INTERNATIONAL EVALUATION OF RESEARCH AND DOCTORAL TRAINING AT THE UNIVERSITY OF HELSINKI 2005–2010

RC-Specific Evaluation of DEPSY – Developmental Psychology Research Group

Seppo Saari & Antti Moilanen (Eds.)
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**Title:**

**Summary:**
Researcher Community (RC) was a new concept of the participating unit in the evaluation. Participation in the evaluation was voluntary and the RCs had to choose one of the five characteristic categories to participate.

Evaluation of the Researcher Community was based on the answers to the evaluation questions. In addition a list of publications and other activities were provided by the TUHAT system. The CWTS/Leiden University conducted analyses for 80 RCs and the Helsinki University Library for 66 RCs. Panelists, 49 and two special experts in five panels evaluated all the evaluation material as a whole and discussed the feedback for RC-specific reports in the panel meetings in Helsinki. The main part of this report is consisted of the feedback which is published as such in the report.

Chapters in the report:
1. Background for the evaluation
2. Evaluation feedback for the Researcher Community
3. List of publications
4. List of activities
5. Bibliometric analyses

The level of the RCs’ success can be concluded from the written feedback together with the numeric evaluation of four evaluation questions and the category fitness. More conclusions of the success can be drawn based on the University-level report.

**RC-specific information:**

<table>
<thead>
<tr>
<th>Main scientific field of research:</th>
<th>Social Sciences</th>
</tr>
</thead>
<tbody>
<tr>
<td>Participation category:</td>
<td>1. Research of the participating community represents the international cutting edge in its field</td>
</tr>
</tbody>
</table>

**RC’s responsible person:**
Räikännen, Katri

**RC-specific keywords:**
Pre- and postnatal programming, stress, early life stress (ELS), HPA, prematurity, life-course, psychological development, mental health, sleep

**Keywords:**
Research Evaluation, Meta-evaluation, Doctoral Training, Bibliometric Analyses, Researcher Community

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Foreword

The evaluation of research and doctoral training is being carried out in the years 2010–2012 and will end in 2012. The steering group appointed by the Rector in January 2010 set the conditions for participating in the evaluation and prepared the Terms of Reference to present the evaluation procedure and criteria. The publications and other scientific activities included in the evaluation covered the years 2005–2010.

The participating unit in the evaluation was defined as a Researcher Community (RC). To obtain a critical mass with university-level impact, the number of members was set to range from 20 to 120. The RCs were required to contain researchers in all stages of their research career, from doctoral students to principal investigators (PIs). All in all, 136 Researcher Communities participated in this voluntary evaluation, 5857 persons in total, of whom 1131 were principal investigators. PIs were allowed to participate in two communities in certain cases, and 72 of them used this opportunity and participated in two RCs.

This evaluation enabled researchers to define RCs from the “bottom up” and across disciplines. The aim of the evaluation was not to assess individual performance but a community with shared aims and researcher-training activities. The RCs were able to choose among five different categories that characterised the status and main aims of their research. The steering group considered the process of applying to participate in the evaluation to be important, which lead to the establishment of these categories. In addition, providing a service for the RCs to enable them to benchmark their research at the global level was a main goal of the evaluation.

The data for the evaluation consisted of the RCs’ answers to evaluation questions on supplied e-forms and a compilation extracted from the TUHAT – Research Information System (RIS) on 12 April 2011. The compilation covered scientific and other publications as well as certain areas of scientific activities. During the process, the RCs were asked to check the list of publications and other scientific activities and make corrections if needed. These TUHAT compilations are public and available on the evaluation project sites of each RC in the TUHAT-RIS.

In addition to the e-form and TUHAT compilation, University of Leiden (CWTS) carried out bibliometric analyses from the articles included in the Web of Science (WoS). This was done on University and RC levels. In cases where the publication forums of the RC were clearly not represented by the WoS data, the Library of the University of Helsinki conducted a separate analysis of the publications. This was done for 66 RCs representing the humanities and social sciences.

The evaluation office also carried out an enquiry targeted to the supervisors and PhD candidates about the organisation of doctoral studies at the University of Helsinki. This and other documents describing the University and the Finnish higher education system were provided to the panellists.

The panel feedback for each RC is unique and presented as an entity. The first collective evaluation reports available for the whole panel were prepared in July–August 2011. The reports were accessible to all panel members via the electronic evaluation platform in August. Scoring from 1 to 5 was used to complement written feedback in association with evaluation questions 1–4 (scientific focus and quality, doctoral training, societal impact, cooperation) and in addition to the category evaluating the fitness for participation in the evaluation. Panellists used the international level as a point of comparison in the evaluation. Scoring was not expected to go along with a preset deviation.

Each of the draft reports were discussed and dealt with by the panel in meetings in Helsinki (from 11 September to 13 September or from 18 September to 20 September 2011). In these meetings the panels also examined the deviations among the scores and finalised the draft reports together.

The current RC-specific report deals shortly with the background of the evaluation and the terms of participation. The main evaluation feedback is provided in the evaluation report, organised according to the evaluation questions. The original material provided by the RCs for the panellists has been attached to these documents.
On behalf of the evaluation steering group and office, I sincerely wish to thank you warmly for your participation in this evaluation. The effort you made in submitting the data to TUHAT-RIS is gratefully acknowledged by the University. We wish that you find this panel feedback useful in many ways. The bibliometric profiles may open a new view on your publication forums and provide a perspective for discussion on your choice of forums. We especially hope that this evaluation report will help you in setting the future goals of your research.

Johanna Björkroth
Vice-Rector
Chair of the Steering Group of the Evaluation

Steering Group of the evaluation
Steering group, nominated by the Rector of the University, was responsible for the planning of the evaluation and its implementation having altogether 22 meetings between February 2010 and March 2012.

Chair
Vice-Rector, professor Johanna Björkroth

Vice-Chair
Professor Marja Airaksinen
Chief Information Specialist, Dr Maria Forsman
Professor Arto Mustajoki
University Lecturer, Dr Kirsi Pyhältö
Director of Strategic Planning and Development, Dr Ossi Tuomi
Doctoral candidate, MSocSc Jussi Vauhkonen
Panel members

CHAIR
Professor Hebe Vessuri
Social anthropology
Venezuelan Institute of Scientific Research, Venezuela

VICE-CHAIR
Professor Christine Helm
Psychology, neurobiology of early-life stress, depression, anxiety, functional somatic disorders
Charité University Medicine Berlin, Germany

Professor Allen Ketcham
Ethics and social philosophy, applied Social philosophy, ethics of business
Texas A&M University – Kingsville, USA

Professor Erno Lehtinen
Education, educational reform
University of Turku, Finland

Professor Enzo Mingione
Urban sociology
University of Milan - Bicocca, Italy

Professor Giovanna Procacci
Political sociology, transformation of citizenship, social rights, social exclusion, immigration policy
University of Milan, Italy

Professor Inger Johanne Sand
Law, public law, legal theory
University of Oslo, Norway

Professor Timo Teräsvirta
Time series econometrics
Aarhus University, Denmark

Professor Göran Therborn
General sociology
University of Cambridge, Great Britain

Professor Liisa Uusitalo
Consumer behaviour (economic & social theory), marketing and communication research
Aalto University, School of Economics, Finland

The panel, independently, evaluated all the submitted material and was responsible for the feedback of the RC-specific reports. The panel members were asked to confirm whether they had any conflict of interests with the RCs. If this was the case, the panel members disqualified themselves in discussion and report writing.

Added expertise to the evaluation was contributed by two members from the Panel of Humanities.

Experts from the Panel of Humanities
Professor Erhard Hinrichs
Professor Pauline von Bonsdorff
EVALUATION OFFICE
Dr Seppo Saari, Doc., Senior Adviser in Evaluation, was responsible for the entire evaluation, its planning and implementation and acted as an Editor-in-chief of the reports.

Dr Eeva Sievi, Doc., Adviser, was responsible for the registration and evaluation material compilations for the panellists. She worked in the evaluation office from August 2010 to July 2011.

MSocSc Paula Ranne, Planning Officer, was responsible for organising the panel meetings and all the other practical issues like agreements and fees and editing a part the RC-specific reports. She worked in the evaluation office from March 2011 to January 2012.

Mr Antti Mollanen, Project Secretary, was responsible for editing the reports. He worked in the evaluation office from January 2012 to April 2012.

TUHAT OFFICE
Provision of the publication and other scientific activity data
Mrs Alja Kaltera, Project Manager of TUHAT-RIS served the project ex officio providing the evaluation project with the updated information from TUHAT-RIS. The TUHAT office assisted in mapping the publications with CWTS/University of Leiden.

MA Liisa Ekebom, Assisting Officer, served in TUHAT-RIS updating the publications for the evaluation. She also assisted the UH/Library analyses.

BA Liisa Jäppinen, Assisting Officer, served in TUHAT-RIS updating the publications for the evaluation.

HELSINKI UNIVERSITY LIBRARY
Provision of the publication analyses
Dr Maria Forsman, Chief Information Specialist in the Helsinki University Library, managed with her 10 colleagues the bibliometric analyses in humanities, social sciences and in other fields of sciences where CWTS analyses were not applicable.
**Acronyms and abbreviations applied in the report**

**External competitive funding**
- AF – Academy of Finland
- TEKES - Finnish Funding Agency for Technology and Innovation
- EU - European Union
- ERC - European Research Council
- International and national foundations
- FP7/6 etc. /Framework Programmes/Funding of European Commission

**Evaluation marks**
- Outstanding (5)
- Excellent  (4)
- Very Good  (3)
- Good  (2)
- Sufficient  (1)

**Abbreviations of Bibliometric Indicators**
- P - Number of publications
- TCS – Total number of citations
- MCS - Number of citations per publication, excluding self-citations
- PNC - Percentage of uncited publications
- MNCS - Field-normalized number of citations per publication
- MNJS - Field-normalized average journal impact
- THCP10 - Field-normalized proportion highly cited publications (top 10%)
- INT_COV - Internal coverage, the average amount of references covered by the WoS
- WoS – Thomson Reuters Web of Science Databases

**Participation category**
- Category 1. The research of the participating community represents the international cutting edge in its field.
- Category 2. The research of the participating community is of high quality, but the community in its present composition has yet to achieve strong international recognition or a clear break-through.
- Category 3. The research of the participating community is distinct from mainstream research, and the special features of the research tradition in the field must be considered in the evaluation.
- Category 4. The research of the participating community represents an innovative opening.
- Category 5. The research of the participating community has a highly significant societal impact.

**Research focus areas of the University of Helsinki**
- Focus area 1: The basic structure, materials and natural resources of the physical world
- Focus area 2: The basic structure of life
- Focus area 3: The changing environment – clean water
- Focus area 4: The thinking and learning human being
- Focus area 5: Welfare and safety
- Focus area 6: Clinical research
- Focus area 7: Precise reasoning
- Focus area 8: Language and culture
- Focus area 9: Social justice
- Focus area 10: Globalisation and social change
1 Introduction to the Evaluation

1.1 RC-specific evaluation reports

The participants in the evaluation of research and doctoral training were Researcher Communities (hereafter referred to as the RC). The RC refers to the group of researchers who registered together in the evaluation of their research and doctoral training. Preconditions in forming RCs were stated in the Guidelines for the Participating Researcher Communities. The RCs defined themselves whether their compositions should be considered well-established or new.

It is essential to emphasise that the evaluation combines both meta-evaluation1 and traditional research assessment exercise and its focus is both on the research outcomes and procedures associated with research and doctoral training. The approach to the evaluation is enhancement-led where self-evaluation constituted the main information. The answers to the evaluation questions formed together with the information of publications and other scientific activities an entity that was to be reviewed as a whole.

The present evaluation recognizes and justifies the diversity of research practices and publication traditions. Traditional Research Assessment Exercises do not necessarily value high quality research with low volumes or research distinct from mainstream research. It is challenging to expose the diversity of research to fair comparison. To understand the essence of different research practices and to do justice to their diversity was one of the main challenges of the present evaluation method. Understanding the divergent starting points of the RCs demanded sensitivity from the evaluators.

1.2 Aims and objectives in the evaluation

The aims of the evaluation are as follows:

- to improve the level of research and doctoral training at the University of Helsinki and to raise their international profile in accordance with the University’s strategic policies. The improvement of doctoral training should be compared to the University’s policy.2
- to enhance the research conducted at the University by taking into account the diversity, originality, multidisciplinary nature, success and field-specificity,
- to recognize the conditions and prerequisites under which excellent, original and high-impact research is carried out,
- to offer the academic community the opportunity to receive topical and versatile international peer feedback,
- to better recognize the University’s research potential.
- to exploit the University’s TUHAT research information system to enable transparency of publishing activities and in the production of reliable, comparable data.

1.3 Evaluation method

The evaluation can be considered as an enhancement-led evaluation. Instead of ranking, the main aim is to provide useful information for the enhancement of research and doctoral training of the participating RCs. The comparison should take into account each field of science and acknowledge their special character.

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1 The panellists did not read research reports or abstracts but instead, they evaluated answers to the evaluation questions, tables and compilations of publications, other scientific activities, bibliometrics or comparable analyses.

2 Policies on doctoral degrees and other postgraduate degrees at the University of Helsinki.
The comparison produced information about the present status and factors that have lead to success. Also challenges in the operations and outcomes were recognized.

The evaluation approach has been designed to recognize better the significance and specific nature of researcher communities and research areas in the multidisciplinary top-level university. Furthermore, one of the aims of the evaluation is to bring to light those evaluation aspects that differ from the prevalent ones. Thus the views of various fields of research can be described and research arising from various starting points understood better. The doctoral training is integrated into the evaluation as a natural component related to research. Operational processes of doctoral training are being examined in the evaluation.

**Five stages of the evaluation method were:**
1. Registration – Stage 1
2. Self-evaluation – Stage 2
3. TUHAT\(^3\) compilations on publications and other scientific activities\(^4\)
4. External evaluation
5. Public reporting

### 1.4 Implementation of the external evaluation

**Five Evaluation Panels**
Five evaluation panels consisted of independent, renowned and highly respected experts. The main domains of the panels are:
- 1. biological, agricultural and veterinary sciences
- 2. medicine, biomedicine and health sciences
- 3. natural sciences
- 4. humanities
- 5. social sciences

The University invited 10 renowned scientists to act as chairs or vice-chairs of the five panels based on the suggestions of faculties and independent institutes. Besides leading the work of the panel, an additional role of the chairs was to discuss with other panel chairs in order to adopt a broadly similar approach. The panel chairs and vice-chairs had a pre-meeting on 27 May 2011 in Amsterdam.

