SHORT TERM SCIENTIFIC MISSION (STSM)
SCIENTIFIC REPORT

This report is submitted for approval by the STSM applicant to the STSM coordinator

Action number: CA18211
STSM title: Prenatal and Perinatal Psychology could reduce inequalities and improve maternity services
STSM start and end date: 29/03/2021 to 09/04/2021
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PURPOSE OF THE STSM:

Epigenetics is the study of "how your behaviours and environment can cause changes that affect the way your genes work" (Champagne 2012). Moreover, behavioural epigenetics show "how this expression of genes produce individual differences in personality, behaviours and mental health" (Zhang 2010, Bagot 2010).

In 2015, Burris investigated disparities in preterm births. In her study, we can see how differential risks for preterm birth among recent African immigrants compared to black Americans suggest that an individual's inherited biology (beyond genetic code) may be due to acquired heritability rather than genetic heritability.

Otto Rank and generations of prenatal psychology pioneers including Thomas Verny advocated for the impact of prenatal and perinatal psychology and birth trauma in adult life. Rank (1999), believed that the separation anxiety when the baby is born constitutes the blueprint of all anxieties experienced in life. While Verny, studied the profound impact on the subsequent quality of health and human behaviour and that life is a continuum which starts *before conception*, not after birth (Gouni *et al.* 2021).

The MBRRACE-UK report (2019) showed that in UK, maternal deaths are not evenly spread across the population. Black women are five times and Asian women two times more likely to die as a result of complications in their pregnancy, than white women. Also, the UKOSS report recently published that the death rate during COVID-19 has been higher for women from Black, Asian and Ethnic minorities groups of population. This is due to various reasons such as job roles, socioeconomic disadvantages, inaccessibility to health systems, translation issues and other such reasons.

It is now time to scrutinise the health systems and find out what needs to change and how. It is time to understand the root of the problem and how to overcome the barriers, optimise the birth environment and improve the quality of care all maternity health professionals provide.

This STSM aims to investigate the understanding of behavioural epigenetics and prenatal and perinatal psychology, so as to reduce health inequalities and thus build maternity services able to provide individualised care. Optimisation of the birth environment and high quality care can contribute to positive birth outcomes and experiences for the family as a whole.

Objectives

This STSM will explore how maternity services can be effective if culture awareness is taken into consideration for individualised care. This will be achieved through the following objectives:

- Explore how woman's history has an impact on the way she gives birth.
- Explore health inequalities in maternity services and raise culture awareness.
- Explore how health professionals' personal history affects the way they provide care.

DESCRIPTION OF WORK CARRIED OUT DURING THE STSMS

Day 1

I met with Olga Gouni, the STSM leader. I had this great opportunity to explore in depth the topic as Olga has been specialised in Prenatal and Perinatal Psychology. This first discussion was about the birth of Prenatal Psychology and the evolution through the years. We also discussed the appropriate literature should be studied to enhance the understanding on the topic and how to approach it in a wholistic way. We finally planned in detail the rest of the days.

Day 2

Day 2 started with a course on the Cosmoanelixis platform about Anthropology of Birth and Cross-cultural issues (PSM7103) by Prof Michelle Sadler and Dr Alejandra Carreno. The course explored, in 10 sessions, concepts and progress in the discipline of Anthropology of birth and Medical Anthropology. It defined the way the first Anthropologists studied the human culture, the understanding of health and absence of health and finally the study of medical systems as cultural systems. Prof. Sadler analysed the models of relationships between healers and people and the concept of health and illness within every model. Three models: i) Classic empirical, ii) interpretative, iii) critical. These models also explore where culture sits within the health systems and how the health professionals create cultural representation and try to understand the person's individuality as a critical element for diagnosis and treatment.

These sessions made me wonder how the national systems in various countries perceive conception, pregnancy and motherhood as illness or as a condition where there is absence of health and how this affects this journey for the mother, unborn child and the dynamics within the family.

Later during the day, the literature discussed previously was explored and study priorities were identified.

Day 3

Aiming to gain information about maternity services and midwives' experiences in caring for women from different cultural, religion and ethnicity background a survey with 19 questions Was discussed in detail to be finalised.

After discussing with the STSM leader, the survey had 5 demographical, 12 open-ended and two multiple-choice questions. The survey was available in both Greek and English, as I intended to investigate potential commonalities and differences. Finally, a consent form for the participants was discussed and finalised.

