs. Furthermore, the book provides fundamental knowledge on tailoring culturally and linguistically appropriate interventions for perinatal depression and anxiety among Spanish-speaking and Latina women. Recognizing the significance of context, it offers perspectives on the effects of natural disasters and health crises on perinatal mental health and mother-infant bonding. The book advocates for the development of a research and mental health workforce attuned to the diverse needs of Spanish-speaking and Latina/Latinx perinatal women. It also discusses the value of biomarkers in perinatal depression research. In sum, this book brings together topic experts from across the globe to provide a more holistic approach to perinatal depression and anxiety.



<https://link.springer.com/book/10.1007/978-3-031-57824-3>

Be Part of Our Next TREASURE Newsletter

We want you to be featured in our next edition! This is a great opportunity to share your experiences, research, and insights with the TREASURE community. Whether you've participated in an STSM, are working on a topic related to perinatal stress or mental health, or have recently published a study, we'd love to highlight your work!

Our newsletter is more than just updates—it's a platform to connect, collaborate, and showcase the incredible contributions of our team. Let's build stronger networks and foster new opportunities together!

treasurecostaction@gmail.com



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CONNECTING AHEAD: SAVE THE DATES.

Core Group and Working Group Meeting

WELCOME TO MADRID - COMPLUTENSE UNIVERSITY.
FROM MARCH 17TH TO 18TH.

Dear colleagues,

It is with great pleasure that I welcome you to our meeting for the COST Action TREASURE. This is an important event for us, as it brings together experts and professionals from all over Europe to discuss the progress and challenges in our ambitious project.

The meeting will be held at the Faculty of Medicine (Universidad Complutense de Madrid) on March, from 17 to 18th. Over these days, we will have the opportunity to network with our peers, learn from each other, and share our ideas. We have a packed agenda, with a variety of sessions and subgroup meetings that will cover the tasks included within our COST initiative.

I am confident that the meeting will be a success, and that we will all leave here with new knowledge and insights. I encourage you to take advantage of this opportunity to network with your colleagues and make the most of your time here.

Thank you for your participation, and I look forward to a productive and enjoyable congress.

Sincerely,

Alejandro De la Torre-Luque.



Alejandro de la Torre-Luque, PhD

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Second Call for Short Term Scientific Mission (STSM)

THE CALL FOR APPLICANTS WILL BE OPEN FROM THE 15TH OF FEBRUARY UNTIL THE
31ST OF MARCH 2025

If you're interested in applying, you can find all the information at the following link

<https://lc.cx/XtHv54>.

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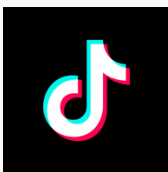
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