The panel compositions were nominated by the Rector of the University 27 April 2011. The participating RCs suggested the panel members. The total number of panel members was 50. The reason for a smaller number of panellists as compared to the previous evaluations was the character of the evaluation as a meta-evaluation. The panellists did not read research reports or abstracts but instead, they evaluated answers to the evaluation questions, tables and compilations of publications, other scientific activities, bibliometrics and comparable analyses.

The panel meetings were held in Helsinki:
- On 11–13 September 2011: (1) biological, agricultural and veterinary sciences, (2) medicine, biomedicine and health sciences and (3) natural sciences.
- On 18–20 September 2011: (4) humanities and (5) social sciences.

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3 TUHAT (acronym) of Research Information System (RIS) of the University of Helsinki

4 Supervision of thesis, prizes and awards, editorial work and peer reviews, participation in committees, boards and networks and public appearances.
1.5 Evaluation material

The main material in the evaluation was the RCs’ self-evaluations that were qualitative in character and allowed the RCs to choose what was important to mention or emphasise and what was left unmentioned.

The present evaluation is exceptional at least in the Finnish context because it is based on both the evaluation documentation (self-evaluation questions, publications and other scientific activities) and the bibliometric reports. All documents were delivered to the panellists for examination.

Traditional bibliometrics can be reasonably done mainly in medicine, biosciences and natural sciences when using the Web of Science database, for example. Bibliometrics, provided by CWTS/The Centre for Science and Technology Studies, University of Leiden, cover only the publications that include WoS identification in the TUHAT-RIS.

Traditional bibliometrics are seldom relevant in humanities and social sciences because the international comparable databases do not store every type of high quality research publications, such as books and monographs and scientific journals in other languages than English. The Helsinki University Library has done analysis to the RCs, if their publications were not well represented in the Web of Science databases (RCs should have at least 50 publications and internal coverage of publications more than 40%) – it meant 58 RCs. The bibliometric material for the evaluation panels was available in June 2011. The RC-specific bibliometric reports are attached at the end of each report.

The panels were provided with the evaluation material and all other necessary background information, such as the basic information about the University of Helsinki and the Finnish higher education system.

Evaluation material

1. Registration documents of the RCs for the background information
2. Self evaluation material – answers to the evaluation questions
3. Publications and other scientific activities based on the TUHAT RIS:
   3.1. statistics of publications
   3.2. list of publications
   3.3. statistics of other scientific activities
   3.4. list of other scientific activities
4. Bibliometrics and comparable analyses:
   4.1. Analyses of publications based on the verification of TUHAT-RIS publications with the Web of Science publications (CWTS/University of Leiden)
   4.2. Publication statistics analysed by the Helsinki University Library - mainly for humanities and social sciences
5. University level survey on doctoral training (August 2011)
6. University level analysis on publications 2005–2010 (August 2011) provided by CWTS/University of Leiden

Background material

University of Helsinki
- Basic information about the University of the Helsinki
- The structure of doctoral training at the University of Helsinki
- Previous evaluations of research at the University of Helsinki – links to the reports: 1998 and 2005

The Finnish Universities/Research Institutes
- Finnish University system
- Evaluation of the Finnish National Innovation System
- The State and Quality of Scientific Research in Finland, Publication of the Academy of Finland 9/09.

The evaluation panels were provided also with other relevant material on request before the meetings in Helsinki.
1.6 Evaluation questions and material

The participating RCs answered the following evaluation questions which are presented according to the evaluation form. In addition, TUHAT RIS was used to provide the additional material as explained. For giving the feedback to the RCs, the panellists received the evaluation feedback form constructed in line with the evaluation questions:

1. Focus and quality of the RC’s research
   - Description of
     - the RC’s research focus.
     - the quality of the RC’s research (incl. key research questions and results)
     - the scientific significance of the RC’s research in the research field(s)
   - Identification of the ways to strengthen the focus and improve the quality of the RC’s research

The additional material: TUHAT compilation of the RC’s publications, analysis of the RC’s publications data (provided by University of Leiden and the Helsinki University Library)
A written feedback from the aspects of: scientific quality, scientific significance, societal impact, innovativeness
   - Strengths
   - Areas of development
   - Other remarks
   - Recommendations

Numeric evaluation: OUTSTANDING (5), EXCELLENT (4), VERY GOOD (3), GOOD (2), SUFFICIENT (1)

2. Practises and quality of doctoral training
   - Organising of the doctoral training in the RC. Description of the RC’s principles for:
     - recruitment and selection of doctoral candidates
     - supervision of doctoral candidates
     - collaboration with faculties, departments/institutes, and potential graduate schools/doctoral programmes
     - good practises and quality assurance in doctoral training
   - Identification of the ways to strengthen the societal impact of the RC’s research and doctoral training, and the actions planned for their development.

The additional material: TUHAT compilation of the RC’s other scientific activities/supervision of doctoral dissertations
A written feedback from the aspects of: processes and good practices related to leadership and management
   - Strengths
   - Areas of development
   - Other remarks
   - Recommendations

Numeric evaluation: OUTSTANDING (5), EXCELLENT (4), VERY GOOD (3), GOOD (2), SUFFICIENT (1)

3. The societal impact of research and doctoral training
   - Description on how the RC interacts with and contributes to the society (collaboration with public, private and/or 3rd sector).
   - Identification of the ways to strengthen the societal impact of the RC’s research and doctoral training.

The additional material: TUHAT compilation of the RC’s other scientific activities.
A written feedback from the aspects of: societal impact, national and international collaboration, innovativeness
   - Strengths
   - Areas of development
   - Other remarks
   - Recommendations

Numeric evaluation: OUTSTANDING (5), EXCELLENT (4), VERY GOOD (3), GOOD (2), SUFFICIENT (1)
4. **International and national (incl. intersectoral) research collaboration and researcher mobility**
   - Description of
     - the RC’s research collaborations and joint doctoral training activities
     - how the RC has promoted researcher mobility
   - Identification of the RC’s strengths and challenges related to research collaboration and researcher mobility, and the actions planned for their development.

A written feedback from the aspects of: scientific quality, national and international collaboration
   - Strengths
   - Areas of development
   - Other remarks
   - Recommendations

Numeric evaluation: OUTSTANDING (5), EXCELLENT (4), VERY GOOD (3), GOOD (2), SUFFICIENT (1)

5. **Operational conditions**
   - Description of the operational conditions in the RC’s research environment (e.g. research infrastructure, balance between research and teaching duties).
   - Identification of the RC’s strengths and challenges related to operational conditions, and the actions planned for their development.

A written feedback from the aspects of: processes and good practices related to leadership and management
   - Strengths
   - Areas of development
   - Other remarks
   - Recommendations

6. **Leadership and management in the researcher community**
   - Description of
     - the execution and processes of leadership in the RC
     - how the management-related responsibilities and roles are distributed in the RC
     - how the leadership- and management-related processes support
       - high quality research
       - collaboration between principal investigators and other researchers in the RC
       - the RC’s research focus
       - strengthening of the RC’s know-how
   - Identification of the RC’s strengths and challenges related to leadership and management, and the actions planned for developing the processes

7. **External competitive funding of the RC**
   - The RCs were asked to provide information of such external competitive funding, where:
     - the funding decisions have been made during 1.1.2005-31.12.2010, and
     - the administrator of the funding is/has been the University of Helsinki
   - On the e-form the RCs were asked to provide:
     1) The relevant funding source(s) from a given list (Academy of Finland/Research Council, TEKES/The Finnish Funding Agency for Technology and Innovation, EU, ERC, foundations, other national funding organisations, other international funding organisations), and
     2) The total sum of funding which the organisation in question had decided to allocate to the RCs members during 1.1.2005–31.12.2010.

Competitive funding reported in the text is also to be considered when evaluating this point.

A written feedback from the aspects of: scientific quality, scientific significance, societal impact, innovativeness, future significance
   - Strengths
   - Areas of development
   - Other remarks
   - Recommendations

8. **The RC’s strategic action plan for 2011–2013**
   - RC’s description of their future perspectives in relation to research and doctoral training.

A written feedback from the aspects of: scientific quality, scientific significance, societal impact, processes and good practices related to leadership and management, national and international collaboration, innovativeness, future significance
   - Strengths
   - Areas of development
9. Evaluation of the category of the RC in the context of entity of the evaluation material (1-8)

The RC's fitness to the chosen participation category
A written feedback evaluating the RC's fitness to the chosen participation category

- Strengths
- Areas of development
- Other remarks
- Recommendations

Numeric evaluation: OUTSTANDING (5), EXCELLENT (4), VERY GOOD (3), GOOD (2), SUFFICIENT (1)

10. Short description of how the RC members contributed the compilation of the stage 2 material
Comments on the compilation of evaluation material

11. How the UH's focus areas are presented in the RC's research?
Comments if applicable

12. RC-specific main recommendations based on the previous questions 1–11

13. RC-specific conclusions

1.7 Evaluation criteria

The panellists were expected to give evaluative and analytical feedback to each evaluation question according to their aspects in order to describe and justify the quality of the submitted material. In addition, the evaluation feedback was asked to be pointed out the level of the performance according to the following classifications:

- outstanding (5)
- excellent (4)
- very good (3)
- good (2)
- sufficient (1)

Evaluation according to the criteria was to be made with thorough consideration of the entire evaluation material of the RC in question. Finally, in questions 1-4 and 9, the panellists were expected to classify their written feedback into one of the provided levels (the levels included respective descriptions, 'criteria'). Some panels used decimals in marks. The descriptive level was interpreted according to the integers and not rounding up the decimals by the editors.

Description of criteria levels

Question 1 – FOCUS AND QUALITY OF THE RC’S RESEARCH

Classification: Criteria (level of procedures and results)

Outstanding quality of procedures and results (5)
Outstandingly strong research, also from international perspective. Attracts great international interest with a wide impact, including publications in leading journals and/or monographs published by leading international publishing houses. The research has world leading qualities. The research focus, key research questions scientific significance, societal impact and innovativeness are of outstanding quality.

In cases where the research is of a national character and, in the judgement of the evaluators, should remain so, the concepts of “international attention” or “international impact” etc. in the grading criteria above may be replaced by “international comparability”.

\[ \text{Image of a document page} \]
Operations and procedures are of outstanding quality, transparent and shared in the community. The improvement of research and other efforts are documented and operations and practices are in alignment with the documentation. The ambition to develop the community together is of outstanding quality.

**Excellent quality of procedures and results (4)**

Research of excellent quality. Typically published with great impact, also internationally. Without doubt, the research has a leading position in its field in Finland.

Operations and procedures are of excellent quality, transparent and shared in the community. The improvement of research and other efforts are documented and operations and practices are to large extent in alignment with the documentation. The ambition to develop the community together is of excellent quality.

**Very good quality of procedures and results (3)**

The research is of such very good quality that it attracts wide national and international attention.

Operations and procedures are of very good quality, transparent and shared in the community. The improvement of research and other efforts are documented and operations and practices are to large extent in alignment with the documentation. The ambition to develop the community together is of very good quality.

**Good quality of procedures and results (2)**

Good research attracting mainly national attention but possessing international potential, extraordinarily high relevance may motivate good research.

Operations and procedures are of good quality, shared occasionally in the community. The improvement of research and other efforts are occasionally documented and operations and practices are to large extent in alignment with the documentation. The ambition to develop the community together is of good quality.

**Sufficient quality of procedures and results (1)**

In some cases the research is insufficient and reports do not gain wide circulation or do not have national or international attention. Research activities should be revised.

Operations and procedures are of sufficient quality, shared occasionally in the community. The improvement of research and other efforts are occasionally documented and operations and practices are to some extent in alignment with the documentation. The ambition to develop the community together is of sufficient quality.

**Question 2 – DOCTORAL TRAINING**

**Question 3 – SOCIETAL IMPACT**

**Question 4 – COLLABORATION**

**Classification: Criteria (level of procedures and results)**

**Outstanding quality of procedures and results (5)**

Procedures are of outstanding quality, transparent and shared in the community. The practices and quality of doctoral training/societal impact/international and national collaboration/leadership and management are documented and operations and practices are in alignment with the documentation. The ambition to develop the community together is of outstanding quality. The procedures and results are regularly evaluated and the feedback has an effect on the planning.

**Excellent quality of procedures and results (4)**

Procedures are of excellent quality, transparent and shared in the community. The practices and quality of doctoral training/societal impact/international and national collaboration/leadership and management are documented and operations and practices are to large extent in alignment with the documentation. The ambition to develop the community together is of excellent quality. The procedures and outcomes are evaluated and the feedback has an effect on the planning.

**Very good quality of procedures and results (3)**

Procedures are of very good quality, transparent and shared in the community. The practices and quality of doctoral training/societal impact/international and national collaboration/leadership and
management are documented and operations and practices are to large extent in alignment with the
documentation. The ambition to develop the community together is of very good quality.

**Good quality of procedures and results (2)**

Procedures are of good quality, shared occasionally in the community. The practices and quality of
doctoral training/societal impact/international and national collaboration/leadership and
management are documented and operations and practices are to large extent in alignment with the
documentation. The ambition to develop the community together is of good quality.

**Sufficient quality of procedures and results (1)**

Procedures are of sufficient quality, transparent and shared in the community. The practices and
quality of doctoral training/societal impact/international and national collaboration/leadership and
management are occasionally documented and operations and practices are to some extent in
alignment with the documentation. The ambition to develop the community together is of sufficient
quality.

**Question 9 – CATEGORY**

Participation category – fitness for the category chosen

The choice and justification for the chosen category below should be reflected in the RC’s responses to the
evaluation questions 1–8.

1. *The research of the participating community represents the international cutting edge in its field.*
2. *The research of the participating community is of high quality, but the community in its present
   composition has yet to achieve strong international recognition or a clear break-through.*
3. *The research of the participating community is distinct from mainstream research, and the special
   features of the research tradition in the field must be considered in the evaluation.* The research is
   of high quality and has great significance and impact in its field. However, the generally used
   research evaluation methods do not necessarily shed sufficient light on the merits of the
   research.
4. *The research of the participating community represents an innovative opening.* A new opening can
   be an innovative combination of research fields, or it can be proven to have a special social,
   national or international demand or other significance. Even if the researcher community in its
   present composition has yet to obtain proof of international success, its members can produce
   convincing evidence of the high level of their previous research.
5. *The research of the participating community has a highly significant societal impact.* The
   participating researcher community is able to justify the high social significance of its research.
   The research may relate to national legislation, media visibility or participation in social debate,
   or other activities promoting social development and human welfare. In addition to having
   societal impact, the research must be of a high standard.

