FAMILY

"Running in the FAMILY – Understanding and predicting the intergenerational transmission of mental illness"

Grant Agreement number: 101057529

Deliverable 1.4

1st report and plan for gender balance

Workpackage:	WP 1
Task:	Task 1.4
Due Date:	31st March 2023 (M6)
Actual Submission Date:	31st March 2023 (M6)
Project Dates:	Project Start Date: October 01, 2022 Project Duration: 60 months
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Project funded by the European Commission within HORIZON-HLTH-2021-STAYHLTH-01-02: Towards a molecular and neurobiological understanding of mental health and mental illness for the benefit of citizens and patients'		
Dissemination Level		
PU	Public — fully open (automatically posted online)	X
SEN	Sensitive — limited under the conditions of the Grant Agreement	

Document History:

Version	Date	Changes	From	Review
V0.1	14.3.	Deliverable template	Juliane Dittrich	Neeltje van Haren, Lisanne van Houtum
V1	28.3.	Changes in chapter 2-4	Neeltje van Haren, Lisanne van Houtum	Juliane Dittrich
V2	31.3.	Final version	Juliane Dittrich	Neeltje van Haren, Lisanne van Houtum

SUMMARY

This document describes the scientific approach to address sex and gender differences and how they contribute to the understanding and treatment of mental illness. The second chapter explains the Gender Equality Plan and its implementation within FAMILY's research organizations.

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1 INTRODUCTION

1.1 Purpose and Scope

This document describes in Chapters 2 and 3 the scientific approach to address age, sex and gender differences and how they contribute to the understanding and treatment of mental illness. WP4 will quantify the epigenetic contribution to sex differences in the intergenerational transmission of mental illness by specifically studying the X chromosome. WP6 particularly investigates maternal behavior I mice to better understand the role of parental care in transmission of risk to male and female pups. WP8 will take into account cultural, age, and sex and gender aspects in relation to ethical and social consequences of risk prediction (e.g. stigma, shame, guilt) from neurobiological, psychological, environmental, and clinical information. Importantly, by increasing the understanding of the role of **sex and gender** in a **life course** (i.e. across age) perspective, FAMILY will contribute in the longer term, to improved therapeutic approaches to specifically benefit either women or men at different stages of their life.

Chapter 4 explains the Gender Equality Plan and its practical implementation in FAMILY's research organizations as well as the composition of the FAMILY consortium in terms of gender balance. Gender monitoring of FAMILY consortium members is part of WP1.

1.2 References to other FAMILY Documents

- FAMILY DoA

2 SEX AND GENDER ANALYSES IN THE FAMILY PROJECT

The European Commission published a policy report on "Gendered Innovations/ Innovation through Gender" and came to the conclusion that taking into account the gender dimension – that is, ensuring that the biological characteristics as well as the social and cultural features, behaviours and needs of both women and men are taken into consideration – is vital for the societal relevance and quality of research and innovation. (1)

Sex and gender differences in the prevalence, symptomatology, risk factors, and course of mental disorders, are among the most stable and intriguing findings in psychiatry. Intergenerational transmission of risk of mental illness, by definition, requires the joint focus on fathers and mothers and their sons and daughters. Particularly including the role of fathers in research is critical, as (i) their role in child development is understudied and (ii) omitting fathers in family-oriented analyses lead to biased estimates of transmission. FAMILY will therefore offer considerable gains in our understanding of the role of fathers in the development of psychiatric symptoms in children.

To address the role of biological sex, Task 4.5 in WP4 (Quantify epigenetic contribution to sex differences in the intergenerational transmission of mental illness) will examine the role of DNA methylation on X-chromosome inactivation. Moreover, in contrast to work in humans, most animal research on epigenetic intergenerational transmission centres around females, in part because male rodents do not engage in rearing which precludes a behavioural explanation for the resulting transmission of traits. FAMILY's WP6 has a major focus on maternal behaviour to better understand the role of parental care in transmission, since in mice rearing depends only on mothers. To determine if maternal behaviours are sufficient for risk transmission to the progeny cross-fostering will be applied. This can obviously only be done using females, which is a strong justification for focusing on this sex to study the mechanisms of transmission per se. For risk assessment in the progeny, both females and males are examined.

FAMILY will also systematically examine statistical models in WP3-7 for sex interactions.

In WP8, FAMILY will further analyse potential sex- and/or gender-dependency of participant's attitudes, opinions, and beliefs on social and ethical aspects related to intergenerational transmission of risk (e.g., guilt, shame, stigma) and risk prediction, and we will conduct an analysis of potentially different needs of females and males (from different ages) together with our stakeholders, in order to optimise guideline development. How a person perceives and appraises these topics is strongly determined by a person's identity (self-image), which includes aspects of gender. There are also strong socio-cultural norms about how males and females cope with challenges. To avoid potential bias and discrimination, WP8 will constantly reflect on ethical and social problems in the area of sex and gender and will also offer solutions to be implemented in research practice and included in the guidelines for end users of prediction tools.