Day 4

The interviews took place on day 4. The sample consisted of 12 midwives - 6 midwives working in Greece and 6 midwives working in UK. The interviews took place over the phone or on other audio-visual platforms. The questions investigated the understanding of the scope of prenatal and perinatal psychology and what the intergenerational trauma is as well their understanding on how women's personal experiences, beliefs, cultures, faith or religions and socioeconomical and historical background affect the way they birth. Further, the questions also explored their understanding on how their personal experiences, beliefs, cultures, faith or religions and socioeconomical and historical background affect the way they provide care. Finally, whether they believe that the way they were born, gave birth or not have given birth affects the way they provide care.

Day 5

On day 5 I met again with Olga and discussed the results of the interviews and explored the commonalities and the differences between the participants and the two countries.

Later during the day, the activities so far were summarised and the first draft of the report .

Day 6

On the first part of the day, we discussed with Olga how to organise the focus groups and the agenda of the meetings. The topics were finalised and the groups scheduled, two different meetings were organised for the afternoon of the same day and one group meeting for the following day.

Later in the day, two meetings took place. The first one with Dr. Ankita Sapan Marjadi who is the cofounder of a Homeopathy Clinic; she is a psychotherapist who works with couples that want to conceive and couples about to have the first baby or grow their families. She works with them in a holistic way and supports them to connect with their history, their body and their inner unconscious self. Through this journey they prepare the womb environment and the couples' relationships (or family relationship if there is another child) to welcome the new life. They carry on throughout the pregnancy and after birth.

The second meeting was with Dr Antonella Sansone a Clinical Psychologist and currently PhD researcher. She has been working in the past but also currently through her PhD studies on how mindfulness can help holistic approach of the journey from couple to family, from woman to mother and create an environment more welcome for the unborn child.

Day 7

The day started summarising the outcomes of the meetings in the previous day and planning the focus group discussion later the day.

In the afternoon the focus group consisting of 4 specialists in the field of Psychology and Medicine took place and the discussion was about how to implement the knowledge into clinical practice, how to overcome the

barriers and the differences in various countries. An extensive discussion around the resistance to change but also the barriers to implement new practices and apply new knowledge.

Day 8

This day was dedicated to studying the maternity services in various countries based on the discussion form the previous day and the literature. The differences in maternity service on whether and how they increase cultural awareness, what training programmes they have and how they produce policies for equality.

Later, a meeting with Olga took place where we discussed the diversity in maternity systems, the potential cultural safety approach they should implement and the gaps identified. Finally, we discussed how prenatal and perinatal psychology could support the optimisation of birth environment so that they could improve the maternity journey.

Day 9-10

On days 9 and 10, all the results and findings were analysed in depth and written for the report after discussion with Olga.

Day 11 -12

Finally, in the last two days the gaps in research and in clinical practice as well in maternity medical systems were discussed. Future work was established and detailed in the report.

DESCRIPTION OF THE MAIN RESULTS OBTAINED

The interviews revealed some interesting results. The participants who work in Greece were 100% white, Greek midwives. The questionnaire revealed that there is no ethnicity mixture within the health professionals. There is a minority from other countries but however a very small percentage. While the participants who work in the UK were 2 White Greek, 2 White British, 1 Black Caribbean – British born, 1 Indian. All the participants described their workplace as a diverse environment with an adequate ethnicity and cultural mixture of staff. The majority of the participants (7) have professional experience in midwifery between 10 and 20 years (1 participant has 5 years, 2 participants have 20-30, 2 participants 40+). Half of them have postgraduate degrees (5 x MSc, 1 x PhD) while the other half have bachelor in midwifery.

	Age	**Ethnicity**	**Educational level**	**Prof Exp in mw**	**Mixture of ethnicity in staff**	**Mixture of ethnicity in women**
Participant 1 - GR	60 more	White	bachelor	45 years	no	yes
Participant 2 - GR	60 more	White	Master	40 years	no	mostly greek a few cases other ethnicities
Participant 3 - GR	45-50	White	bachelor	25 years	no	good mixture
Participant 4 - GR	41 plus	White	phd	19 years	no	no
Participant 5 -GR	36-40	White	master	16 years	no	a bit of mixture
Participant 6 - GR	36-40	White	master	16 years	no	some mixture

Participant 7 - UK	41-45	White	master	18 years	good mixture	good mixture
Participant 8 - UK	41-45	White	master	20 years	yes but place for imporevement	good diversity
Participant 9 - UK	26-30	White	bachelor	5 years	yes	yes
Participant 10	36-40	Black Carribbean	bachelor	10 years	yes	yes
Participant 11 - UK	31-35	White	bachelor	12 years	yes	yes
Participant 12 - UK	56-60	Asian	bachelor	28 years	yes	yes