**An example of outstanding fitness for category choice (5)**

The RC’s representation and argumentation for the chosen category were convincing. The RC recognized
its real capacity and apparent outcomes in a wider context to the research communities. The specific
character of the RC was well-recognized and well stated in the responses. The RC fitted optimally for the
category.

- Outstanding (5)
- Excellent (4)
- Very good (3)
- Good (2)
- Sufficient (1)

The above-mentioned definition of outstanding was only an example in order to assist the panellists in
the positioning of the classification. There was no exact definition for the category fitness.

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5 The panels discussed the category fitness and made the final conclusions of the interpretation of it.
1.8 Timetable of the evaluation

The main timetable of the evaluation:

1. Registration November 2010
3. External peer review May–September 2011
4. Published reports March–April 2012
   - University level public report
   - RC specific reports

The entire evaluation was implemented during the university’s strategy period 2010–2012. The preliminary results were available for the planning of the following strategy period in late autumn 2011. The evaluation reports will be published in March/April 2012. More detailed time schedule is published in the University report.

1.9 Evaluation feedback – consensus of the entire panel

The panellists evaluated all the RC-specific material before the meetings in Helsinki and mailed the draft reports to the evaluation office. The latest interim versions were on-line available to all the panellists on the Wiki-sites. In September 2011, in Helsinki the panels discussed the material, revised the first draft reports and decided the final numeric evaluation. After the meetings in Helsinki, the panels continued working and finalised the reports before the end of November 2011. The final RC-specific reports are the consensus of the entire panel.

The evaluation reports were written by the panels independently. During the editing process, the evaluation office requested some clarifications from the panels when necessary. The tone and style in the reports were not harmonized in the editing process. All the reports follow the original texts written by the panels as far as it was possible.

The original evaluation material of the RCs, provided for the panellists is attached at the end of the report. It is essential to notice that the exported lists of publications and other scientific activities depend how the data was stored in the TUHAT-RIS by the RCs.
2 Evaluation feedback

2.1 Focus and quality of the RC’s research

- Description of
  - the RC’s research focus
  - the quality of the RC’s research (incl. key research questions and results)
  - the scientific significance of the RC’s research in the research field(s)
- Identification of the ways to strengthen the focus and improve the quality of the RC’s research

ASPECTS: Scientific quality, scientific significance, societal impact, innovativeness

DEPSY is a multidisciplinary RC that uses a multi-methodological approach to integrate diverse levels of investigation in order to study early developmental ‘programming’ of health and disease. The RC’s research is characterized by outstanding scientific quality and outstanding scientific significance. Specifically, the RC’s research is focused on highly innovative and cutting-edge hypotheses that integrate genetic, epigenetic and developmental factors with social experience to predict biological and behavioral phenotypes over the course of development which have vulnerability versus resilience to specific diseases or adverse health outcomes. The research not only elucidates complex mechanisms of disease but - at the same time - identifies targets for prevention and/or intervention. To accomplish this complex research program, the RC comprises and outstanding compilation of PI’s and external collaborators from various diverse fields. The RC also can accomplish a highly prolific and diverse research program by having the unique opportunity to use existing Finnish population cohorts which enable a very efficient design and high throughput of highest quality research studies with prospective designs. Because the central hypotheses of these studies are focused around socially and sociologically relevant topics (e.g., child abuse, prematurity, prenatal stressors), the results of the studies have substantial societal impact as well as societal visibility. The RC is mainly characterized by these strengths.

Areas of development may include an expansion of methods used to also include the neural systems level beyond endocrine, metabolic, sleep parameters that are currently the main outcome measures. In other words, the RC should seek collaborators to include brain imaging techniques. Epigenetic is a field that should be more exploited in these RC’s research focus.

A recommendation concerns to also integrate the multitude of original research reports in more review papers to derive an overall model/theory or future research directions from these single studies.

Numeric evaluation: 5 (Outstanding)

2.2 Practises and quality of doctoral training

- Organising of the doctoral training in the RC. Description of the RC’s principles for:
  - recruitment and selection of doctoral candidates
  - supervision of doctoral candidates
  - collaboration with faculties, departments/institutes, and potential graduate schools/doctoral programmes
  - good practises and quality assurance in doctoral training
  - assuring of good career perspectives for the doctoral candidates/fresh doctorates
- Identification of the RC’s strengths and challenges related to the practises and quality of doctoral training, and the actions planned for their development.
- Additional material: TUHAT compilation of the RC’s other scientific activities/supervision of doctoral dissertations

ASPECTS: Processes and good practices related to leadership and management
The doctoral training seems to be a central concern of this RC. 2 of the PI's are actually in leading roles in the National Doctoral Programme of Finland (with Prof Räikkönen being the director of this program). Several doctoral students are hence enrolled and funded through in this national program. The RC over the past 5 years had a substantial number of doctoral students; however, the precise number of PhD's completed in the evaluation period remains unspecified. Each member of the RC seems to have supervised several students. The process of obtaining a doctoral degree follows the national guidelines.

Strengths of the doctoral training of the RC include:

1. Doctoral students have regular meetings with immediate supervisors but also with a larger collaborative network at UH as well as with international collaborators. This gives the doctoral students the unique opportunity to develop their ideas in interaction with a wide variety of other scientists. There is substantial cross-talk between different faculties and institutes as the studies are by nature multidisciplinary. This enables the training of scientific offspring with multi-methodological skills and a broader scope of understanding medical and psychiatric illness.
2. There is funding in terms of salaries for doctoral students.
3. There is funding to visit national and international conferences for doctoral students and doctoral students compete for this funding inasmuch as funding is linked to actually present a talk or poster at a conference. Hence, doctoral students have early on opportunities to become familiar with scientific presentations and become known in their field.
4. There seems to be an emphasis that doctoral students have first authorships (i.e., 3 per thesis).
5. An international expert is included in the defense of the thesis.
6. There are efforts to find post-doc positions for doctoral students.

Successful training scientific offspring is apparent in the fact that 2 of the RC's PI's were doctoral students with Prof. Räikkönen and now developed into independent researchers with substantial funding.

There was little information regarding the research projects that these doctoral students are completing. There was little information as to how doctoral students are selected and how they choose a research topic. This might identify areas of development.

The international dimension of the doctoral training is somewhat unclear. It is recommended that more doctoral students are referred to post-doctoral fellowships abroad (perhaps within the collaborators' network). It is recommended that the doctoral students apply for more international young investigator awards.

**Numeric evaluation: 5 (Outstanding)**

### 2.3 The societal impact of research and doctoral training

- Description on how the RC interacts with and contributes to the society (collaboration with public, private and/or 3rd sector).
- Identification of the ways to strengthen the societal impact of the RC's research and doctoral training.
- Additional material: TUHAT compilation of the RC's other scientific activities.

**ASPECTS:** Societal impact, national and international collaboration, innovativeness

The RC's research program has substantial societal impact. For instance, the findings on the adverse effects of licorice consumption during pregnancy on developing child leads to important new public health policies regarding recommendations during pregnancy. The RC also has substantial interaction with private foundations that have provided a very substantial amount of research funding. The RC is concerned with public dissemination of their results by participating in public media reports.
Using the example of the finding on licorice consumption during pregnancy on child development, the RC could engage more in policymaking, i.e. formulate guidelines together with the University and an FDA type organization to make sure that this message reaches pregnant women around the world.

**Numeric evaluation: 5 (Outstanding)**

### 2.4 International and national (incl. intersectoral) research collaboration and researcher mobility

- **Description of**
  - the RC’s research collaborations and joint doctoral training activities
  - how the RC has promoted researcher mobility
- **Identification of the RC’s strengths and challenges related to research collaboration and researcher mobility, and the actions planned for their development.**

**ASPECTS:** Scientific quality, national and international collaboration

Interdisciplinary collaboration both at a national and international level is a core feature of this RC. The RC lists 5 highly renowned international collaborators that are regularly involved in the research and also visit the RC on a regular basis. The effectiveness of the international collaboration is demonstrated in multiple joint publications as well as in research funding obtained from or applied for at NIH, MRC, Swiss National Science Foundation and others. The cross disciplinary collaboration of the RC is exemplary. Doctoral students directly benefit from the collaboration. The RC addresses the issue that not all doctoral students have mobility to go abroad but plans are discussed to improve this situation.

**Numeric evaluation: 5 (Outstanding)**

### 2.5 Operational conditions

- **Description of the operational conditions in the RC’s research environment (e.g. research infrastructure, balance between research and teaching duties).**
- **Identification of the RC’s strengths and challenges related to operational conditions, and the actions planned for their development.**

**ASPECTS:** Processes and good practices related to leadership and management

Because of the multidisciplinary network, the RC is uniquely positioned to use and combine resources from several infrastructures, which enables the cutting edge research that the RC produces. The RC uses expert support from each participating institution and integrates this expertise to elucidate innovative research questions. The existing infrastructure from existing Finish cohort studies is used for the research, which is very effective. The RC emphasizes the need for centralized data management, which is an area of development.

The panel cannot comment on balance between research and teaching duties as teaching duties are not covered in the materials.

### 2.6 Leadership and management in the researcher community

- **Description of**
  - the execution and processes of leadership in the RC
  - how the management-related responsibilities and roles are distributed in the RC
  - how the leadership- and management-related processes support
    - high quality research
    - collaboration between principal investigators and other researchers in the RC
- the RC’s research focus
- strengthening of the RC’s know-how
- Identification of the RC’s strengths and challenges related to leadership and management, and the actions planned for developing the processes

**ASPECTS:** Processes and good practices related to leadership and management

The leadership of the RC appears to be democratic, with all persons involved in all decisions. The practicality of this might be questioned, but the leadership style seems to work, as evidenced by a highly productive research team in terms of publications, funding and doctoral training. The RC is exemplary for a strong leadership and management, as evidenced by its success. The leadership seems to be sensitive to issues such as gender equality etc. The leadership encourages motivation and initiatives from junior team members which might be vital to the success of the RC as a whole. Most notably, senior members of the RC have been specifically trained over 18 months in leadership skills, which is exemplary.

**2.7 External competitive funding of the RC**

- The RCs were asked to provide information of such external competitive funding, where:
  - the funding decisions have been made during 1.1.2005–31.12.2010, and
  - the administrator of the funding is/has been the University of Helsinki
- On the e-form the RCs were asked to provide:
  1) The relevant funding source(s) from a given list (Academy of Finland/Research Council, TEKES/The Finnish Funding Agency for Technology and Innovation, EU, ERC, foundations, other national funding organisations, other international funding organizations), and
  2) The total sum of funding which the organisation in question had decided to allocate to the RCs members during 1.1.2005–31.12.2010.

*Competitive funding reported in the text is also to be considered when evaluating this point.*

**ASPECTS:** Scientific quality, scientific significance, societal impact, innovativeness and future significance

The RC has obtained a substantial amount of funding from the academy of Finland (€ 2,460,000), Ministry of Education and Culture (€ 610,000), different foundations administrated by UH (€ 620,000), and foundations not administrated by UH (€ 4,411,100). The RC participates in grants at multiple international funding institutions including NIH and MRC as mentioned above. The research funding is substantial given that this is a small and relatively young RC.

**2.8 The RC’s strategic action plan for 2011–2013**

- **RC’s description of their future perspectives in relation to research and doctoral training.**

*ASPECTS:* Scientific quality, scientific significance, societal Impact, processes and good practices related to leadership and management, national and international collaboration, innovativeness, future significance

The strategic action plan of the RC for 2011–2013 mainly focuses on areas of development for the research program. The research plans are cutting edge and will certainly result in continuation of the group’s chain of high-profile publications. Results of this work will also enable competitive future funding applications. Several research arms span across genetics, epigenetics, prenatal programming, postnatal programing and health status. In particular, a prospective study (PREDO) on the effects of prenatal stress involving 5000 families and their offspring seems very exciting. The RC should also be commended for including PET imaging of brain function in their future plans.

The RC here also acknowledges the need to improve academic career prospects of their doctoral students and postdocs and to enhance student and researcher mobility which is commendable. The RC specifically suggests engaging in grant applications to enhance and develop the RC in these areas.
2.9 Evaluation of the category of the RC in the context of entity of the evaluation material (1-8)

The RC's fitness to the chosen participation category.
Category 1. The research of the participating community represents the international cutting edge in its field.

When considering the RC in its entirety, it clearly represents the international cutting edge in its field (Category 1). This is reflected in the high number of original research articles in the high impact international journals. The hypotheses of current research projects and outlined plans for the next years are at the cutting edge of the field. The doctoral students have exposure to research and multiple resources that ensure training at an internationally highest competitive level. The chosen category by the RC matches this evaluation.

Numeric evaluation: 5 (Outstanding)

2.10 Short description of how the RC members contributed the compilation of the stage 2 material

It seems that several RC members contributed to the compilation of the Stage 2 Materials, in an appropriate fashion relative to the role of each individual in the RC.

2.11 How the UH’s focus areas are presented in the RC’s research

Focus area 5: Welfare and safety

The RC addresses the focus area of ‘promoting health and well-being’, which appears to be one of the focus areas of the Institute of Behavioral Sciences.

2.12 RC-specific main recommendations

Main recommendations:
- Further intensify international collaboration, including student exchange program
- Apply for funding at the EU level, perhaps in collaboration with EU collaborators
- Intensify mobility of students and encourage students to apply for awards/grants that would enable mobility
- Expand research methods to include brain imaging
- Engage in centralized data banks

This RC should have adequate institutional support and resources to further strengthen this relatively small but highly prolific RC. Postdoc positions could be added. The RC could be joined with other RC’s to develop into a research center with adequate University resources.