3 AGE ANALYSES IN THE FAMILY PROJECT

FAMILY includes a life course perspective by investigating biological and clinical development in offspring and parents from preconception into late adulthood. Examining how genetic, biological, and environmental risk and resilience factors interact across different life stages within families can potentially improve the prediction of risk of mental illness. FAMILY addresses age in several tasks specifically, by estimating the stability and change in genetic nurture effects throughout the life course (WP3, T3.2) and two tasks focus on the prediction of mental health problems during late adolescence from repeated assessments of DNA methylation (WP4, T4.2) and brain metrics (WP5, T5.3) in childhood.

4 GENDER EQUALITY STRATEGY WITHIN FAMILY

4.1 Gender Equality Plan requirements

The EU Gender Equality Strategy delivers on the von der Leyen Commission's commitment to achieving a Union of Equality. The Strategy presents policy objectives and actions to make significant progress by 2025 towards a gender-equal Europe. The goal is a Union where women and men, girls and boys, in all their diversity, are free to pursue their chosen path in life, have equal opportunities to thrive, and can equally participate in and lead our European society.

The key objectives are ending gender-based violence; challenging gender stereotypes; closing gender gaps in the labour market; achieving equal participation across different sectors of the economy; addressing the gender pay and pension gaps; closing the gender care gap and achieving gender balance in decision-making and in politics. (2)

Having a Gender Equality Plan (GEP) in place that meets a set of mandatory requirements becomes an eligibility criterion for all public bodies, higher education institutions and research organisations.
For FAMILY, all requirements are met:

- Dedicated resources

Commitment of human resources and gender expertise to implement it.

The institutions of all partners in the consortium have taken measures to improve the under-representation of women in science and the gender inequalities that persist from hiring to promotions. As one example, EMC as coordinating site, had dedicated talent schemes in place for women, i.e. a Female Talent Class for young female researchers who are within two years after completing their PhD thesis and a Female Career Development Program for female researchers between 3 to 8 years after completing their PhD thesis.

- Data collection and monitoring:

Sex/gender disaggregated data on personnel and students and annual reporting based on indicators.

FAMILY will monitor gender balance within the project and, if significantly different from 50/50%, work out and implement a plan for gender balance. This plan will foresee dedicated resources and expertise to implement activities around data collection and monitoring, training, awareness, organisational culture, integration of the gender dimension into research and teaching content, etc.

- Training:

Awareness raising/trainings on gender equality and unconscious gender biases for staff and decision-makers.

As part of the GA meetings, we will organise a workshop on gender equality and unconscious gender biases in academia.

- Minimum areas to be covered and addressed via concrete measures and targets

work-life balance and organisational culture;
gender balance in leadership and decision-making;
gender equality in recruitment and career progression;
integration of the gender dimension into research and teaching content;
measures against gender-based violence including sexual harassment.

As part of the GA meetings, we will organise workshops on gender equality and unconscious gender biases in academia and work-life balance. FAMILY partners ensure that working hour arrangements for staff employed will not disproportionately disadvantage those with caring responsibilities.
Additionally, as described above sex and gender are key variables in the FAMILY research program. A mentor-mentee program will be implemented to offer early career researchers the

possibility to discuss potential sex and gender related topics (such as sexual harassment or prejudice) with a trusted mentor.

4.2 Composition of FAMILY consortium

The composition of the FAMILY consortium and management is 58% female and 42% male. Most FAMILY's work packages are led by one female and one male scientists (Table 1) all prominent positions in their respective fields (well-proven by their CV's) and from different academic organisations. Additionally, there is a balanced male/female ratio among members of FAMILY's Steering Committee and General Assembly (Table 2) to ensure gender aspects are well addressed at all levels, including management.

The current gender representation in FAMILY is presented in Table 1 and 2.