None of the participants had any official training on how to provide care to families from different ethnicities and cultures. All the participants believed that women and their families are not aware, or slightly aware of the impact their own historical and socio-economical background has on the way they give birth.
Only two of the participants showed a good understanding in intergenerational trauma while half of the rest had some knowledge and the rest only little or none. Similar were the results on the understanding on what Prenatal and Perinatal Psychology and Medicine is representing and how the historical and socio-economical background impact the way women give birth. The sample showed a small understanding on how the way they were born had an impact on how they provide care. While, it was more apparent to them that the way they gave birth has a clear impact on their practice.
The midwives that work in Greece believed that the training the students receive, on how to provide care to families from diverse ethnic and cultural backgrounds, is quite low and the maternity services are not prepared to support these families. On the contrary, the majority of midwives working in UK believed that the maternity services are well prepared and the students receive adequate training.
Finally, all the participants from both countries believed that there is an urgency to have an official multidisciplinary training for all health professionals working in maternity services and the students in order to raise awareness of cultural safety and prenatal and perinatal psychology. The two common perceived barriers are the lack of understanding within the policymakers, as well as the low capacity and funding issues.

Discussion

The impact of trauma during pregnancy, labour and delivery, and postnatal period, has been explored by many scientists, from various disciplines, explaining the relationship with the child's heath quality later in life. Within these studies, major historical events have been studied such as the children of pregnant women during the Dutch Famine, the Holocaust (Dashorst *et al*. 2019) and the fathers of children who were prisoners during the US Civil War (Costa *et al*. 2018) where adverse outcomes have been shown to exist due to poor quality of care during pregnancy, maternal nutrition issues and/or existence of stress.
Gouni (2018) said that the history and the constitution of the maternal system will shape the unborn baby in a unique way that is connected with the history, constitution, organisation and structure of the unborn baby him/herself. In addition, the way the mother and the family perceives the unborn child and the consequent ideas, thoughts attitudes, emotions and behaviours that stem from this way are not necessarily empowering for the unborn child. Lastly, Turner *et al.* (2018) claimed that gestation should be regarded as critical period and the failure of this perception could lead to flawed diagnosis and treatment.
Even though there is a growing literature on this topic, there is still a lack of awareness within the healthcare and educational systems. From the interviews, it became apparent that professionals that have been in maternity care for many years, but also for those that have recently joined the maternity workforce, consider that this is still a topic with a lot of confusion and lack of knowledge.
During the STSM, I had the great opportunity to discuss with professionals that have vast experience and academic work around the topic through the virtual workshops (Jon RG Turner (Netherlands), Olga Gouni (Greece), Smilja Pugliese (Italy), Ruthi Vijslingz (Nethrlands). A common belief within this team was that the resistance to change is a contributing factor of the lack of knowledge and that builds foundations of systems to support an environment for individualised care. Biology follows the law of physics; therefore, our bodies, our mind-sets have the spontaneous response to resist to any change and there is unconscious effort to keep the same position physically and also mentally. In some degree the effort must be more powerful in

the beginning in order to overcome inertia (social or personal) and activate new behaviours. Thus, the service leaders have responsibilities to create a system that will encourage change. They have a responsibility to co-design with the relevant stakeholders an educational program for health professionals, students and families. And finally to co-design policies to build a sustainable health system that will optimise birth environment

Another very interesting belief within the experts, was that the multidisciplinary team that is involved in parental journey, from conception to postnatal period, is not always collaborative and therefore the gap but also the resistance grows. Furthermore, the differences between national health systems and the mistrust towards political systems and authorities can contribute to the ignorance of the importance that individualised care has as well as the critical role of prenatal and perinatal psychology and cultural safety in improving maternity services.

Prof. Sadler in her sessions claimed that first experts in the field moved to the environment where people live and they stayed there in order to observe and deeply understand how they behave in the place where they feel safe. They observe how they react and how they perceive health, illness and other elements of every day life. This is when they realised essential characteristics and they were in a position to provide critical information.

Midwives, obstetricians and all the health professionals involved in maternity services should construct a strong birth environment for the families to feel safe, to build relationships based on trust, to understand cultural, social and historical uniqueness. That will reduce inequalities and will achieve safer outcomes.

FUTURE COLLABORATIONS/Conclusion

It is apparent that now is time to change. It is time to improve maternity systems and optimise care for the families in a holistic way. Professionals from all disciplines should come together to learn from each other. It is now the time to support the families to connect with themselves and empower them to normalise their journey to parenthood.

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