Lifebrain

D6.4 Lifebrain gender equity report

Project title:	Healthy minds from 0-100 years: Optimising the use of European brain imaging cohorts
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Leader for this deliverable:	University of Oslo

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Document History				
Release	Date	Reason for Change	Status (Draft/In-review/Submitted	Distribution
1.0	05.12.2017	First draft created based on the online gender workshop held 29th November, 2017	Sent for review to the Executive Board	E-mail, OneDrive
2.0.	21.12.2017	Final draft created based on feedbacks from the EB and gender team	Submitted to the participant portal	OneDrive, Participant portal

Dissemination level		
PU	Public	X

Executive summary

Gender equity and equality is not considered as an extra task in Lifebrain, but it will be incorporated in all activities we do.

A Gender Equity Plan has been designed for Lifebrain to ensure that gender perspectives are integrated in all project activities.

The Lifebrain Gender Equity Plan covers three main areas:

1. providing equal opportunities for women and men in the consortium
2. incorporating the gender perspective in research design and analysis and
3. interacting with policy-makers to share the Lifebrain gender experience and promote gender equity and equality at various levels: EU, national, institutional and individual level.

The Lifebrain GEP ensures that the consortium's policy regarding gender issues is correctly implemented, including the awareness and sensitisation programmes.

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List of acronyms/ abbreviations

Lifebrain	Healthy minds from 0-100 years: Optimising the use of European brain imaging cohorts
CA	Consortium Agreement
EB	Executive Board
EC	European Commission
EU	European Union
GA	Grant Agreement
GenA	General Assembly
GEP	Gender Equity Plan
KMC	Knowledge Management Committee
LCBC	Centre for Lifespan Changes for Brain and Cognition, University of Oslo
LB	Lifebrain
M	Month
MPIB	Max Planck Institute for Human Development
NIPH	Norwegian Institute of Public Health
PI	Principal Investigator
REGIONH	Region Hovedstad
SB	Safety Board
UB	University of Barcelona
UiO	University of Oslo
UOXF	University of Oxford
UmU	Umeå University
UzL	University of Lübeck
WP	Work Package

Definitions

SEX: Sex refers to the biologically determined characteristics of men and women in terms of reproductive organs and functions based on chromosomal complement and physiology.

GENDER: Gender refers to the social construction of women and men, of femininity and masculinity, which varies in time and place, and between cultures. It is important to distinguish clearly between gender and sex. These terms are often used interchangeably while they are conceptually distinctive.

GENDER EQUITY: Gender equity is the process of allocating resources, programs and decision-making fairly to both males and females.

GENDER EQUALITY: This term refers to the situation where individuals of both sexes are free to develop their personal abilities and make choices without the limitations imposed by strict gender roles. The different behaviours, aspirations and needs of women and men are considered, valued and favoured equally.

IMPLICIT GENDER BIAS: Implicit gender bias refers to unconscious and unintentional gender prejudices and stereotypes that affect decision-making and actions. Implicit gender bias is the often unintentional and implicit differentiation between men and women by placing one gender in a hierarchical position relative to the other in a certain context, as a result of stereotypical images of masculinity and femininity. All, both men and women have implicit bias, regardless of conscious belief systems. Implicit bias begins to form early in life and originates from a variety of different sources including the media, family, friends and the social and cultural groups to which we belong.

GENDER BIAS IN RESEARCH: Gender bias influences both the participation of men and women in research and the validity of research. Gender biased research is a research that focuses on the experience and point of view of either men or women, while presenting the results as universally valid.

1. Introduction

1.1. Deliverable description

D6.4. Lifebrain gender equity report (R) [12] The management in coordination with the Safety Board team will ensure and monitor that the consortium's policy regarding gender issues is correctly implemented, including the awareness and sensitisation programmes.

Task 6.4. Gender equity programmes.
Lead: UiO; Participants: All (M18-M60) (M1-M60). The management in coordination with the Safety Board team will ensure and monitor that the consortium's policy regarding gender issues is correctly implemented, including the awareness and sensitisation programmes.

1.2. Lifebrain Gender Equity Plan

A Gender Equity Plan has been designed for Lifebrain to ensure that gender perspectives are integrated in all project activities.