Table 1. Gender composition of the FAMILY consortium

No.	Acronym	Country	Name	Position	Male	Female
1	**ERASMUS MC**	Netherlands	**Neeltje van Haren**	PI, WP leader		X
			Manon Hillegers	Contributor data		X
1			Lisanne van Houtum	PD		X
1			Debbie Tesselaar	RA		X
1			vacancy	PhD		
1			Charlotte Cecil	WP leader		X
1			Alexander Neumann	WP leader/ PD	X	
			Tim Finke	PhD	X	
1			Nicky Creasey	PD		X
1			Ryan Muetzel	WP leader	X	
			Jonathan Krikeb	Data manager	X	
1			Steven Kushner	WP leader	X	
1			vacancy	PD		
2	**RADBOUDUMC**	Netherlands	Christian Beckmann	WP leader	X	
2			Emma Sprooten	WP leader		X
2			Lennart Oblong	PhD	X	
2			Nicolò Trevisan	PD	X	
3			Ting Mei	PD		X
3	**LIR GGMBH**	Germany	Raffael Kalisch	WP leader	X	
			Kenneth Yuen	researcher	X	
3			vacancy	PD		
4	**LU**	Latvia	Signe Mezinska	WP leader		X
4			Ivars Neiders	Researcher	X	
6	**NIPH**	Norway	Alexandra Havdahl	WP leader		X
7	**FCRB and HCB**	Spain	Gisela Sugranyes	WP leader		X
			Josefina Castro	Team leader		X
			Patricia Camprodon	PD		X
			Maria Ortuño	PhD		X
8	**HARVARD GLOBAL**	US	Henning Tiemeier	WP leader	X	
9	**concentris**	Germany	Ameli Schwalber	Team leader		X
9			Juliane Dittrich	Project manager		X
9			Katrin Zimmermann	Conference manager		X
9			vacancy	WP leader Dissemination		X
10	**FIBHGM**	Spain	Carmen Moreno	Contributor data		X
11	**REGIONH**	Denmark	Merete Nordentoft	Contributor data		X

No.	Acronym	Country	Name	Position	Male	Female
11			Anne Amalie Elgaard Thorup	Contributor data		X
11			Bjorn Ebdrup	Contributor data	X	
12	**ESCAP**	Belgium	Karen Schlaegel			X
13	**EUFAMI**	Belgium	John Saunders		X	
13			Andre Decraene		X	
13			Dimitra Stefanopoulos			X
ASSOCIATED						
14	**UZH**	Switzerland	Isabelle Mansuy	WP leader		X
14			Ellen Jaspers			X
15	**CHUV**	Switzerland	Martin Preisig	Contributor data	X	
15			Caroline Vandeleur	Contributor data		X
16	**UCL**	UK	JB Pingault	WP leader	X	
16			Andrea Allegrini	PD	X	
17	**USI**	Switzerland	Andrea Raballo	Team leader	X	
				Total	19	26

Table 2. Current gender representation in FAMILY's Steering Committee and General Assembly

No.	Acronym	Country	Name	General Assembly (team leads)		Steering Committee (WP leads)	
				Male	**Female**	**Male**	**Female**
1	**ERASMUS MC**	The Netherlands	Neeltje, Ryan, Charlotte, Alexander Steven, Manon		3	2	3
2	**RadboudUMC**	The Netherlands	Christian, Emma	1		1	1
3	**LIR GGMBH**	Germany	Raffael	1		1	
4	**LU**	Latvia	Signe		1		1
6	**NIPH**	Norway	Alexandra	1		1	
7	**FCRB and HCB**	Spain	Gisela		1		1
8	**Harvard Global**	US	Henning	1		1	
9	**concentris**	Germany	Ameli, Juliane		1		2
10	**FIBHGM**	Spain	Carmen		1		
11	**REGIONH**	Denmark	Merete/ Bjorn		1		
12	**ESCAP**	Belgium	Karen		1		
13	**EUFAMI**	Belgium	John, Andre	1			
14 AP	**UZH**	Switzerland	Isabelle		1		1
15 AP	**CHUV**	Switzerland	Martin, Caroline	1			
16 AP	**UCL**	UK	Jean Baptiste	1		1	
17 AP	**USI**	Switzerland	Andrea	1			
			TOTAL	**8**	**10**	**7**	**9**

The FAMILY Boards are also gender balanced:

- DATA ACCESS COMMITTEE

Members: Ryan Muetzel (EMC; M), Gisela Sugranyes (FCRB; F), Maria Ortuño (IDIBAPS; F), Lisanne van Houtum (EMC; F)

- IMPACT BOARD

Members: Christian Beckmann (Radboud UMC, chair; M), Juliane Dittrich (concentris; F), Signe Mezinska (LU; F), Neeltje van Haren (EMC; F)

- SCIENTIFIC AND ETHICAL ADVISORY BOARD (SEAB)

Members: Prof Martien Kas (RUG; M), Dr Ghislaine van Thiel (UMCU; F)

5 LITERATURE REFERENCES

1. European Commission, Directorate-General for Research and Innovation, Gendered innovations: how inclusive analysis contributes to research and innovation, Publications Office, 2020, https://data.europa.eu/doi/10.2777/619077

2. https://commission.europa.eu/strategy-and-policy/policies/justice-and-fundamental-rights/gender-equality/gender-equality-strategy_en#gender-equality-strategy-2020-2025

ACKNOWLEDGEMENT

Funded by the European Union, the Swiss State Secretariat for Education, Research and Innovation (SERI) and the UK Research and Innovation (UKRI) under the UK government's Horizon Europe funding guarantee'. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union, or the European Research Executive Agency (REA), the SERI or the UKRI. Neither the European Union nor the granting authorities can be held responsible for them.