2.13 RC-specific conclusions

This is an exemplary RC that produces research at the highest internationally competitive level. The RC is highly prolific with a large number of publications and continued funding. The publications are highly cited in average, especially compared to other RC’s in the social sciences panel, but also compared to all panels in the evaluation. Doctoral training is extremely well organized and a large number of doctoral students have been trained in the evaluation period. The leadership and future plans are exemplary. The RC should
receive needed resources to further enhance its high performance. It should be increased in size, teaching responsibilities should be balanced relative to research performance. Center status in combination with other RC's should be considered.
3 Appendices

A. Original evaluation material
   a. Registration material – Stage 1
   b. Answers to evaluation questions – Stage 2
   c. List of publications
   d. List of other scientific activities

B. Bibliometric analyses
   a. Analysis provided by CWTS/University of Leiden
   b. Analysis provided by Helsinki University Library (66 RCs)
NAME OF THE RESEARCHER COMMUNITY:
Developmental Psychology Research Group (DEPSY)

LEADER OF THE RESEARCHER COMMUNITY:
Professor Katri Räikkönen, Institute of Behavioural Sciences, Faculty of Behavioural Sciences

RC-SPECIFIC MATERIAL FOR THE PEER REVIEW:

- Material submitted by the RC at stages 1 and 2 of the evaluation
  - STAGE 1 material: RC’s registration form (incl. list of RC participants in an excel table)
  - STAGE 2 material: RC’s answers to evaluation questions
- TUHAT compilations of the RC members’ other scientific activities 1.1.2005-31.12.2010
  (analysis carried out by CWTS, Leiden University)

NB! Since Web of Science(WoS)-based bibliometrics does not provide representative results for most RCs representing humanities, social sciences and computer sciences, the publications of these RCs will be analyzed by the UH Library
(results available by the end of June, 2011)
INTERNATIONAL EVALUATION OF RESEARCH AND DOCTORAL TRAINING AT THE UNIVERSITY OF HELSINKI

RC-SPECIFIC STAGE 1 MATERIAL (registration form)

1 RESPONSIBLE PERSON

Name: Räikkönen, Katri
Phone: 19129501
Affiliation: Institute of Behavioral Sciences
Street address: Siltavuorenpenger 1A, 00014 University of Helsinki

2 DESCRIPTION OF THE PARTICIPATING RESEARCHER COMMUNITY (RC)

Name of the participating RC (max. 30 characters): Developmental Psychology Research Group
Acronym for the participating RC (max. 10 characters): DEPSY
Description of the operational basis in 2005-2010 (eg. research collaboration, joint doctoral training activities) on which the RC was formed (MAX. 2200 characters with spaces): The Developmental Psychology Research Group (DEPSY) is a multidisciplinary, across-faculty RC at the University of Helsinki. The DEPSY is composed of 3 PI’s (Katri Räikkönen, Anu-Katriina Pesonen, Kati Heinonen) affiliated at the Institute of Behavioral Sciences plus 2 collaborator-PI’s (Johan Eriksson, Eero Kajantie) affiliated at the Department of General Practice and Primary Health Care and at the Institute of Clinical Medicine. In addition to several post-doctoral researchers and doctoral candidates, the DEPSY employs 2 research nurses and 8 research assistants. The group has been built by professor Räikkönen with funding obtained from the European Science Foundation, the Academy of Finland, the Finnish Ministry of Culture and Education and scientific foundations, and with funding the two other PI’s of the DEPSY, senior university lecturers Pesonen and Heinonen, whose PhD-theses and post doctoral training professor Räikkönen has supervised, have obtained from the Academy of Finland, the University of Helsinki, the Finnish Ministry of Culture and Education and scientific foundations.

The DEPSY has extensive connections to other research groups both in Finland and abroad. This network enhances shared expertise and truly multidisciplinary and translational scientific approach, which are a prerequisite for novel scientific discoveries and top-quality scientific work.

The RC submitted for the present scientific evaluation consists of researchers working with the DEPSY, and of those doctoral candidates and post-doctoral researchers in the collaborating groups of professor Johan Eriksson and academy researcher Eero Kajantie, who work in close collaboration with us. Supervising of doctoral students and post-docs is jointly and excellently organised within this RC.

The members of the RC meet on a monthly basis to share data, analyses, expertise and ideas. This RC functions as a part of an extensive research network including national and international research collaborators and laboratories who contribute with their highly specialized expertise to different research questions.
INTERNATIONAL EVALUATION OF RESEARCH AND DOCTORAL TRAINING AT THE UNIVERSITY OF HELSINKI

RC-SPECIFIC STAGE 1 MATERIAL (registration form)

3 SCIENTIFIC FIELDS OF THE RC

Main scientific field of the RC’s research: social sciences
RC’s scientific subfield 1: Psychology, Multidisciplinary
RC’s scientific subfield 2: Psychology, Developmental
RC’s scientific subfield 3: Psychiatry
RC’s scientific subfield 4: Pediatrics

Other, if not in the list: Clinical psychology listed under Medicine, Biomedicine and Health sciences characterizes also our multidisciplinary research interests.

4 RC’S PARTICIPATION CATEGORY

Participation category: 1. Research of the participating community represents the international cutting edge in its field

Justification for the selected participation category (MAX. 2200 characters with spaces): Although our RC has been built during the evaluation period, being thus a young RC, the core members (three PI’s representing psychology) of the RC have published during these years nearly 80 articles in top-quality international peer-reviewed journals, in addition to several book chapters and other articles in peer-reviewed Finnish journals. The collaborator-PI’s of this RC have, in addition to the co-authored articles with us, an extensive list of publications in their specialized field of expertise. In addition, the three PI’s of the RC representing psychology have obtained together over 3 million euros of external funding during this period from the European Science Foundation, the Academy of Finland, the University of Helsinki, the Finnish Ministry of Culture and Education and scientific foundations. The multidisciplinary composition of our RC has also greatly profited the writing of successful research proposals: 3 of the currently ongoing grants are consortia between the members of this RC. Our scientific field is multidisciplinary psychology, and most of our papers, combining core aspects of psychology and medicine, are published in high-impact medical journals. These include, for instance, top-ranking journals in psychiatry (Archives of General Psychiatry, American Journal of Psychiatry, Molecular Psychiatry), endocrinology (Journal of Clinical Endocrinology and Metabolism, Psychoneuroendocrinology, Diabetes Care), epidemiology (American Journal of Epidemiology, International Journal of Epidemiology) and pediatrics (Pediatrics, Journal of Pediatrics, Pediatric Research). We consider the multidisciplinary nature of our work as our key strength and a resource, which allows new openings into many traditional research paradigms.

5 DESCRIPTION OF THE RC’S RESEARCH AND DOCTORAL TRAINING

Public description of the RC’s research and doctoral training (MAX. 2200 characters with spaces): The DEPSY RC has many interrelated arms of research. The first and the most extensive arm centers around the Developmental Origins of Health and Disease (DOHaD) – hypothesis. This hypothesis states that a suboptimal prenatal environment may permanently program offspring biology in ways that may increase the risk of physical and mental disorders throughout the lifespan. Recent evidence suggests that the source of these programming influences may not be restricted to fetal period but may extend to postnatal period...
from infancy to young adulthood. This arm explores the critical periods of growth for psychological
development and mental health, and examines the mechanisms, for example the role of glucocorticoids,
underlying these programming effects. This arm also focuses on the effects of prematurity on later
psychological and somatic health.

The second arm is genetic, and is based on large-scale genome-wide-association (GWA) mapping. The
DEPSY is part of the ENGAGE, CHARGE and EGG/EAGLE consortia, which aim to unravel the genetic basis of
several psychological and mental health phenotypes, in addition to physical growth and markers and
disorders of somatic health. In addition, we use the haplotype and candidate gene approaches for
identification of the genetic basis for these phenotypes, and also focus on the gene x environment
interactions (G x E).

The third arm studies the effects of early life stress on life-span psychological development, mental and
somatic health and stress regulation. Specifically, we study the effects of early life separation from
biological parents due to war evacuations occurring during the WW II.

The fourth arm concentrates on sleep-wake cycles in both pediatric and adult populations. This includes
studies on the role of sleep-wake cycles in psychological development and mental and somatic health.

In addition, we have several other ongoing arms of research, related to the specific themes of our doctoral
candidates, ranging from experimental research on family therapy to questions on the associations on
mental health and diabetes and the metabolic syndrome.

Significance of the RC's research and doctoral training for the University of Helsinki (MAX. 2200
characters with spaces):
The multidisciplinary and translational research of the DEPSY has the potential to
provide novel and important insight into the mechanisms through which psychological development and
mental health over the lifespan are ‘programmed’. By focusing on the potentially modifiable environmental
factors, the research conducted by the DEPSY has also the potential to contribute to the design of
prevention and intervention strategies to promote well-being and health of an individual. Research on
health and well-being is named as one of the key areas of research by the University of Helsinki and by the
Faculty of Behavioral Sciences. The research conducted by the DEPSY, thus, contributes to this target area.

Our research has gained a lot of public interest. All PI's of DEPSY are regularly been interviewed to journals,
radio shows and TV. For instance, last year our paper (Räikkönen K, Pesonen A-K, Heinonen K, Lahti J,
detrimental cognitive and psychiatric outcomes in children. American Journal of Epidemiology, 170(9),
1137-1146) received a lot of public interest and was cited in dozens of papers in both the UK and Finland.

This RC brings together a network of experts from different disciplines and from different countries
furnishing an excellent base for doctoral and postdoctoral training. By doctoral training the DEPSY will not
only expand the research potential in the DOHaD-field, increase possibilities for external funding as the RC
will expand, but will also enhance possibilities for public dissemination and implementation of our results.

Keywords: Pre- and postnatal programming, stress, early life stress (ELS), HPA, prematurity, life-course,
psychological development, mental health, sleep.
INTERNATIONAL EVALUATION OF RESEARCH AND DOCTORAL TRAINING AT THE UNIVERSITY OF HELSINKI

RC-SPECIFIC STAGE 1 MATERIAL (registration form)

6 QUALITY OF RC’S RESEARCH AND DOCTORAL TRAINING

Justified estimate of the quality of the RC’s research and doctoral training at national and international level during 2005-2010 (MAX. 2200 characters with spaces): The DEPSY has extensive connections to other research groups in related domains of specialty, both in Finland and abroad. This is evident in both the co-authored publications as well as in the obtained research funding.

The psychologists of DEPSY RC have published nearly 80 articles in top-quality international peer-reviewed scientific journals under the period of evaluation. In addition to the international peer-reviewed scientific journals, the DEPSY has published book chapters and articles in national peer-reviewed scientific journals.

The 3 PI’s of the DEPSY representing psychology have collectively obtained over 3 million euros of external research funding from the European Science Foundation, the Academy of Finland, the University of Helsinki, the Finnish Ministry of Culture and Education and scientific foundations.

The DEPSY has been successful in recruiting extremely talented doctoral candidates. The 2 PI’s of the DEPSY were initially doctoral candidates and later on post-docs under the supervision of professor Rääkkönen. Both of these researchers have become PI’s and obtained significant external research funding from the Academy of Finland, the University of Helsinki, the Finnish Ministry of Culture and Education and scientific foundations, as well as have been able to obtain highly competitive senior university lecturer positions at the University of Helsinki. With the external funding available by the 3 PI’s of the DEPSY, the DEPSY has been able to offer doctoral and post-doctoral positions to the most talented doctoral candidates and doctors. It is also noteworthy that some doctors we have trained, have obtained top-level positions also outside the university.

Comments on how the RC’s scientific productivity and doctoral training should be evaluated (MAX. 2200 characters with spaces): The suggested method of assessment is a traditional peer-review method using objective indices with a special emphasis on the multidisciplinary research paradigm.
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<td>Savolainen</td>
<td>Katri</td>
<td>Doctoral candidate</td>
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<td>Seppänen</td>
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<td>Doctoral candidate</td>
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<td>Sjösten</td>
<td>Noora</td>
<td>Postdoctoral Researcher</td>
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<td>Sonja</td>
<td>Strang-Karlsson</td>
<td>Doctoral candidate</td>
<td>Faculty of Medicine, Institute of Clinical Medicine</td>
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<td>Tuovinen</td>
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INTERNATIONAL EVALUATION OF RESEARCH AND DOCTORAL TRAINING AT THE UNIVERSITY OF HELSINKI

RC-SPECIFIC STAGE 2 MATERIAL

BACKGROUND INFORMATION

Name of the RC's responsible person: Räikkönen, Katri
E-mail of the RC's responsible person:

Name and acronym of the participating RC: Developmental Psychology Research Group, DEPSY

The RC’s research represents the following key focus area of UH: 5. Hyvinvointi ja turvallisuus – Welfare and safety

Comments for selecting/not selecting the key focus area: Our RC’s truly multidisciplinary approach equally represents “clinical research” and “the thinking and learning human being” -areas.

FOCUS AND QUALITY OF RC’S RESEARCH (MAX. 8800 CHARACTERS WITH SPACES)

- Description of the RC’s research focus, the quality of the RC’s research (incl. key research questions and results) and the scientific significance of the RC’s research for the research field(s).

The Developmental Psychology Research Group (DEPSY) is a multidisciplinary cross-faculty RC at the University of Helsinki. The DEPSY is composed of 3 PI’s (Katri Räikkönen, Anu-Katriina Pesonen, Kati Heinonen) affiliated at the Institute of Behavioral Sciences plus 2 collaborator-PI’s (Johan G Eriksson, Eero Kajantie) affiliated at the Institute of Clinical Medicine. In addition to several post-doctoral researchers and doctoral candidates, the DEPSY employs 2 research nurses and 8 research assistants. The DEPSY has extensive connections to other research groups both in Finland and internationally. This network enhances shared expertise and truly multidisciplinary and translational scientific approach, which are a prerequisite for novel scientific discoveries and top-quality scientific work.

The DEPSY RC covers many interrelated arms of research.

The first and the most extensive arm centers around the Developmental Origins of Health and Disease (DOHaD) -paradigm suggesting, that a suboptimal prenatal environment may permanently ‘program’ offspring biology in ways that may increase the risk of physical and mental disorders throughout the lifespan. Recent evidence suggests that the source of these programming influences may not be restricted to fetal period only, but may as well extend to postnatal periods ranging from infancy to young adulthood. This arm focuses upon critical windows during growth and development for psychological function and mental and somatic health, and also focuses on the short- and long-term consequences of preterm birth and maternal pregnancy disorders on these outcomes. This research arm also attempts to unravel the mechanisms underlying the programming effects by using study designs arising from natural experiments and current clinical practice.

The second arm is genetic, and is based on large-scale genome-wide-association (GWA) mapping. By participating in dozens of meta-analyses, the DEPSY RC is part of multidisciplinary and international ENGAGE / CHARGE / EGG / EAGLE / CORNET / ALCGEN / COGENT / MAGIC / SSG consortia, which aim to confirm known and identify new genetic loci that may underlie psychological / mental /physical health phenotypes. In addition, we use the haplotype and candidate gene approaches, and also focus on gene x environment interactions (G x E).

The third arm studies the effects of early life stress on life-span psychological function, mental and somatic health. Specifically, we study the effects of objectively-documented early life separation from biological parents due to war evacuations occurring during the World War II.
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The fourth arm concentrates on sleep-wake cycles in both pediatric and adult populations. This includes studies on associations of sleep-wake cycles and psychological function, mental and somatic health as well as studies on environmental and genetic underpinnings of sleep-wake cycles.