An online workshop on *"Gender in research"* (29th November, 2017, See 1.1.4.) was organised to help the gender team to assess the main challenges and some potential solutions in the field, which could be then implemented at the level of the Lifebrain project.

Gender equity and equality is not considered as an extra task in Lifebrain, but it will be incorporated in most of the activities we do, as to the extent possible.

The Lifebrain Gender Equity Plan covers three main areas:

- providing equal opportunities for women and men in the consortium
- incorporating the gender perspective in research design and analysis and
- interacting with policy-makers to share the Lifebrain gender experience and promote gender equity and equality at various levels: EU, national, institutional and individual level.

The GEP will be updated yearly along the project and new activities would be added/or planned activities changed, as the project evolves.

The following figure will be used as a framework for the Gender equity plan of Lifebrain, as it helps to systematically cover the phases of a research cycle.

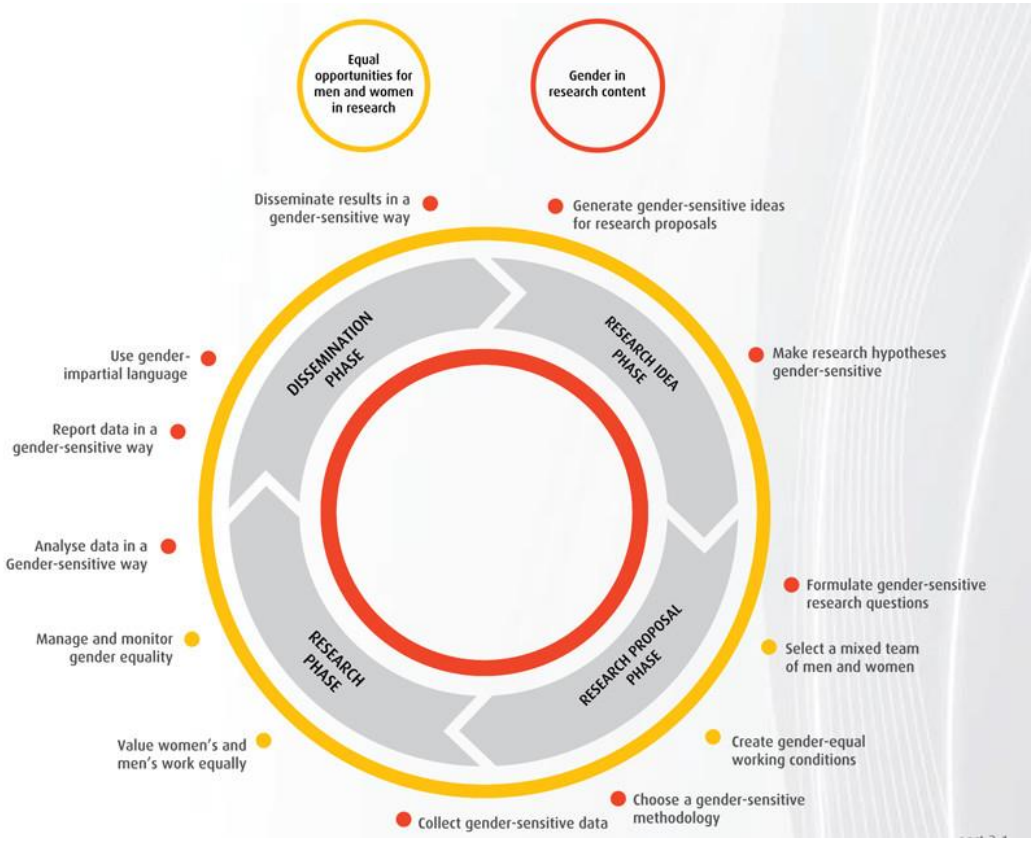

Figure 1. Gender in the research cycle (Source: Njuki, 2016)

1.3. The Lifebrain gender team

A "gender team" has been established to coordinate the design and implementation of the gender equity plan of Lifebrain:

- Kristine B. Walhovd (UiO), coordinator
- Barbara B. Friedman (UiO), administrative coordinator
- Sana Suri (UOXF), WP5 science communication expert, researcher
- Kathrine Skak Madsen (RegionH), researcher
- William F.C. Baaré (RegionH), WP2 leader
- Anne Inger Helmen Borge (UiO), external expert/EC Horizon2020 Gender Advisory Group

2. Gender in the management of the consortium

2.1. Gender balance in the consortium

Objective

Have a gender balance in the research team and incorporate gender dimensions when organizing and coordinating the project. We aim for 50% representation of women in the total group of researchers in Lifebrain.

