

Research Seminar in Health Sciences Spring Semester 2019

**Health Sciences and Health Policy
Prof. Dr. Stefan Boes
Prof. Dr. Gisela Michel**

Contemporaneous health effects of physical activity – the role of education

Simon Spika, University of Konstanz

Monday, 25 February 2019

Speaker	Simon Spika works as a post-doc at the University of Konstanz at the Chair of Economics and Social Policy of Friedrich Breyer. He obtained his PhD from the University of Zurich. His research focuses on the cost-efficiency of smartphone based interventions designed to motivate a healthy lifestyle and on the association between health-behaviors and the demand for health care. He is also interested in hospital management and works part-time at the financial department of the University Hospital Zurich.
Date and time	Monday, 25 February 2019, 14:00 – 15:00h
Room	Room HS 12, University of Lucerne, Frohburgstrasse 3, 6002 Lucerne
Content	<p><i>Background:</i> Physical activity has proven to be an important determinant for the prevention of numerous diseases, owing to a long-term effect of past behavior. But physical activity may also have an immediate impact on health, reflected in a temporary deviation from a given health state. And as for the long-term effect, education could be considered as a crucial factor in the short-term association between physical activity and health, for example because educated individuals may be better informed about adverse effects of physical activity and thus are more likely to take appropriate countermeasures. This study aims at analyzing the impact of physical activity on contemporaneous number of physician visits and how this impact varies with education.</p> <p><i>Methods:</i> Data were retrieved from waves 2016 and 2017 of the Konstanz Life-Study, a longitudinal cohort study conducted in Southern Germany. Individuals (n=2077) were grouped according to self-assessed physical activity into one of the three categories “high”, “moderate” and “low”. Education is measured by the binary variable with/without high school degree. The number of physician visits in the previous three months was regressed on physical activity, education and the corresponding interaction variables in negative binomial and hurdle models. Further covariates like self-assessed health, age, gender, smoking, drinking or current occupation were included in the models.</p> <p><i>Results:</i> Estimates of the negative binomial models indicated a significantly higher number of physician visits for physical active individuals compared with low active/inactive individuals among those without high school degree („moderate“ +29%, $p<0.1$), („high“ +47%, $p<0.01$). Among individuals with high school degree in contrast, the number of visits was not different between the three activity categories. Low active / inactive individuals with high school degree however had a higher number of visits compared with low active individuals in this educational group (+32%, $p<0.1$). The estimation of the hurdle</p>

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models suggested that the positive association between physical activity and the number of physician visits among individuals without degree was due to an increased probability of a first visit as well as an increased number of following visits. Estimations on data stratified by gender yielded similar results for both genders, albeit less pronounced in magnitude and significance for women.

Conclusion: Among the participants of the Konstanz Life-Study, physical activity did not reduce the number of physician visits. Moreover, for individuals without high school degree, physical activity even increased the number of visits. The findings provide support for the hypothesis that more educated individuals are more likely to consider the immediate effects of physical activity on health. A limitation of the study is the fact that participation was not completely random.

Analysis of Spatial Clustering of Childhood Cancers

Garyfallos Konstantinoudis, Institute of Social and Preventive Medicine, University of Bern