The final arm focuses on associations between mental health / stress and diabetes and insulin resistance / obesity. The major aim is to unravel the underlying mechanisms that explain these well-known links; We will utilize information from early life origins and genomic analyses to address the question.

Key questions addressing the key research arms are as follows: (1) What are the sensitive periods of environmental adversities on psychological / mental / physical health phenotypes over the lifespan? (2) What are the mechanisms underlying the effects of programming? (3) What are the genetic underpinnings of psychological and mental health phenotypes - can GWA mapping inform us of the known and novel genetic loci, and how do early life environmental exposure and known and novel genetic variants interact in the manifestation of these phenotypes? (4) Does early life stress play a role in understanding pathways to individual differences in psychological / mental / physical health phenotypes? (5) What are the causes and consequences of individual differences in sleep-wake cycles? (6) What are the mechanisms underlying the associations between mental health / stress phenotypes and diabetes?

The following unique Finnish longitudinal datasets - that are not readily available anywhere else in the world - have been collected by funding obtained by the 5 PI’s of the DEPSY RC to address the key research questions. The datasets provide a rich platform utilizing life-course data from Finnish registers in combination with in-depth data obtained during clinical visits. HBCS, The Helsinki Birth Cohort Study, is an epidemiological life-course study of 13345 individuals born between 1934-44 in Helsinki. AVLS, the Arvo Ylppö Longitudinal Study, is a regional birth cohort study extending from mother’s pregnancy to young adulthood of the offspring, and is composed of 2193 individuals born between 1985-86 in the Uusimaa district. HeSVA, the Helsinki Study of Very Low Birth Weight (VLBW; <1500 g) Young Adults, is a clinical follow-up study of 340 individuals born preterm at VLBW and sex-, age-, and birth hospital – matched term controls currently followed up to young adulthood. The same questions in adults born moderately preterm are studied in ESTER study, the target of the ongoing recruitment is 2000 individuals. These four studies can address all the key questions to a varying depth. GLAKU, Glycyrrhizin in Licorice Study, and Repeat-BM, the Single Repeat Dose Betamethasone Clinical Trial, which focus on one of the potential underlying mechanisms, namely programming induced by prenatal overexposure to glucocorticoids, are composed, respectively, of 1049 mothers using varying levels of glycyrrhizin in licorice confectionery during pregnancy and their children currently followed up to 11 years, and of 320 mothers exposed to one single repeat dose of betamethasone or placebo during pregnancy and their children currently followed up to 7 years. These two studies can also address the question relating to sleep-wake cycles. PREDO, Pregnancy Disorders Study, is a longitudinal study focusing on preeclampsia, maternal obesity and prenatal stress as sources hinting of the programming mechanisms underlying the offspring developmental outcomes, and is composed of 4800 pregnant mothers followed from 10-12 weeks of gestation and their children currently followed up to 5 years of age. PPP-Botnia, Prevalence, Prediction and Prevention of Diabetes Study, is a longitudinal population-based random sample of 5000 individuals and allows examination of the causes of consequences of sleep-wake cycles and of questions related to diabetes.

The quality and scientific significance of the RC’s work can be evaluated using several objective indices. Although our RC has been built during the evaluation period, being thus a young RC, the three PIs of this RC representing psychology have published during these years nearly 80 articles in top scientific journals. In addition, two PIs of this RC representing medicine have an extensive list of publications in high ranking medical journals. A significant number of the publications are co-authored by all PI’s of the RC. The members of this RC have obtained nearly 8 M€ of external funding from different sources during this evaluation period (please note that nearly half of this sum is managed outside the UH at different
INTERNATIONAL EVALUATION OF RESEARCH AND DOCTORAL TRAINING AT THE UNIVERSITY OF HELSINKI

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Research institutions. The multidisciplinary composition of our RC has also been successful in writing research proposals: 3 of the currently ongoing grants are consortia between the members of this RC. Our scientific field is multidisciplinary psychology, and most of our papers, combining core aspects of psychology and medicine, are published in high-impact top-ranking journals.

- Ways to strengthen the focus and improve the quality of the RC’s research.

We consider the multi-focused, multidisciplinary and international nature of our work and the rich platform of multiple unique longitudinal Finnish datasets as the key strengths of this RC. The intellectual support by our collaborators provides a resource that expands not only the expertise of the RC but also increases the quality and therefore scientific impact of the work conducted. Active participation in national and international grant proposals is another asset that continues to strengthen the quality: we already are funded by or are part of current applications to ESF / EU / NIH / MRC / CIHR. Active participation in national and international conferences, workshops, symposia and brainstorming sessions also allow cross-talks with other scientists beyond the field of expertise of the members of this RC and is vital in inducing new research ideas that widen the scope and innovativeness of the RC’s research. Student and researcher mobility/exchange and international recruitment are also seen as important elements that will strengthen the quality of the RC’s scientific work.

2 PRACTICES AND QUALITY OF DOCTORAL TRAINING (MAX. 8800 CHARACTERS WITH SPACES)

- How is doctoral training organised in the RC? Description of the RC’s principles for recruitment and selection of doctoral candidates, supervision of doctoral candidates, collaboration with faculties, departments/institutes, and potential graduate schools/doctoral programmes, good practices and quality assurance in doctoral training, and assuring good career perspectives for the doctoral candidates/fresh doctorates.

The DEPSY RC has been able to offer doctoral and post doctoral positions to the most talented doctoral candidates. Recruitment is open, transparent and international. In recruitment, the DEPSY RC follows the equality plan of the University of Helsinki.

In doctoral training the DEPSY RC follows the good practices of doctoral training as outlined by the Faculty of Behavioral Sciences and the National Graduate Programme in Psychology (www.dopsy.fi). Each doctoral student is assigned two supervisors and according to the good practices both parties sign an agreement form stating the rights and obligations assigned to the student and the supervisors. The practices are identical for doctoral training in the medical faculty, where the 2 collaborator-PIs representing the field of medicine are affiliated. The faculties at the University of Helsinki oversee that the processes are followed and officially accept enrolled students into doctoral training.

The doctoral thesis is composed of four to five articles published in international peer-reviewed scientific journals, out of which at least three are first-authored. The PhD thesis is an extended summary of these publications and is sent out to two external reviewers. After their critical comments and further corrections and editing the doctoral candidate can publicly defend the thesis. An expert opponent is invited from another university, in most cases abroad, to publicly discuss the thesis with the doctoral candidate and then grades the thesis together with yet another external reviewer. This process follows the academic traditions of the Finnish universities.

One of the strengths of doctoral training in the DEPSY RC is that supervision is offered at multiple levels: the main and the co-supervisor, proximal research group, extended research group with national and international collaborators, peer doctoral students in the proximal and distal research groups, and other supervisors and other peer doctoral students in other fields of psychology (e.g., meetings of the national program) and Faculty/University, the latter of which offers the infrastructure and curriculum and academic traditions for the training.
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Doctoral students meet their main and co-supervisor on a weekly basis to discuss research questions, data analyses and writing of the manuscripts. In addition, the RC organizes monthly meetings where all members of the proximal research group meet. The meetings vary in topic, but typically involve the work in progress by the doctoral students. It is noteworthy that the proximal research group involves also doctoral and post doctoral students that are not affiliated at the University of Helsinki. Because of their double affiliations, a significant amount of funding obtained by Professor Eriksson and Docent Kajantie is directed to other research institutes. The proximal research group is therefore much larger and involves also other doctoral students, post docs and senior-level researchers from multiple fields of science. This large DEPSY RC offers not only scientific but also peer support that is vital in successful fulfillment of the PhD thesis.

Among the wide multidisciplinary and translational network of scientists, the shared-expertise of the national and international collaborators and their research groups will also play vital roles in contributing towards successful and high-quality training of the doctoral students. The national and international collaborators are often co-authors in manuscripts and therefore the doctoral students are offered feedback of their work from many scientists before submission. The RC organizes bi-seasonal meetings with the key international collaborators and members of their research groups to share data, analyses, expertise, ideas and generate new ones. In this wider network of national and international collaborators are also two statisticians, a data manager, laboratory technicians, research nurses, doctoral students, post docs and senior researchers who will provide an excellent and extended infrastructure for the DEPSY RC to conduct top-quality science. Schooling and tutoring of doctoral and post doctoral students is thus well organised within these narrower and wider networks of shared expertise.

The DEPSY RC has excellent connections to the National Doctoral Programme in Psychology. Professor Räikkönen is the Director of this programme (2010 – 2014) and has been the Vice director previously (2006-2010) and Dr Pesonen is a Vice member (2010 – present) of the board of directors of this programme. While the national doctoral programme is able to offer funding for only a small subset of the most competitive students, its’ courses and meetings are open to all doctoral students. Therefore, doctoral students of the DEPSY RC are encouraged to attend all activities offered by the national programme. This allows networking and peer support also with other supervisors and doctoral students working in different research groups in psychology and neighboring fields. This also promotes career planning, widens perspectives and encourages mobility.

Doctoral candidates of the DEPSY RC have been competitive applicants in doctoral programmes and schools. Of the doctoral candidates of the RC representing psychology, two have obtained full-salaried four (2010-2013) and three years positions (2010-2012) in the National Doctoral Programme in Psychology and one has received a full-salaried four year position (2009-2012) in the University of Helsinki Graduate School. All other doctoral students in psychology are non-salaried members of this national programme.

The doctoral students are also encouraged to attend national and international conferences, symposia and workshops. The DEPSY RC has been able to offer funding for participation. It is also noteworthy that the University of Helsinki offers funds for doctoral students to attend international conferences, and the National Doctoral Programme offers funding up to 500 eur per annum for salaried students and 500 eur per 4 years for non-salaried students. Oral or poster presentation is a prerequisite for obtaining funding form all resources. This allows further networking, helps in building career perspectives and encourages student and researcher mobility. An important aspect of doctoral training is that doctoral students are also involved in teaching the curriculum of psychology by participating in teching of master-level studies.

The DEPSY RC sees career planning of the doctoral candidates as an integral part of the doctoral training. For instance, the 2 PI’s of the DEPSY RC were initially doctoral candidates and later became
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Post docs under the supervision of professor Räikkönen. Both of these researchers have become PI’s and obtained significant external research funding from the Academy of Finland, the University of Helsinki, the Finnish Ministry of Culture and Education and scientific foundations, as well as have been able to obtain highly competitive senior university lecturer positions at the UH. The DEPSY RC has been able to offer post doctoral positions to other doctoral students that the DEPSY RC has trained. However, the positions have always been placed open and the recruitment process is transparent. It is also noteworthy that some doctors we have trained, have obtained top-level positions outside the university. While the DEPSY RC has been able to offer post doc positions, at the same time it encourages post doc mobility both nationally and internationally.

- RC’s strengths and challenges related to the practises and quality of doctoral training, and the actions planned for their development.

The key strengths of the doctoral training in the DEPSY RC lie in the supervision offered by the multidisciplinary and translational network of scientists in the proximal and extended RC. Also the large multidisciplinary RC is able to offer supervision at multiple different levels ranging from different fields of expertise and perspectives to peer support. Challenges of the doctoral training are the relatively low and bound salaries offered to the doctoral students that may not necessarily attract the most competitive national and international students. While the DEPSY RC invests in career planning, academic career prospects create another challenge, as post doc positions are highly competitive, and national mobility within Finland and internationally is not always an option. The DEPSY RC has itself some resources to offer positions beyond doctoral training.

3 SOCIETAL IMPACT OF RESEARCH AND DOCTORAL TRAINING (MAX. 4400 CHARACTERS WITH SPACES)

- Description of how the RC interacts with and contributes to the society (collaboration with public, private and/or 3rd sector).

Key results of our research have contributed significantly to the practices of child welfare clinics: the harmful effects of glycyrrhizin in licorice we have reported in several studies have lead to new public health recommendations to pregnant women in Finland. Second, the HeSVA has rapidly gained its place as one the leading longitudinal cohorts of premature birth worldwide. Current research interest for the optimal postnatal growth of prematurely born infants will have a major public health impact, given that information on growth is lacking in most of the other high quality cohort studies. In addition, we work in close collaboration with the Helsinki University Hospital for Children and Adolescents, who take care of all infants born severely premature in Southern Finland. This collaboration has also produced several clinical research projects aiming at supporting the early development of the infants born premature.

Third, we have had a unique possibility to study the effects of early life stress on psychological function, mental and physical health across the life-span in a natural experiment during the World War II. These results, showing how objectively-documented early experiences have a major impact on life-span functioning have drawn wide public attention. It is noteworthy that experience of early life stress for various reasons, such as child abuse and neglect, illness, poverty, institutionalization, immigration or war, still concerns children everywhere in the contemporary world.

The genome-wide associations studies we are conducting in several multidisciplinary and international large consortia will eventually have great preventive public health impact by increasing means for recognizing individuals at heightened vulnerability for a wide range of complex diseases, and may have value in ‘personalized medicine’.

Each senior member of the RC has also public appearances in media and frequent public talks in universities, other national health and social organizations. We have also several memberships in boards of public organizations that apply scientific knowledge of psychology and medicine. These include...
organizations such as the Ministry of Defence, the Ministry of Social Affairs and Health, Student Examination Board in the Ministry of Education and Culture, and the organizations for psychiatric services, child care services, and school psychology services in the city of Helsinki. In addition, writing texts in international and national books and journals that popularize scientific research is an important way to contribute to society.

We encourage our doctoral candidates to actively take part in networks having societal impact, and the senior members actively promote their public appearances and talks. Most of the doctoral candidates also work part-time as physicians, therapists, in the Red Cross crisis management unit, etc., which bridges the research and clinical practice and increases the societal impact of our research work. We believe that allowing the doctoral candidates to build their clinical career during their graduate years, is beneficial for both the doctoral candidates and the research community.

Ways to strengthen the societal impact of the RC’s research and doctoral training.

The DEPSY RC is highly research oriented. We believe that top-quality research will have societal impact, even though the steps taken at one time are small. This impact is not bound to Finland. A way to strengthen the societal impact the RC’s research, specifically at national level, is to pay more attention to public communication of new research results. Notably, we have underused the PR services provided by the faculty and the UH. Many of our research results in the domains of psychology and public health could contribute to health care and education in Finland more efficiently if the public communication, for example in the form of university news letter or press release, would work more systematically. We consider this PR question as tied to the research infrastructure provided of the UH. Two of our RC members are board members (Professor Räikkönen as the Director) of the National Graduate Programme in Psychology. This gives us a critical possibility to develop doctoral training both nationally and within the research community.

Description of the RC’s research collaborations and joint doctoral training activities and how the RC has promoted researcher mobility.