Current assessment

The coordinator of the project, Professor Kristine B. Walhovd is female, and so are some of the most central project researchers professor Heidi Johansen-Berg, Claire Sexton (UOXF), Brenda Penninx (VUmc) and Lorraine Tyler (UCAM). Female researchers have a key role and tasks at MPIB (Simone Kühn, Ylva Köhncke, Sandra Düzel), UmU (Sara Pudas), REGIONH (Kathrine Skak Madsen, Olga Rigina, Louise Baruël Johansen, Ellen Garde), Athanasia Monika Mowinckel (UiO) and UzL (Christina Lill), ensuring female participation among the critical staff across sites.

Women with strong stakeholder (Camilla Stoltenberg, Gun Peggy Knudsen, Isabelle Budin Ljøsne, FHI) expertise are also represented.

Proportion of female and male researchers in Lifebrain (end of 2017): 20/17.

Planned activities

Hiring of new staff will ensure that national legislation is adhered to with regard to gender and equal opportunities and gender biases of recruitment are made explicit as much as possible and are counteracted.

2.2. Gender in decision-making

Objective

Have female and young female researchers in key decision-making positions.

Current assessment

Women in decision-making role in the project:

- General Assembly (PI-s from each LB partner): 4 female PI-s/9 male PI-s
- Work package leaders: WP1, WP4, WP6 are led by female researchers, WP2, WP3, WP5, WP7 are led by male researchers.
- Advisory Board: Gaël Chételat leads the Advisory Board, Raquel Sánchez-Valle is an external advisor. The AB has one male member, Naftali Raz.

- Safety Board: Anne Marita Milde as an external advisor of the Board. The SB has two male members, Anders M. Fjell and Lars Nyberg.
- Executive Board: Kristine Walhovd acts as the leader of the board, as a coordinator
- Knowledge Management Committee: Simone Kühn (MPIB) is a member of the KMC, together with 4 male members.

Although women`s participation is quite balanced in Lifebrain at almost all levels, its clearly visible that most Principal Investigators are male researchers, therefore, in all Steering Groups based on the participation of PI-s, women are underrepresented (General Assembly, Executive Board). Most female researchers are quite young and are in a post-doc position. This is in line with the phenomenon of the academic sector in Europe, that the more higher we go in the academic ranking, the less female full professors we found. The gender balance in the academics is almost exlusively at the PhD or post-doc level. The bottle neck appears at getting higher level positions, like faculty positions/professorships for women. Various structural reasons are behind this gender bias, which Lifebrain alone as a project cannot compensate for. However, as we have identified a gender imbalance in decision-making, we can make various steps to counterbalance it. The following activities in the GEP aim for that.

2.3. Gender-equal working conditions

Objective

Provide gender-equal working conditions in the project

Current assessment and planned activities

As to the extent possible, the work in Lifebrain is organised in a way that supports equal participation of all researchers and we plan to continue with the following practices:

- The decision-making and the flow of information is transparent and accountable, all project documents are available on the Internet (OneDrive, slack, minutes of meetings, inputs are requested from all to committee decisions).
- Project activities and meetings are planned ahead, so that there is enough time to provide for child care, prepare project documents in advance in case of pregnancy etc.
- The length of project meetings (personal and online) is also kept relatively short to save time for participants. The meetings are scheduled to avoid national or school holidays.

2.4. Gender awareness raising and sensitivity workshops

Objective

Raise awareness on implicit gender biases in research.

Current assessment

Both female and male researchers may have implicit biases. Systematic awareness raising and capacity-building can contribute to change and overcome inbuilt gender stereotypes.

Planned activities

One gender workshop is planned to be implemented each project year, altogether 5 workshops during the project.

The workshops will target raising awareness on gender issues and making Lifebrainers sensitive to implicit gender bias both in terms of research management and research design and analysis.

The workshops will be co-organised with the Lifebrain gender team and will invite external speakers/experts to deepen our knowledge in the field.