Monday, 18 March 2019

Speaker	Garyfallos Konstantinoudis holds a Bachelor of Science in Mathematics from the Aristotle University of Thessaloniki, Greece and a Master of Science in Biostatistics from the University of Glasgow, United Kingdom. Since 2015, he is a PhD researcher at the Institute of Social and Preventive Medicine, University of Bern.
Date and time	Monday, 18 March 2019, 14:00 – 15:00h
Room	Room HS 12, University of Lucerne, Frohburgstrasse 3, 6002 Lucerne
Content	<p><i>Introduction:</i> Childhood cancers are rare cancers and little is known about their aetiology. Among the established environmental risk factor is ionising radiation in high doses. Hypothesised environmental risk factors include traffic-related air pollution, background radiation, pesticides and infectious agents.</p> <p>Exploring the spatial variation of childhood cancers might provide clues about the disease's aetiology and help generate hypotheses about potential environmental risk factors.</p> <p><i>Aim:</i> The objective of this study was to analyse the spatial distribution of childhood cancers in Switzerland.</p> <p><i>Methods:</i> I analysed the spatial distribution of childhood cancers using spatial clustering and disease mapping methods. Spatial clustering methods are expected to provide insights about an overall tendency of cases to occur closer than expected by chance and also about potential cancer clusters. Disease mapping methods create smooth risk maps that can be extended to incorporate the effect of potential risk factors. I used k-functions, Cuzick-Edwards' test, Tango's index for point data and Kulldorff's circular scan to examine spatial clustering. For disease mapping used the Besag-York-Mollié model and log-Gaussian Cox processes.</p> <p><i>Results:</i> The main findings and contributions of this work are:</p> <ol style="list-style-type: none"> 1. A cluster of childhood acute lymphoid leukaemia was identified in a rural part of Switzerland. However, after carefully adjusting for multiple testing, we found that chance was the most likely explanation of this cluster's occurrence. 2. We found evidence, consistent with the literature, that childhood Hodgkin lymphoma and embryonal CNS tumour cases have a tendency to cluster in space. The environmental risk factors leading to this clustering remain to be identified.

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3. We created the first childhood cancer incidence maps for Switzerland. Factors such as air pollution and background radiation explain a part of the spatial variation. CNS tumours presented the largest spatial variation that persisted after adjusting for the selected risk factors.

Conclusion: This work was the first systematic investigation of the spatial distribution of childhood cancers in Switzerland. Our results highlight that CNS tumours might indeed have environmental aetiology and future studies should stratify by subgroup and pool data to maximise power.

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Early detection and treatment of developmental dysplasia of the hip in Mongolia: a nationwide prevention program

Munkhtulga Ulziibat, National Center for Maternal and Child Health
in Ulaanbaatar, Mongolia

Thursday, 21 March 2019

Speaker	Munkhtulga Ulziibat is medical doctor, scientific collaborator, coordinator of the Swiss Mongolian Pediatric Project, and PhD student
Date and time	Thursday, 21 March 2019, 13:30 – 14:30h
Room	Room HS 13, University of Lucerne, Frohburgstrasse 3, 6002 Lucerne
Content	-

A Peer Group Approach to Normative Social Influences on Risk Behaviors

Sarah Geber, University of Zurich

Monday, 1 April 2019

Speaker	Sarah Geber is senior research and teaching associate at the University of Zurich. Her research focuses on the fields of media use and effects as well as health communication, with emphasis on the role of social norms and interpersonal communication within both fields.
Date and time	Monday, 1 April 2019, 14:00 – 15:00h
Room	Room HS 12, University of Lucerne, Frohburgstrasse 3, 6002 Lucerne
Content	Social norms have been found to be an important factor in individuals' health and risk behaviors. Past research has typically addressed which social norms individuals perceive in their social environments and how these norms influence individual behavior. The talk will present a peer group approach that allows examining the mechanisms of normative social influences beyond normative perceptions by taking into account the peer group and its (actual) normative characteristics. Methodologically, the peer group approach was realized through a representative survey among young German car drivers (N = 311 anchor respondents) who nominated their three most important friends, resulting in a sample of N = 1,244 respondents clustered in K = 311 peer groups. Among others, data on norms and three road traffic risk behaviors (speeding, driving after drinking, and texting while driving) were collected. Based on these data, I will first present a multilevel approach that differentiates the influences of actual group norms and individually perceived norms. Second, I will address the question of where normative perceptions come from and examine the role of certain group members, opinion leaders, in the process of normative perception building. The findings' theoretical and practical implications will be discussed and further steps towards a comprehensive understanding of normative social influences among peer groups will be presented.

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What explains the inequalities in healthcare use between immigrants and natives in Switzerland?