The extensive international and national collaboration of the DEPSY RC enhances shared expertise and multidisciplinary and translational scientific approach, and opens up new horizons for novel scientific discoveries and high-quality scientific work. This collaboration is ongoing and the research groups meet on a regular basis (monthly meetings with the key national and bi-seasonal meetings with the key international collaborators) to share data, analyses, expertise, ideas and generate new ones. Schooling and tutoring of doctoral students and post docs and short-term visits are well organised within this wider network of shared expertise.

The key collaborators are: Professor David JP Barker, FRS, professor, University of Southampton, UK, and Oregon Health and Science University, Portland, OR, USA. Professor Barker is a highly-cited scientist and the founder of ‘the Developmental Origins of Health and Disease (DOHaD), or ‘the Barker-hypothesis’. Professor Barker will serve as collaborator for the studies addressing the DOHaD - paradigm. Professor Jonathan R. Seckl, FRCP, FMedSci, FRSE, professor of molecular medicine, University of Edinburgh, Edinburgh, UK. Professor Seckl is a highly-cited scientist and the founder of the ‘fetal programming induced by overexposure to glucocorticoids’ –hypothesis. Professor Seckl’s expertise and laboratory facilities at the University of Edinburgh will inform of the programming mechanisms. Professor Aarno Palotie, MD, PhD, Head of Medical Sequencing, Welcome Trust Sanger Institute, UK. Professor Palotie is a highly-cited scientist with a strong track record in genetics of mendelian and complex traits taking advantage of the unique Finnish population structure. Professor Palotie will serve as a collaborator for
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the genetic studies. Professor Karen A Matthews, PhD, Distinguished Professor of Psychiatry, Professor of Epidemiology, Psychology, & Clinical and Translational Science Director, Cardiovascular Behavioral Medicine Research Training Program, USA. Professor Matthews is a highly-cited scientist with a strong track-record on studies in children’s and women’s health and will she will serve as a collaborator and an expert for the sleep-wake cycle studies.

The DEPSY RC is also part of several multidisciplinary and international genome-wide association study consortia: ENGAGE / CHARGE / EGG / EAGLE / CORNET / ALCGEN / COGENT / MAGIC / SSG. These consortia are composed of tens of cohort studies with PIs as world-leading experts in genomic and epigenomic studies.

The other collaborators bring expertise within the fields of neonatology, pediatrics, neurology, obstetrics and gynecology, clinical chemistry, geriatrics, psychiatry and biology (professors Saroj Saigal, Mikko Hallman, Timo Strandberg, Kristian Wahlbeck, Leif Groop, docents Anneli Kari, Outi Peltoniemi, Hannele Laihui, Esa Hämäläinen, Anna-Lisa Järvenpää, Drs. Aulikki Lano, Iiris Hovatta, Bo Isomaa), genetics (docent Elisabeth Widen), epidemiology, psychiatry and psychology (professor Michael F Scheier), developmental psychology (professor Dieter Wolke), neuropsychology (professor Louis Schmidt), and temperament (associate professors Samuel Putnam, Maria Gartstein).

- **RC’s strengths and challenges related to research collaboration and researcher mobility, and the actions planned for their development.**

We strongly believe that the multidisciplinary and translational expertise that the collaborators bring to the DEPSY RC will be a strong asset that guarantees not only a successful fulfillment of the currently ongoing projects, but also opens up new horizons by generating innovative ideas and hypothesis for future work. The multi-focused research of the DEPSY RC and our wide national and international collaboration also allow opportunities of funding from multiple different national and international resources. Challenges of research collaboration relate to infrastructure, data storage, management and transfer. While the DEPSY RC employs one full-time data manager, she is not affiliated at the UH, but at one of the host institutions (the National Institute of Health and Welfare).

**5 OPERATIONAL CONDITIONS (MAX. 4400 CHARACTERS WITH SPACES)**

- **Description of the operational conditions in the RC’s research environment (e.g. research infrastructure, balance between research and teaching duties).**

The research infrastructure of DEPSY is composed of several host institutions, given that key members of the RC have double or even triple affiliations.

The Institute of Behavioral Sciences (IBS) at the UH provides the first and most important part of our infrastructure. The IBS is a research-friendly and –oriented institution, which provides excellent facilities in terms of space for conducting large-scale cohort studies. Currently, we run two clinics in the IBS, one in the GLAKU – study for the 11-year-follow-up, and the other for the young adult follow-up of the AYLS. In addition, the IBS has a high-standard stress laboratory which has been available to us for our stress experiments. IBS provides excellent technical support for laboratory equipment and software.

Second, the Folkhälsan Research Centre, where professor Johan Eriksson is double-affiliated, provides us another clinic including the salary of a research nurse and with excellent facilities used for the medical part of the data collection both in the AYLS and the HBCS cohorts. Folkhälsan is a Swedish-speaking NGO (non-governmental organization) in the social welfare and health care sector in Finland. It carries out scientific research and provides social welfare and health care services as well as information and counseling in order to promote health and quality of life. The research centre focus on molecular
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genetics research on rare genetic diseases as well as common non-communicable diseases such as diabetes and cardiovascular disease. Other research activities include population genetics, nutrition and cancer, health promotion and social sciences. Folkhäläns research centre is located in Biomedicum Helsinki and has about 200 employees.

Third, the Helsinki University Hospital for Children and Adolescents provides us laboratory services and professional sample management for the GLAKU and the PREDO studies.

Fourth, the National Institute for Health and Welfare (THL) is a research and development institute under the Finnish Ministry of Social Affairs and Health. THL works to promote the well-being and health of the population, prevent diseases and social problems, and develop social and health services. Of our PI’s, Drs. Kajantie and Eriksson, and 4 of their graduate students are double affiliated in THL. THL provides us the infrastructure for data management of HBCS, HeSVA and ESTER studies.

In addition and finally, we profit from the research infrastructure and expertise of our international and national collaborators. For instance, the placental samples collected in the PREDO study are currently analyzed in the University of Edinburgh for genetic and epigenetic markers in a highly specialized laboratory, whereas the placental morphology analyses are delegated to the laboratory in the University of Munich. For salivary cortisol analyses, we collaborate with the University of Trier. Telomere length analyses are conducted in the Finnish Institute for Molecular Medicine (FIMM) and high performance computational services for analyses of genome-wide data are provided by the FIMM.

- RC’s strengths and challenges related to operational conditions, and the actions planned for their development.

We consider the network of different research infrastructures as our key strength. A single institution (like the IBS) could not host the multidisciplinary data and could not provide the expert support we have in each host institution, ranging from highly specific medical laboratory questions and data management to psychological questions. A current challenge in the IBS and at the UH in general, is to organize the data management system at a higher level. The infrastructure for shared data storage has been in constant turbulence in UH, making our data management extremely challenging. We sincerely hope that these issues will be taken more seriously in the development of the research infrastructure in the UH.

With the external funding obtained by the senior member of this RC, we have been thus far able to cover the expenses related to data storage and management.

**6 LEADERSHIP AND MANAGEMENT IN THE RESEARCHER COMMUNITY (MAX. 4400 CHARACTERS WITH SPACES)**

- Description of the execution and processes of leadership in the RC, how the management-related responsibilities and roles are distributed in the RC and how the leadership- and management-related processes support high quality research, collaboration between principal investigators and other researchers in the RC, the RC’s research focus and strengthening of the RC’s know-how.

The RC is characterized by participative, democratic leadership style. New research ideas, practical arrangements, division of tasks, funding applications, authorship issues etc. are discussed within the whole community or within the team involved in a specific project as appropriate. The senior researchers coordinate this process and encourage initiatives and contributions from both senior and junior members of the RC. We believe this is essential both to maximize the scientific input of the whole community motivation and commitment of each RC member.

Project management has three overlapping goals: to ensure excellence in research output; to provide high-quality research training (including training in project management itself); and to ensure the well-
being and motivation of the members of the research team. While management practices are flexible, in practice each of our projects has a defined principal investigator who is responsible for management of the tasks of the researchers and research staff involved in the specific project. Day-to-day management of a specific project is usually taken care of by a postdoctoral researcher or a PhD student, with specific tasks adjusted for the level of experience of the person involved. The project teams meet face-to-face on a regular basis (variable intervals depending on the phase of the project), with day-to-day issues communicated by e-mail.

In decision-making we aim at unanimous decisions which we in most cases are able to reach. In the rare case of disagreement, the opinion of the senior member responsible for the specific project or theme will prevail. While the work within the RC is based on mutual trust and not necessarily regulated by formal agreements, we realize the importance of such agreements which are a routine in our external collaborations.

We take the development of leadership and management skills seriously. Two of the five senior members have completed an 18-month apprenticeship training in leadership.

- **RC’s strengths and challenges related to leadership and management, and the actions planned for developing the processes.**
  
  We believe that the participative leadership style and flexible management is our key strength which has been essential to our success in producing high-quality research and relatively rapid growth as a RC. It enables easy communication between principal investigators, other researchers and research staff and thus allows everybody in the RC to contribute fully with her/his own expertise to our common goals. Success and growth are also our main challenge: we are aware that a larger team may require more formal practices to ensure effective and just decision-making. Such practices are already being introduced for example in the form of supervision agreements in the training of PhD students which are also encouraged or required by graduate schools.

### 7 External competitive funding of the RC

- **Listing of the RCs external competitive funding, where:**
  
  - the funding decisions have been made during 1.1.2005-31.12.2010, and
  - the administrator of the funding is/has been the University of Helsinki

- **Academy of Finland (AF)** - total amount of funding (in euros) AF has decided to allocate to the RC members during 1.1.2005-31.12.2010: **2460000**

- **Finnish Funding Agency for Technology and Innovation (TEKES)** - total amount of funding (in euros) TEKES has decided to allocate to the RC members during 1.1.2005-31.12.2010:

- **European Union (EU)** - total amount of funding (in euros) EU has decided to allocate to the RC members during 1.1.2005-31.12.2010:

- **European Research Council (ERC)** - total amount of funding (in euros) ERC has decided to allocate to the RC members during 1.1.2005-31.12.2010:
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International and national foundations  – names of international and national foundations which have decided to allocate funding to the RC members during 1.1.2005-31.12.2010, and the amount of their funding (in euros).
- names of the foundations: European Science Foundation (EuroSTRESS), University of Helsinki: Principal’s grant, Emil Aaltonen Foundation, Research Foundation of the University of Helsinki, Yrjö Jahnsson Foundation
  - total amount of funding (in euros) from the above-mentioned foundations: 620000

Other international funding  - names of other international funding organizations which have decided to allocate funding to the RC members during 1.1.2005-31.12.2010, and the amount of their funding (in euros).
  - names of the funding organizations:
  - total amount of funding (in euros) from the above-mentioned funding organizations:

Other national funding (incl. EVO funding and Ministry of Education and Culture funded doctoral programme positions) - names of other national funding organizations which have decided to allocate funding to the RC members during 1.1.2005-31.12.2010, and the amount of their funding (in euros).
- names of the funding organizations: Ministry of Education and Culture
- total amount of funding (in euros) from the above-mentioned funding organizations: 610000

8 RC’S STRATEGIC ACTION PLAN FOR 2011–2013 (MAX. 4400 CHARACTERS WITH SPACES)

Description of the RC’s future perspectives in respect to research and doctoral training.

Our strategic action plan is tied to the rich platform of the unique Finnish longitudinal cohort studies that are available to us for multidisciplinary and translational research. In 2011-13 we will:
- focus on the mechanisms and genomic underpinnings that transfer the impact of early life (fetal and postnatal) environmental exposures into the psychological, mental and physical health phenotypes over the life course – our overall long-term research aim.
- finish our work on epigenomic consequences of early life stress (separation from parents during World War II).
- finish follow-up data collection phases of the ongoing GLAKU, RepeatBM, AYLS and PPP-Botnia studies.
- continue the national data collection addressing the questions on maternal prenatal glycyrrhizin in licorice consumption and placental function.
- complete our multidisciplinary and international placental tissue study that focus on the genomic and epigenomic factors as well as placental structure and function in relation to maternal prenatal stress.
- open the data of the PREDO-study of nearly 5,000 families (first-phase data collection ended in 12/2010) which allows studying the effects of prenatal stress on the child development – and start a new follow-up data collection phase at the children’s age of 5 years.
- actively participate in the already ongoing multidisciplinary, international genome-wide association study consortia.
INTERNATIONAL EVALUATION OF RESEARCH AND DOCTORAL TRAINING AT THE UNIVERSITY OF HELSINKI

RC-SPECIFIC STAGE 2 MATERIAL

- actively search and participate in international study consortia pursuing new genomic approaches, including epigenomic analyses as well as targeted and exomic sequencing of genomic areas of interest in relation to psychological, mental and physical health phenotypes.

- adopt new cross-disciplinary research methods to deepen and widen the phenotypic profiling of our study cohorts, including polysomnography in sleep studies and PET studies for advanced metabolic and functional brain imaging.

- focus on early life environmental and genetic underpinnings that may explain associations between diabetes and psychological and mental health phenotypes.

- apply new research grants from both national and international sources.

- strengthen and evolve our national and international research networks.

- actively search and create new research openings and networks.

- improve our possibilities to provide better academic career prospects to our doctoral students and post docs.

- enhance student and researcher mobility – by encouraging application of grants for these purposes - by encouraging doctoral students and post docs to utilize the RC’s already large international network of collaborators - by continuing the RC’s tradition of international, open and transparent recruitment to all new positions.

9 Short description of how the RC members have contributed to the compilation of the Stage 2 materials (max. 1100 characters with spaces).

Every member of the RC has listed their funding. Drs Räikkönen ja Pesonen have drafted the first version of the material, except for point 6 (leadership) which was drafted by Dr. Kajantie. These drafts were commented and further evolved by all senior members of the group. Please note that Dr. Heinonen, and doctoral students Tuovinen, Pyhälä, Sjösten and Paille-Hyvärinen are on a maternity leave.