Discussions at the workshop will be compiled into a workshop report and shared with decision-makers at various levels.

The first such workshop was organised 29th November, 2017. (See Annex for Agenda and Summary).

2.5. Gender-equal recruitment

Objective

To ensure open and impartial, gender-neutral recruitment procedures

Current assessment

Recruitment processes in Lifebrain aim to find the best candidate for each position, regardless of gender or ethnicity. The recruitment policy of Scandinavian Lifebrain partner universities generally encourages application of women to researcher positions, in accordance with their equal opportunities policy.

Planned activities

To continue with open and impartial recruitment procedures we:

- use mixed selection panels
- advertise open posts widely

- accommodate atypical career patterns

2.6. Mentoring of female researchers

Objective

To encourage young female researchers to continue their careers in science so that in the future they would be represented at a PI level in this particular field of research.

Current assessment

It might be challenging in a male-dominated academic environment for young females researchers to find mentors they can easily talk to and get advice from.

Planned activities

Development of young (female) talents in the Lifebrain team will happen through the following activities:

- support initiating new project/publication ideas, supervision of ideas
- discussions about long-term career planning
- providing help to write grant applications by sharing experience of successful grant preparations, including grant interviews
- establish an internal network of LB researchers with those highly interested in the gender topic in the consortium

One good example for a mentoring activity is the UiO LCBC Girl`s lunch organised by Kristine Walhovd, where female PhD students and post-docs meet and exchange experience on academic career challenges and possible pathways.

2.7. Monitor gender equity and equality in the project

Objective

To measure progress on gender equity and equality within Lifebrain

Planned activities

We will monitor gender activities in the project, and provide gender sensitive statistical data both regarding the management of the consortium and the research analysis. We plan to report on implicit and unconscious biases experienced in Lifebrain both in the progress reports and in a policy-paper for decision-makers (See 1.1.4).

3. Gender in the research

3.1. Introduction

Women and men have different sex and gender-related risks for developing certain diseases and health conditions and respond differently to treatment. Patterns of gene expression differ between men and women.

In line with the strategy of personalized medicine, sex is a variable of interest to account for in most of the analyses we might do in Lifebrain.

On average, 60 % of the participants in the LB cohorts are female. The sample size will allow testing of sex-specific effects with high statistical power and we will test whether sex improves the performance of stratified analyses and personalized models.

3.2. Gender in the research cycle

All along the research cycle we will consider implications for women and men, and on the relation between woman and men, as to the extent possible:

- when developing research concepts and theories
- when formulating research questions
- when collecting and analyzing data and using analytical tools
- when communicating research results

We will include gender aspects in the various phases of the research cycle as follows:

- Initiate papers that focus on sex/gender effects (See 2.3)
- Address/consider/correct for potential sex/gender effects when initiating a project: if relevant, and also depending on the initial research question and focus
- Participatory research and design: WP1 Stakeholder engagement activities are based on a participatory research design, which allow for channelling in diverse perceptions from society, such as women, minorities, disadvantaged people etc.
- Choose a gender sensitive research methodology: the big sample size in Lifebrain make it possible to have a bigger statistical power, so we will be able to analyse sex effects. However, this cannot be done in certain parts of research using imaging measures, because there samples are too small.
- Collect gender sensitive data: in the T2.3. online enrichment questionnaire special questions has been added on Masculinity and Femininity self-assessment and women health (See D2.3. to be submitted by the end of June, 2018).
- Sex/gender and age analysis will be conducted in order to understand the mechanisms behind development of health conditions and reduced well-being across the lifespan and to promote more personalised treatment and healthcare.

This challenge overlaps with other societal challenges that influence health and have been included in the T2.3. Lifebrain enrichment questionnaire and in analysis plans, such as socio-economic status, employment, educational factors, environment and lifestyle. Analyses per gender effectively halves the statistical power, which should be taken into account as well.

- Research dissemination: rethinking language and visual representations of the research results.

3.3. Implementation of Task 4.5. Distinguishing gender specific risk and protective factors

As accounted for in a dedicated WP4 task, T4.5. we see sex as an important moderator variable that needs to be thoroughly investigated.