NOTE THAT OUR RC HAS RECEIVED AN ADDITIONAL 4411100 EUROS, NOT ADMINISTERED BY THE UH, FROM THE ACADEMY OF FINLAND, FINNISH CULTURAL FOUNDATION, GYLLENBERG FOUNDATION, JUHO VAINIO FOUNDATION, WIHURI FOUNDATION, FINNISH FOUNDATION FOR CARDIOVASCULAR RESEARCH, FINNISH FOUNDATION FOR PEDIATRIC RESEARCH, MAUD KUISTILA MEMORIAL FOUNDATION, BIOMEDICUM HELSINKI FOUNDATION, PÄIVIKKI AND SAKARI SOHLBERG FOUNDATION, FINNISH DIABETES RESEARCH FOUNDATION, JALMARI AND RAUHA AHOKAS FOUNDATION, NOVO NORDISK FOUNDATION, SIGRID JUSELIUS FOUNDATION, SWISS FEDERAL OFFICE OF PUBLIC HEALTH, SWISS NATIONAL SCIENCE FOUNDATION, THE UNIVERSITY OF BASEL.
INTERNATIONAL EVALUATION OF RESEARCH AND DOCTORAL TRAINING AT THE UNIVERSITY OF HELSINKI

RC-SPECIFIC TUHAT COMPILATIONS OF PUBLICATIONS DATA 2005-2010

DEPSY/Räikkönen

1 Analysis of publications


<table>
<thead>
<tr>
<th>Publication type</th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
<th>Total Count 2005 - 2010</th>
</tr>
</thead>
<tbody>
<tr>
<td>A1 Refereed journal article</td>
<td>14</td>
<td>26</td>
<td>24</td>
<td>33</td>
<td>46</td>
<td>43</td>
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<td>A2 Review in scientific journal</td>
<td>2</td>
<td>2</td>
<td>4</td>
<td>2</td>
<td>2</td>
<td>12</td>
<td></td>
</tr>
<tr>
<td>A3 Contribution to book/other compilations (refereed)</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>5</td>
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<tr>
<td>A4 Article in conference publication (refereed)</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>B1 Unrefereed journal article</td>
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<td>3</td>
<td>2</td>
<td>6</td>
<td>2</td>
<td>20</td>
<td></td>
</tr>
<tr>
<td>B2 Contribution to book/other compilations (non-refereed)</td>
<td>1</td>
<td></td>
<td>6</td>
<td>2</td>
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<td></td>
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<tr>
<td>B3 Unrefereed article in conference proceedings</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>C1 Published scientific monograph</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>C2 Edited book, compilation, conference proceeding or special issue of journal</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>D1 Article in professional journal</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
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<td>1</td>
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</tr>
<tr>
<td>D2 Article in professional hand or guide book or in a professional data system, or text book material</td>
<td></td>
<td></td>
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<td>1</td>
<td></td>
</tr>
<tr>
<td>E1 Popular article, newspaper article</td>
<td>1</td>
<td>2</td>
<td></td>
<td></td>
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<td>3</td>
<td></td>
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<tr>
<td>E2 Popular monograph</td>
<td>1</td>
<td></td>
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<td>1</td>
<td></td>
</tr>
</tbody>
</table>
2 Listing of publications

A1 Refereed journal article

2005


2006


Lahti, J, Räikkönen, K, Elkelund, J, Patton, M, Raitakari, OT, Keltikangas-Järvinen, L. 'Socio-demographic characteristics moderate the association between DRD4 and novelty seeking'. Personality and Individual Differences, 2006


2007


INTERNATIONAL EVALUATION OF RESEARCH AND DOCTORAL TRAINING AT THE UNIVERSITY OF HELSINKI

RC-SPECIFIC TUHAT COMPILATIONS OF PUBLICATIONS DATA 2005-2010

DEPSY/Räikkönen


Fatty Acids
Villa, P, Laivuori, H, Kajantie, E, Kaaja, R
2009
1466.
Neonatology
infants with respiratory distress syndrome’,
2009
INTERNATIONAL EVALUATION OF RESEARCH AND DOCTORAL TRAINING AT THE UNIVERSITY OF HELSINKI

RC-SPECIFIC TUHAT COMPILATIONS OF PUBLICATIONS DATA 2005-2010

DEPSY/Räikkönen


Elks, CE, Perry, JRB, Sulem, P, Chasman, DI, Franceschini, N, He, C, Lunetta, KL, Visser, JA, Byrne, EM, Cousminer, DL, Gudbjartsson, DF, Esko, T, Feenstra, B, Hottenga, J, Koller, DL, Kutanli, Z, Liu, P, Mangino, M, Marongiu, M, McArdle, PF, Smith, AV, Stok, L, Van Weringen, SH, Zhao, JH, Albricht, E, Corte, T, Ingelsson, E, Hayward, C, Magnusson, PKE, Smith, EN, Ulvi, S, Warrington, NM, Zgaga, L, Alavena, H, Amin, N, Aspelund, T, Bandinelli, S, Barroso, I, Benensten, GS, Bergmann, S, Blackburn, H, Boomsma, DI, Buring, JE, Busonero, F, Campbell, H, Chanock, SJ, Chen, W, Cornelis, MC, Couper, D, Covell, AD, D'Adamo, P, de Faire, U, de Geus, EJC, Deloukas, P, Dehghan, A, Dong, J, Dong, J, Dong, J, Dong, J, Dong, J, Dong, J, Dong, J, Dong, J, Dong, J, Dong, J, Dong, J, Dong, J, Dong, J, Dong, J, Dong, J, Dong, J, Dong, J, Dong, J, Dong, J, Dong, J, Dong, J, Dong, J, Dong, J, Dong, J, Dong, J, Dong, J, Dong, J, Dong, J, Dong, J, Dong, J, Dong, J, Dong, J, Dong, J, Dong, J, Dong, J, Dong, 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INTERNATIONAL EVALUATION OF RESEARCH AND DOCTORAL TRAINING AT THE UNIVERSITY OF HELSINKI

RC-SPECIFIC TUHAT COMPILATIONS OF PUBLICATIONS DATA 2005-2010

DEPSY/Räikkönen


A2 Review in scientific journal

2006


13
INTERNATIONAL EVALUATION OF RESEARCH AND DOCTORAL TRAINING AT THE UNIVERSITY OF HELSINKI

RC-SPECIFIC TUHAT COMPILATIONS OF PUBLICATIONS DATA 2005-2010

DEPSY/Räikkönen


2008


2009


A3 Contribution to book/other compilations (refereed)

2007


2008


2009


2010


A4 Article in conference publication (refereed)

2009


B1 Unrefered journal article

2006

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RC-SPECIFIC TUHAT COMPILATIONS OF PUBLICATIONS DATA 2005-2010

DEPSY/Räikkönen


2007


2008


2009


2010


B2 Contribution to book/other compilations (non-refereed)

2008


B3 Unrefereed article in conference proceedings

2006

Kajantie, E 2006, 'Fetal origins of stress-related adult disease,'
DEPSY/Räikkönen

2008
Kajantie, E 2008, Early life events: Effect on aging,

C1 Published scientific monograph

2005

C2 Edited book, compilation, conference proceeding or special issue of journal

2009

D1 Article in professional journal

2005

D2 Article in professional hand or guide book or in a professional data system, or text book material

2010

E1 Popular article, newspaper article

2007

2008

E2 Popular monograph

2006
INTERNATIONAL EVALUATION OF RESEARCH AND DOCTORAL TRAINING AT THE UNIVERSITY OF HELSINKI

RC-SPECIFIC TUHAT COMPILATIONS OF OTHER SCIENTIFIC ACTIVITIES 2005-2010

DEPSY/Räikkönen

1 Analysis of activities 2005-2010


<table>
<thead>
<tr>
<th>Activity type</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Supervisor or co-supervisor of doctoral thesis</td>
<td>28</td>
</tr>
<tr>
<td>Prizes and awards</td>
<td>2</td>
</tr>
<tr>
<td>Editor of research journal</td>
<td>39</td>
</tr>
<tr>
<td>Peer review of manuscripts</td>
<td>47</td>
</tr>
<tr>
<td>Editor of series</td>
<td>1</td>
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<tr>
<td>Membership or other role in review committee</td>
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<tr>
<td>Membership or other role in research network</td>
<td>5</td>
</tr>
<tr>
<td>Membership or other role in national/international committees, council, board</td>
<td>27</td>
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<tr>
<td>Membership or other role in public Finnish or international organization</td>
<td>3</td>
</tr>
<tr>
<td>Other tasks of an expert in private sector</td>
<td>2</td>
</tr>
<tr>
<td>Participation in interview for written media</td>
<td>19</td>
</tr>
<tr>
<td>Participation in radio programme</td>
<td>1</td>
</tr>
<tr>
<td>Participation in TV programme</td>
<td>9</td>
</tr>
</tbody>
</table>
2 Listing of activities 2005-2010

Supervisor or co-supervisor of doctoral thesis

Kati Heinonen,
Doctoral supervision, Kati Heinonen, 2009 → ..., Finland
Doctoral supervision, Kati Heinonen, 2009 → ...

Eero Kajantie,
Doctoral thesis supervision, MD Petteri Hovi, University of Helsinki, Eero Kajantie, 2003 → ..., Finland
Doctoral thesis supervision, M Psych Kimmo Fälti, Eero Kajantie, 2005 → 08.12.2010, Finland
Doctoral thesis supervision, MD Pia Vila, University of Helsinki, Eero Kajantie, 2005 → ..., Finland
Doctoral thesis supervision, MD Sonja Strang-Karlsson, University of Helsinki, Eero Kajantie, 2005 → 17.02.2011, Finland
Doctoral thesis supervision, M Psych Riikka Pyhäälä-Neuvonen, University of Helsinki, Eero Kajantie, 2006 → ..., Finland
Doctoral thesis supervision, MD Marika Sipola-Leppänen, University of Oulu, Eero Kajantie, 2008 → ..., Finland
Doctoral thesis supervision, MD Tia Aalto-Viljakainen, University of Helsinki, Eero Kajantie, 2008 → ..., Finland
Doctoral thesis supervision, MD Pia Villa, University of Helsinki, Eero Kajantie, 2008 → ..., Finland
Doctoral thesis supervision, MD Sonja Strang-Karlsson, University of Helsinki, Eero Kajantie, 2008 → ..., Finland
Doctoral thesis supervision, M Psych Riikka Pyhäälä-Neuvonen, University of Helsinki, Eero Kajantie, 2009 → ..., Finland
Doctoral thesis supervision, MD Marika Sipola-Leppänen, University of Oulu, Eero Kajantie, 2009 → ..., Finland
Doctoral thesis supervision, MD Tia Aalto-Viljakainen, University of Helsinki, Eero Kajantie, 2009 → ..., Finland
Doctoral thesis supervision, MD Marika Sipola-Leppänen, University of Oulu, Eero Kajantie, 2009 → ..., Finland

Anu-Katriina Pesonen,
Doctoral supervision, Anu-Katriina Pesonen, 2009 → ...
Doctoral supervision, Anu-Katriina Pesonen, 2009 → ...
Doctoral supervision, Anu-Katriina Pesonen, 2009 → ...
Doctoral supervision, Anu-Katriina Pesonen, 2010 → ...

Katri Räikkönen,
Depression and cognition in type 2 diabetes from a life course perspective, Katri Räikkönen, 2001 → ..., Finland
Finnish war evacuees - Cardiovascular disease prevalence, general health and quality of life 60 years later, Katri Räikkönen, 2006 → ...
Developmental Origins of Personality Disorders: An Epidemiological Life Course Perspective, Katri Räikkönen, 2007 → ..., Finland
Psychological well-being in young adults with very low birth weight, Katri Räikkönen, 2007 → ..., Finland
Depression, stressful life events, physical activity and the metabolic syndrome, Katri Räikkönen, 2008 → ...
Child temperament and parental personality: continuity and transactional change, Katri Räikkönen, 2009
Developmental origins of psychological vulnerability factors for mental disorders, Katri Räikkönen, 2009 → ...
Developmental origins of physiological stress reactivity, Katri Räikkönen, 2010
Physical activity, sleep and health in children: Developmental perspectives, Katri Räikkönen, 2010 → ...
Telomere length, psychiatric disorders and personality, Katri Räikkönen, 2010 → ..., Finland

Prizes and awards

Jari Marko Lahti,
Young Investigators Award in 6th World Congress on Developmental Origins of Health and Disease, Jari Marko Lahti, 02.12.2009, Chile
Anu-Katriina Pesonen,
Award for best young investigator in the Berzelius symposium of Fetal Origins of Health and Disease, Stockholm. Title: “Personality of Young Adults born with Very Low Birth Weight”, Anu-Katriina Pesonen, 2006 → …, Sweden

**Editor of research journal**

**Johan Eriksson**,
- Diabetologia, Johan Eriksson, 01.01.2005 → 31.12.2005, Germany
- Diabetes Care, Johan Eriksson, 01.01.2005 → 31.12.2005, United States
- Diabetes Care, Johan Eriksson, 01.01.2005 → 31.12.2005, Finland
- Lancet, Johan Eriksson, 01.01.2005 → 31.12.2005, United Kingdom
- MRC Netherlands, Johan Eriksson, 01.01.2005 → 31.12.2005, Netherlands
- MRC South Africa, Johan Eriksson, 01.01.2005 → 31.12.2005, South Africa
- MRC South Africa, Johan Eriksson, 01.01.2005 → 31.12.2005
- New England Journal of Medicine, Johan Eriksson, 01.01.2005 → 31.12.2005, United States
- Suomen Lääkärilehti, Johan Eriksson, 01.01.2005 → 31.12.2005, Finland
- Suomen Lääkärilehti, Johan Eriksson, 01.01.2005 → 31.12.2005, Finland
- Suomen Lääkärilehti, Johan Eriksson, 01.01.2005 → 31.12.2005, Finland
- Diabetes Care, Johan Eriksson, 01.01.2006 → 31.12.2006, United States
- Diabetes Care, Johan Eriksson, 01.01.2006 → 31.12.2006
- Diabetologia, Johan Eriksson, 01.01.2006 → 31.12.2006, Germany
- Diabetologia, Johan Eriksson, 01.01.2006 → 31.12.2006
- Journal of Clinical Endocrinology and Metabolism, Johan Eriksson, 01.01.2006 → 31.12.2006, United States
- New England Journal of Medicine, Johan Eriksson, 01.01.2006 → 31.12.2006, United States
- New England Journal of Medicine, Johan Eriksson, 01.01.2006 → 31.12.2006
- Suomen Lääkärilehti, Johan Eriksson, 01.01.2006 → 31.12.2006, Finland
- Suomen Lääkärilehti, Johan Eriksson, 01.01.2006 → 31.12.2006, Finland
- Suomen Lääkärilehti, Johan Eriksson, 01.01.2006 → 31.12.2006, Finland
- Diabetologia, Johan Eriksson, 01.01.2008 → 31.12.2008, Germany
- Diabetes Care, Johan Eriksson, 01.01.2008 → 31.12.2008, United States
- Lancet, Johan Eriksson, 01.01.2008 → 31.12.2008, United Kingdom
- New England Journal of Medicine, Johan Eriksson, 01.01.2008 → 31.12.2008, United States
- Suomen Lääkärilehti, Johan Eriksson, 01.01.2008 → 31.12.2008, Finland

**Kati Heinonen**,

**Jari Marko Lahti**,
- Biological Psychiatry, Jari Marko Lahti, 01.01.2007 → 31.12.2007

**Anu-Katriina Pesonen**,
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RC-SPECIFIC TUHAT COMPILATIONS OF OTHER SCIENTIFIC ACTIVITIES 2005-2010

**DEPSY/Räikkönen**

Katri Räikkönen,

European Journal of Personality, Katri Räikkönen, 2006
International Journal of Behavioral Medicine, Katri Räikkönen, 2006 → ..., United Kingdom
Psychosomatic Medicine, Katri Räikkönen, 2006 → ...
European Journal of Psychology, Katri Räikkönen, 2007 → ..., United Kingdom
European Journal of Psychology, Katri Räikkönen, 2007 → ...