Task description: Distinguishing general and gender-specific risk and protective factors. Lead: REGIONH; Participants: UOXF, VUMC, UzL (M 36-M48). Analyses to identify sex-specific differences in developmental trajectories of brain and behavioral measures and how these are related to life style factors, e.g. physical activity and substances use, and bodily functions, e.g. hormones and metabolic profiles. Moderating effects of genetic/ epigenetic factors and biological markers will be investigated. We will investigate for example, some characteristics, such as levels of cholesterol, physical activity, or substance use and metabolic profiles with regard to whether they are more beneficial or detrimental to brain and cognitive development for males than females across the life span. The analyses will identify possible sex specificity and or moderation of risk and protective factors by sex, pivotal to personalised medicine and targeted prevention and public health and social programs and policies across Europe.

Sex and gender effects are intertwined in nearly all aspects of Lifebrain. While men and women in many aspects are more alike than they are different, there are clear sex and gender differences in e.g. disease prevalence or age of disease onset.

In Lifebrain, we aim to identify sex (and gender related) differences in developmental trajectories of multimodal brain measures (e.g. cortical thickness, surface area, tissue microstructure, structural connectivity brain networks), behavioural (e.g. cognition, personality) and physical and mental health measures (depression, vascular disease) and how these are interrelated and influenced by e.g. life style and environmental factors (e.g. diet, physical activity, stressful life events and substance use) and bodily functions (e.g. sex hormones and metabolic profiles). Moderating effects of genetic (e.g. polygenic risk scores)/ epigenetic factors and biological markers will be investigated. Other variables of influence include e.g. socio-economic status, BMI, (body fat composition), national/cultural aspects (Gender Equality Index). The analyses aim to identify possible sex-specificity and/or moderation of risk and protective factors by sex.

We will investigate for example, characteristics such as levels of cholesterol, physical activity, or substance use and metabolic profiles with regard to whether they are more beneficial or detrimental to brain and cognitive development for males than females across the life span.

Elucidating sex and gender effects will inform public (health) strategies and regulations, the general public as well as (researchers, health care) professionals and private stakeholders.

4. Interaction with policy-makers on gender issues

Based on the 1.4. gender workshops, the consortium plans to publish a short policy paper towards the end of the project, to inform the EC on gender related challenges in research and propose some interventions at the EU level.

5. Conclusion

The GEP has been prepared and it will be monitored and reported upon all along the project.

6. References

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ANNEX

ANNEX 1 *"GENDER IN RESEARCH"* ONLINE WORKSHOP DRAFT AGENDA

ANNEX 2 "*GENDER IN RESEARCH"* ONLINE WORKSHOP MINUTES

ANNEX 1 *"GENDER IN RESEARCH"* ONLINE WORKSHOP DRAFT AGENDA

DATE:

Wednesday, 29th November, 2017, 15:30-17.30 CET

ONLINE MEETING PLACE:

Skype (username: Lifebrain Project Office)

INVITED PARTICIPANTS:

- Agneta Herlitz, Professor, Head of research group, Department of Clinical Neuroscience, Karolinska Institute, Sweden
- Sonja Kotz, Professor, Head of Section Neuropsychology, Maastrict University, Netherlands
- Danielle Posthuma, Professor, VU - Center for Neurogenomics and Cognitive Research & VUMC - Dept. Clinical Genetics, Head of Department Complex Trait Genetics, Netherlands
- Kathrine Skak Madsen, Senior researcher, Brain Maturation Group, REGIONH/Danish Research Centre for Magnetic Resonance, Denmark, Lifebrain
- William Baaré, Senior researcher, Brain Maturation Group, REGIONH/Danish Research Centre for Magnetic Resonance, Lifebrain
- Anne Inger Helmen Borge, Professor, Department of Psychology, University of Oslo/ Horizon 2020 Advisory Group on Gender
- Sana Suri, Post-doc researcher, Department of Psychiatry, University of Oxford, Lifebrain
- Kristine Walhovd, Professor, Head of Centre for Lifespan Changes in Brain and Cognition, University of Oslo
- Barbara B. Friedman, Administrative coordinator, University of Oslo, Lifebrain

MAIN OBJECTIVES:

- Identify and discuss
  (1) gender aspects in research

  (2) gender in research management/career

  (3) gender aspects in a European life span neuroimaging research setting

  (4) how to impact the gender agenda of the European Commission

DRAFT AGENDA

- Introduction of participants (10-15 minutes):
  - Professional background

    - Gender related research interests
- Short introduction on Lifebrain (10 minutes, Kristine B. Walhovd)
- Distinguishing gender specific risk and protective factors in Lifebrain (5-10 minutes William Baaré, See Annex)
- Discussions on:
    - Female research mobility
    - Female research authorship
    - Fallout of boys from schools
    - Gender bias in personalised medicine
    - Identify objectives and topics to discuss for next year for the offline gender meeting

WORKSHOP INPUTS TO LIFEBRAIN

Please note that the workshop results will be channeled and provide inputs to some Lifebrain tasks.

REFERENCES

ELSEVIER Gender in the Global Research Landscape Report
https://www.elsevier.com/research-intelligence/resource-library/gender-report

DG Research and Innovation Horizon2020 draft workshop report on implicit gender biases during evaluations: how to raise awareness and change attitudes?
http://ec.europa.eu/research/swafs/pdf/pub_gender_equality/report_on_implicit_gender_biases_during_evaluations.pdf

Personalised medicine and gender bias
https://qz.com/1023448/if-youre-not-a-white-male-artificial-intelligences-use-in-healthcare-could-be-dangerous/?linkId=43834449

Maney: Perils and pitfalls of reporting sex differences
http://dx.doi.org/10.1098/rstb.2015.0119

ANNEX 2 "*GENDER IN RESEARCH"* ONLINE WORKSHOP MINUTES

DATE:
Wednesday, 29th November, 2017, 15:30-17.30 CET

ONLINE MEETING PLACE:
Skype

PARTICIPANTS:

- Agneta Herlitz, Professor, Head of research group, Department of Clinical Neuroscience, Karolinska Institute, Sweden
- Sonja Kotz, Professor, Head of Section Neuropsychology, Maastrict University, Netherlands
- Kathrine Skak Madsen, Senior researcher, Brain Maturation Group, REGIONH/Danish Research Centre for Magnetic Resonance, Denmark, Lifebrain
- William Baaré, Senior researcher, Brain Maturation Group, REGIONH/Danish Research Centre for Magnetic Resonance, Lifebrain
- Anne Inger Helmen Borge, Professor, Department of Psychology, University of Oslo/ Horizon 2020 Advisory Group on Gender
- Sana Suri, Post-doc researcher, Department of Psychiatry, University of Oxford, Lifebrain
- Kristine Walhovd, Professor, Head of Centre for Lifespan Changes in Brain and Cognition, University of Oslo
- Barbara B. Friedman, Administrative coordinator, University of Oslo, Lifebrain

Objective of the workshop

The objective of the workshop is twofold:

- Influence policy-making, hopefully at an EU level
- Input to brain research on gender related risk and protective factors

Assessment

Talent retention

- *"Many female talents are lost on the way"* in the academic sector. The higher up we go in the positions, the fewer women we find in full professorship. Where and why do they disappear? We should focus on retaining talent equally between the sexes.

Implicit bias in hiring and research grant reviews

- Female researchers at certain age are definitely discriminated, gender-bias exists: evaluators may expect that maternity leave will kick in and do not risk providing a fund for a female candidate (discussion on research studies finding evidence of implicit bias at hiring stages).
- When discussing gender differences with respect to ERC research proposal evaluations, a female evaluator noted that female researchers, who defend their early stage ERC research proposals, appear to be more hesitant, uncertain or nervous. She also pointed out that female researchers, as compared to their male counterparts, seem to be more open to criticism as they often take a more defensive position, instead of standing up for their research ideas and choice of methods. These observations underscore the importance of interview training opportunities for young researchers (see later for the suggestions).
- At job interviews, the more the candidate talk, the more likely they are to get the job. However, males get more open-ended questions, while females more closed-end questions (yes/no), which would involve not being able to expand on the answers, leaving them to talk less. Whether this is the case at grant interviews is unknown.
- Journal editorial boards, grant panels are biased in favour of men and the panels are not representative of the population, only to the prevailing researcher population ("middle-aged white man" ruling the panels)