**Peer review of manuscripts**

Johan Eriksson,

Diabetologia, Johan Eriksson, 01.01.2005 → 31.12.2010, Finland
Lancet, Johan Eriksson, 01.01.2005 → 31.12.2010
New England Journal of Medicine, Johan Eriksson, 01.01.2005 → 31.12.2010
Suomen Lääkärilehti, Johan Eriksson, 01.01.2006 → 31.12.2006

Kati Heinonen,

Reviewer, Psykologia, Kati Heinonen, 2005, Finland
Reviewer, European Journal of Personality, Kati Heinonen, 2006
Reviewer, International Journal of Behavioral Medicine, Kati Heinonen, 2006
Reviewer, Social Psychology Quarterly, Kati Heinonen, 2007
Reviewer, European Journal of Personality, Kati Heinonen, 2008 → 2011
Reviewer, International Journal of Behavioral Medicine, Kati Heinonen, 2008

Eero Kajantie,

Reviewer, Pediatric Research, Eero Kajantie, 2003 → ...
Reviewer, Journal of Human Hypertension, Eero Kajantie, 2004 → ..., United Kingdom
Reviewer, Molecular Genetics and Metabolism, Eero Kajantie, 2005 → ...
Reviewer, Journal of Clinical Endocrinology and Metabolism, Eero Kajantie, 2006 → ..., United States
Reviewer, New England Journal of Medicine, Eero Kajantie, 2007 → ..., United States
Reviewer, European Journal of Endocrinology, Eero Kajantie, 2008 → ...

Niina Komsi,

European Journal of Personality, Niina Komsi, 2008 → 2010
Scandinavian Journal of Personality, Niina Komsi, 2009
Developmental Psychology, Niina Komsi, 2010
Parenting: Science and Practice, Niina Komsi, 2010
Suomen Lääkärilehti, Niina Komsi, 2010, Finland

Jari Marko Lahti,

Alcohol & Alcoholism, Jari Marko Lahti, 01.05.2005
Biological Psychiatry, Jari Marko Lahti, 01.10.2005
European Psychologist, Jari Marko Lahti, 01.05.2006
Journal of Child Psychology and Psychiatry, Jari Marko Lahti, 01.01.2006
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The International Journal of Behavioural Medicine, Jari Marko Lahti, 01.04.2008
Psychiatry Research, Jari Marko Lahti, 01.05.2009
Alcoholism: Clinical and Experimental Research, Jari Marko Lahti, 01.03.2010
European Journal of Personality, Jari Marko Lahti, 01.07.2010
Pediatric and Perinatal Epidemiology, Jari Marko Lahti, 01.08.2010
Social Psychiatry and Psychiatric Epidemiology, Jari Marko Lahti, 01.06.2010

Marius Lahti,
International Journal of Behavioral Medicine, Marius Lahti, 2010
The World Journal of Biological Psychiatry, Marius Lahti, 2010

Anu-Katriina Pesonen,
Journal of Pediatric Psychology, Anu-Katriina Pesonen, 2007 → ..., United States
International Journal of behavioral medicine, Anu-Katriina Pesonen, 01.01.2008
Psychology, Anu-Katriina Pesonen, 01.01.2008 → 31.12.2008, Finland
European Journal of Personality, Anu-Katriina Pesonen, 2009 → 2011
Pediatrics, Anu-Katriina Pesonen, 2009
European Journal of Psychological Assessment, Anu-Katriina Pesonen, 2010
Psychoneuroendocrinology, Anu-Katriina Pesonen, 2010

Riikka Pyhälä,
International Journal of Behavioral Medicine, Riikka Pyhälä, 2009 → ...
European Journal of Personality, Riikka Pyhälä, 2010 → ...

Antti-Jussi Pyykönen,
Personality disorder and metabolic syndrome, Antti-Jussi Pyykönen, 12.2010

Editor of series
Eero Kajantie,
Journal of Developmental Origins of Health and Disease, member of editorial board, Eero Kajantie, 2009 → ...

Membership or other role in review committee
Kati Heinonen,
Reviewer for the best work and organisational psychology Master’s thesis of the year, Kati Heinonen, 2005
Grant review panel member, Finnish Ministry of Defense, Scientific Board, Behavioral Sciences Section, Kati Heinonen, 2010

Katri Räikkönen,
Grant review panel member, Finnish Ministry of Defense, Scientific Board, Behavioral Sciences Section, Katri Räikkönen, 2003 → 2006, Finland
Member of the review panel, Audit of psychology departments of Tallinn and Tartu, Estonia, Katri Räikkönen, 2008, Estonia
Grant review for ZonMWTop and University of Leuven, the Netherlands, Katri Räikkönen, 2009 → 2010, Netherlands
Member of the review panel, Distinguished Professor of Psychiatry, University of Pittsburgh, Katri Räikkönen, 2009, United States
Member of the review panel, Professorship in Biological Psychology, University of Copenhagen, Katri Räikkönen, 2010, Denmark

Membership or other role in research network
Eero Kajantie,
Member of study core team, Helsinki Birth Cohort Study, Eero Kajantie, 2004 → ..., Finland
Member of study board, Finnpec - Finnish Genetic of Pre-eclampsia Study, Eero Kajantie, 2007 → ..., Finland
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Member of publication board, Northern Finland Birth Cohort, Eero Kajantie, 2008 → ..., Finland
Member of study board, Finngedi - Finnish Gestational Diabetes Study, Eero Kajantie, 2008 → ..., Finland
Miia Silvia Anneli Seppänen,
Member: Finnish Center of Excellence in Interdisciplinary Music Research, Miia Silvia Anneli Seppänen, 2008 → 2013, Finland

Membership or other role in national/international committee, council, board

Johan Eriksson,
SNEHA India, Johan Eriksson, 29.12.2004 → 31.12.2011, India
DOHAD, Johan Eriksson, 29.12.2007 → 31.12.2011, United Kingdom

Kati Heinonen,
Deputy member of the board, PsykoNet/ Educational and Developmental Psychology Division, Kati Heinonen, 2000 → ...
Deputy member of the consultative committee, Library of Behavioral Sciences, University of Helsinki, Kati Heinonen, 2003 → 2007
Vice president and secretary, The Finnish Psychological Society, Kati Heinonen, 2004 → 2007, Finland
Matriculation Examination Board, Finland, Kati Heinonen, 2006 → ...
Board member, Finnish Ministry of Defense, Scientific Board, Behavioral Sciences Section, Kati Heinonen, 2010 → ...

Niina Komsi,
Matriculation Examination Board, Finland, Niina Komsi, 01.03.2007 → 05.05.2011, Finland

Anu-Katriina Pesonen,
Psykologian laitoksen strategiatyöryhmän jäsen, Anu-Katriina Pesonen, 2006, Finland
Käyttäytymistieteellisen tiedekunnan kansainvälinen opetukseen toimikunta, Anu-Katriina Pesonen, 2007 → 2008
Psykologian laitoksen opetuksen laadunarviointityöryhmän jäsen, Anu-Katriina Pesonen, 2007 → 2008
Viksu-iedekilpailut, Anu-Katriina Pesonen, 01.01.2007 → 31.01.2008, Finland
Suomen Psykologien Seuran hallitus, Anu-Katriina Pesonen, 2008 → 2009
Pohjoneuvostoylän vakuttavauustutkimus /seurantaryhmä, Anu-Katriina Pesonen, 2009 → 2011
Student Examination Board, full member, chair of the division of psychology, Anu-Katriina Pesonen, 2010 → 2013, Finland
The committee for promoting equality in the Institute of Behavioral Sciences, Anu-Katriina Pesonen, 2010 → ...

Katri Räikkönen,
Board Member, Finnish Ministry of Defense, Scientific Board, Behavioral Sciences Section, Katri Räikkönen, 2001 → ..., Finland
Chair of the Sector of Developmental Psychology, Katri Räikkönen, 2003 → ...
Finnsight 2015, Katri Räikkönen, 2005 → 2006, Finland
Paavansa asiaa parnosta, Katri Räikkönen, 2005, Finland
Board Member, Kansanterveyden tutkimusohjelma, The Academy of Finland, Katri Räikkönen, 2006, Finland
Maanpuolustuksen tieteenhuoltotukikunta, Katri Räikkönen, 01.01.2006 → 31.12.2006, Finland
SA kansanterveyden tutkimusohjelma, Katri Räikkönen, 01.01.2006 → 31.12.2006, Finland
Vice Chair of Graduate school of psychology, Katri Räikkönen, 2006 → 2010, Finland
Member of the Institute of the Faculty of Behavioral Sciences, Katri Räikkönen, 2009 → ..., Finland
Chair of the National doctoral program in psychology, Katri Räikkönen, 2010 → ..., Finland

Membership or other role in public Finnish or international organization

Johan Eriksson,
DEHKO:n eri toimikunnissa asiantuntija, Johan Eriksson, 01.01.2005 → 31.12.2005
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DEHKO:n eri toimikunnissa asiantuntija, Johan Eriksson, 01.01.2005 → 31.12.2010

Katri Räikkönen ,
*? Katri Räikkönen, 01.01.2006 → 31.12.2006, Finland

**Other tasks of an expert in private sector**

Anu-Katriina Pesonen ,
Päivähoidon kehittäminen, Anu-Katriina Pesonen, 01.01.2005 → 31.12.2005, Finland
Päivähoidon asiantuntjatehtävät Espoon ja Vantaan kaupungeissa, Anu-Katriina Pesonen, 01.01.2006, Finland

**Participation in interview for written media**

Johan Eriksson ,
Lehdet, Johan Eriksson, 2006, Finland
Lehti, Johan Eriksson, 2006, Finland
Lehted, Johan Eriksson, 02.06.2008, Finland

Niina Komsi ,
Recognize the infant’s temperament and understand him better, Niina Komsi, 04.2006
How the good self-esteem develops, Niina Komsi, 02.2007, Finland
The first sensitive year of the infant., Niina Komsi, 06.2007, Finland
How to support the self-esteem of a sensitive child, Niina Komsi, 12.2008, Finland
The explosive child, Niina Komsi, 02.2008, Finland
How to recognize the school-beginner’s temperament in a supportive way?, Niina Komsi, 06.2009, Finland
Temperament in the relationship between spouses, Niina Komsi, 02.2009, Finland
Temperament may have a harmful effect on the schoolwork of many children, Niina Komsi, 08.2009, Finland
Temperament: challenge and resource., Niina Komsi, 09.2009, Finland
Don’t pour your own stress on the child, Niina Komsi, 10.2010, Finland

Jari Marko Lahti ,
Luennoitsija Helsingin kaupungin työntöön työskentelevien työntöön työskentelevien työntöön työskentelevien työskentelevien työskentelevien työskentelevien työskentelevien työskentelevien työskentelevien työskentelevien työskentelevien työskentelevien työskentelevien työskentelevien työskentelevien työskentelevien työskentelevien työskentelevien työskentelevien työskentelevien työskentelevien työskentelevien työskentelevien työskentelevien työskentelevien työskentelevien työskentelevien työskentelevien työskentelevien työskentelevien työskentelevien työskentelevien työskentelevien työskentelevien työskentelevien työskentelevien työskentelevien työskentelevien työskentelevien työskentelevien työskentelevien työskentelevien työskentelevien työskentelevien työskentelevien työskentelevien työskentelevien työskentelevien työskentelevien työskentelevien työskentelevien työskentelevien työskentelevien työskentelevien työskentelevien työskentelevien työskentelevien työskentelevien työskentelevien työskentelevien työskentelevien työskentelevien työskentelevien työskentelevien työskentelevien työskentelevien työskentelevien työskentelevien työskentelevien työskentelevien työskentelevien työskentelevien työskentelevien työskentelevien työskentelevien työskentelevien työskentelevien työskentelevien työskentelevien työskentelevien työskentelevien työskentelevien työskentelevien työskentelevien työskentelevien työskentelevien työskentelevien työskentelevien työskentelevien työskentelevien työskentelevien työskentelevien työskentelevien työskentelevien työskentelevien työskentelevien työskentelevien työskentelevien työskentelevien työskentelevien työskentelevien työskentelevien työskentelevien työskentelevien työskentelevien työskentelevien työskentelevien työskentelevien työskentelevien työskentelevien työskentelevien työskentelevien työskentelevien työskentelevien työskentelevien työskentelevien työskentelevien työskentelevien työsk
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Haastattelu TV ohjelmaan, Jari Marko Lahti, 01.05.2008
Anu-Katriina Pesonen

Abitreenit, Anu-Katriina Pesonen, 04.2010 – 09.2010, Finland

Vitsas vauva / Wise infant, Anu-Katriina Pesonen, 09.12.2010, Finland
Research Group: Räikkönen K

Basic statistics

<table>
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<tr>
<th>Metric</th>
<th>Value</th>
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<tr>
<td>Number of publications (P)</td>
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<tr>
<td>Number of citations (TCS)</td>
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<td>Number of citations per publication (MCS)</td>
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<td>Percentage of uncited publications</td>
<td>22%</td>
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<td>Field-normalized number of citations per publication (MNCS)</td>
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<td>Field-normalized average journal impact (MNJS)</td>
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<td>Field-normalized proportion highly cited publications (top 10%)</td>
<td>1.64</td>
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<td>Internal coverage</td>
<td>.89</td>
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</tbody>
</table>

Trend analyses

![Graphs showing trend analyses for MNCS, THCP10, and MNJS over time.]

Collaboration

![Graph showing performance (MNCS) by collaboration type.]

Performance (MNCS) by collaboration type
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AT THE UNIVERSITY OF HELSINKI
by CWTS, Leiden University, the Netherlands

Research profile

[Diagram showing research profile categories and corresponding bars indicating publication counts.]

Threshold: $P > 6$