Female research mobility

- When female researchers get a family, responsibility for family care disproportionately skews towards women making travel abroad on a research fellowship difficult/expensive (day-care costs, health costs etc.). Furthermore, it requires extra sacrifice from the family: spouse has to leave career temporarily and men are not as expected to give up on their career. Academic career becomes impossible almost until kids reach the age of 10, when they are not so dependent on the parents anymore.
- In some of the research scholarships, such as ERC, "independent research career" is a criteria for getting research project funding, which requires research mobility. It's a bit provoking as there is something naïve about its reality.
- When it comes to childcare costs, it is not an eligible cost in a Horizon2020 project, such as Lifebrain

Involvement of male researchers/man

- Many male researchers are horrified by the fact of how female researchers are discriminated: they are shocked at the numbers. They themselves are often not aware/conscious about these biases, and many of them would like to help and contribute eliminating discrimination and gender bias. However, gender bias exists in all of us, both man and women are vulnerable to these biases (see the Yale study as an example on the same CV judged differently with a female/male name)

- Men are not present at meetings with the gender topics, neither at an EU level nor at national levels as experienced by the workshop participants – discussion of campaigns to increase male involvement in gender equality (e.g. UN's HeForShe campaign in UK universities)

Research on gender bias/gender as a science/feminist research

- More awareness is needed on the table to show how gender biases exists in the academic sector, and how it works through various mechanisms: number of female presenters at a conference, number of awards to young female researchers etc.
- Gender research should receive more attention, it is a science in itself
- The ultimate aim of the gender issue should be that it is not needed at all in the future
- Gender biases are not easily solved at the policy-level, changing gender biases at an individual level is perhaps where we can start
- Talking about gender differences/sex difference does not necessarily emphasise differences. It is also about valuing differences and how do we value them.

Positive discrimination/enforcement of gender equity

- Participants felt that time is ticking and changes do not take place without pressing for them
- Positive discrimination can definitely help counterbalance discrimination against women on a shorter-term, but evokes mixed feelings in those being discriminated in a positive manner. For e.g. those offered professorship based on the same qualities as man still need to defend themselves and constantly prove towards the world and their department/institute that they deserved the promotion, they are capable to lead etc.
- Female authors to be put on curricula: this might though fire back: authors should be selected, because they are the best in their field. However, course leaders could be more conscious about the gender of the authors they request students to read
- Successful female researchers could mentor other female researchers in their career development. This in itself could entail a bias, as those who have made it for e.g. to professorship face probably different kind of gender biases then those, who have not pursued a career up till that position.
- Stressing and enforcing the gender issue can be paradoxical: we are stressing a dimension we actually do not want to. In an ideal world, gender does not matter, and it should not matter either when deciding on who should get a position. Until we eliminate the problem, we have to focus on that.

Differences across countries

- Norwegian research policy is "pushing" researchers to go abroad and acquire research experience. The national health and childcare policy is quite generous: free health care, free day care for kids, parental leave is available for a 1 year. At the same

time financial support is only partly/or not at all provided to the researchers to move abroad with a family- Though it is still easier to put daycare costs on a Norwegian Research Council funded project than on an EU project.
- Denmark is lagging behind in terms of gender equality and equity among the Scandinavian countries.
- EU 13 are not so privileged as the Western-European countries/Scandinavia: there are almost no female project coordinators. In the Marie Curie programmes, there is funding for researcher's mobility, which then causes a brain drain in Eastern-Europe after the programme is over: at the Western-European universities more research resources become accessible. Experience from Poland: females were serving coffee, meanwhile men were presenting lectures.

Role of EU

- EU would need feedback from successful, (young) female researchers in drawing up the research future for female scientists: how that future should look like, what tools are needed to be introduced for promoting gender equity and equality? A Pan-European perspective and local variations are both important for the EU.
- EU has worked a lot on the "implicit bias report" to explore where and how biases manifest. EU has developed gender bias trainings for evaluators.
- EU external experts monitor ERC research grant panels from a gender perspective: but that feels intimidating from an evaluator point of view. Reflections on gender biases can happen in various research grant panels, but it depends a lot who is sitting in the panel, who is the chair and how much they are open to discuss these things. Evaluators cannot be forced to discuss gender bias and these discussions should not stop a normal dialogue and cooperation in the panel.

Some proposals/solutions for the challenges

<u>EU level</u>

- Make child care costs eligible in an EU research (not only certain training programs), so that research mobility becomes reality. For e.g. Provide the possibility of a sabbatical year/months for researchers with small children (up to the level of paying a hotel room for a shorter time to writing up research articles, childcare for that period etc.)
- Differentiate between the problems of the Western block and Eastern/Southern block, where more traditional gender roles are prevailing and economic situation of researchers is much more disadvantageous then in the Western-European countries
- To support proving gender bias with statistical data: journal compositions, grant panels, questions asked in panels etc.

- Have experience reports of successful female (and male) researchers across domains available, at a global level. Conduct research on role models: analyse career path, and factors which helped successful female researchers to go higher in their career path. It is subjective, but would be interesting to see the common grounds and make generalisations.
- Train evaluators, making them aware more of gender biases
- Anonymous/ungendered grant applications, without "gender bias" in the first round: this solution has a disadvantage, though: a research grant is about quality, novelty, impact, feasibility and trust, and is based on credibility/face of a researcher
- Preparing researchers to defend their research proposals
- Gender meetings should reach out to men, too, perhaps change their title in a way that they become more attractive and inclusive for men, too

National level

- More representative research evaluation committee: people of color, age, sex
- Make child care costs eligible in research grants
- Awareness raising campaigns on gender bias
- To support proving gender bias with statistical data: journal compositions, grant panels etc.
- Train evaluators, making them aware of gender biases, just before the evaluations
- Discuss gender bias issues already in schools, through various subjects. A possible approach: we should not be afraid to talk about differences. It is the way we talk about them that matters. Everybody has traditional male and female qualities. We should get rid of the male/female continuum at some point when talking about in principle "gender free" qualities such as caring, sensitivity, assertiveness, action taking. We are not defined by our sex or colour for that matter (…males also have identity issues based on cultural expectations). Foremost we are humans with individually different levels of need for certainty, variability (uncertainty), significance (egocentricity), and connection and love. The trick is to fulfil these needs in positive and constructive ways e.g. not fulfilling the need for significance and recognition by pulling others down (e.g. females, other ethnic groups) but by improving oneself and make a difference for/to others
- Transparency and predictability on various levels
- Train researchers to prepare for defending their research proposal
- Support system for more balanced parental care: Scandinavian countries as good examples, where fathers take around 101-12 weeks parental leave
- Norwegian Research Council as a good example, "extra attentive of gender bias":
    - awareness raising lecture on gender biases before evaluation
    - asking almost the same questions/in a very similar way from all participants

Institutional level

- Experienced, female researchers could mentor female phd students/post-docs and support to move forward in their academic ranking: good example at UiO LCBC Women`s lunch, where phd students and post-docs career development issues are discussed and advice are provided
- Having female role models
- Awareness raising campaigns on the gender biases
- Mentorship schemes for female researchers and researchers of color, helping minority student to go up the academic ladder
- Training evaluators, making them aware of gender biases

Individual level

- Learn to be aware and conscious of biases, both men and women would need to learn about it. Inner realisation of gender biases is necessary, a kind of "internal awakening".
- Focus on the similarities between genders. Have more man in parental care, taking paternity leave, getting involved at housework etc.
- Learn to value diversity
- Focus on personal development

Next steps

At the level of the Lifebrain project

- Implement some of these ideas at a project level
- Next workshop:
    - Have some interesting keynote speakers in the morning sessions talking on gender policy issues, intersectionality/diversity:
        - An idea: Londa Schiebinger-Director, EU/US Gendered Innovations in Science, Health & Medicine, Engineering, and Environment Project http://www.stanford.edu/dept/HPST/schiebinger.html
    - Identify topics for discussions for the next workshop
        - Topics proposed:
            - Female authorship
            - Fallout of boys from school
            - Gender bias in personalised medicine
            - Gender pay gap
            - Science closer to society-is it more attractive to female researchers?

- What Lifebrain could promote? What we could do in Lifebrain itself: training, teaching, exchanges of students/researchers between the labs, how to interact with policy-makers
    - Intersectionality, talking about race as well, women of color disproportionally represented

Interaction with policy-makers

- Anne Inger as a member of the EU Horizon2020 Gender advisory group: Use the assessment and the solutions proposed during the workshop in the EU discussions