Christina Tzogiou, Zurich University of Applied Sciences and University of Lucerne

Monday, 8 April 2019

Speaker	Christina Tzogiou holds a M.A. in Economics from the University of St. Gallen (HSG). She is a research associate in the health economics research team at the Winterthur Institute of Health Economics (WIG) of the Zurich University of Applied Sciences (ZHAW). She has completed further education courses on scientific research methods in health economic research and on the basic principles of medicine (e.g. anatomy, physiology, classification of diseases and accidents, including diagnosis and treatment). During her Master studies she worked as a project assistant of Prof. Dr. Simon Evenett at the Swiss Institute for International Economics and Applied Economic Research (SIAW-HSG) and the Global Trade Alert, and as a finance assistant at the St. Gallen MBA.
Date and time	Monday, 8 April 2019, 14:00 – 15:00h
Room	Room HS 12, University of Lucerne, Frohburgstrasse 3, 6002 Lucerne
Content	The aim of this study is to explain the inequalities in healthcare use between different immigrant groups and natives in Switzerland. We differentiate immigrants between first- and second generation and culturally different and similar to natives. To retrieve the relative contribution of each inequality factor we apply a non-linear decomposition method based on the Oaxaca-Blinder approach. We further extend the model by categorizing the factors into different groups, such as circumstances and effort. Combining detailed cross-sectional data from the Swiss Health Survey 2012 with the second Health Monitoring Survey 2010 on the immigrant population in Switzerland, we find important inequalities in the intensive margin of doctor visits between the natives and the first generation, as well as the culturally different immigrants, and in the extensive margin between the natives and the culturally different immigrants. No significant inequalities were found for these immigrant groups in emergency department visits. We also find that the contribution of effort is higher relative to circumstances in the inequality in the intensive and extensive margin of doctor visits, while there are heterogeneous effects among the different immigrant groups with regard to the contribution of endowments and coefficients.

Long term hospital stay for children: Implications for children with severe or chronic disease and impact on the social structure of the family

Bernhard Eisenreich, Lucerne Cantonal Hospital

Monday, 15 April 2019

Speaker	Bernhard Eisenreich currently works at the Lucerne Children's Hospital as a senior physician in the Department of Pediatric Oncology and Hematology. His experience in this field dates back to 2000, when he began his medical career at the Charité in Berlin, Germany. He gained more in-depth experience in neonatology and pediatric intensive care medicine.
Date and time	Monday, 15 April 2019, 14:00 – 15:00h
Room	Room HS 12, University of Lucerne, Frohburgstrasse 3, 6002 Lucerne
Content	<p>In collective awareness today, children are generally anchored as healthy beings. "Illness" is perceived in the sense of an acute and healing interruption of the otherwise undisturbed development, thus temporary. For this reason, parents, relatives and the environment are generally completely unprepared for the diagnosis of a life-threatening or chronic illness in childhood. This was not part of the expectation horizon that was nurtured for the child. Many of these illnesses require regular, possibly long-term stays in the children's hospital after the diagnosis has been made. How do children experience this stay? What does it mean for the family, the parents, the siblings, the social structure and surroundings?</p> <p>The very dynamic development also in the field of paediatric medicine leads to a constant change: in the past, in-patient stays in childhood increased significantly, when new methods made the treatment of previously untreatable diseases possible in the first place. The further development of these treatments now makes outpatient therapies possible instead of the previous necessarily inpatient therapies.</p> <p>The lecture thus tries to give an idea of what a severe and/or chronic illness means for the child, for the family, as well as the influence on everyday life.</p>

Health Literacy in Switzerland: Towards measurements and analysis of inequalities

Richard Benkert, Institute of Social and Preventive Medicine, University of Bern

Monday, 6 May 2019

Speaker	Richard Benkert is both geographer and sport scientist and works as a research assistant in the group “social environment” of Prof. Dr. Abel at the Institute of Social and Preventive Medicine (ISPM) at the University of Bern. His research focuses on the social, cultural and economic determinants of health. Richard is responsible for data analysis and involved in the ongoing “Young Adult Survey Switzerland” (YASS). Furthermore, he’s leading a health promotion project in a prison.
Date and time	Monday, 6 May 2019, 14:00 – 15:00h
Room	Room HS 12, University of Lucerne, Frohburgstrasse 3, 6002 Lucerne
Content	<p>Over the last 20 years, health literacy has become a popular concept in research and health policy. Initially defined as an individual’s ability to understand medical information, the definition has quickly expanded. Today, researchers can draw on a wide variety of definitions and measurements of health literacy.</p> <p>An overview of the commonly applied health literacy measurements in Swiss health surveys is depicted, among others a measurement constructed at the ISPM. Based on data gathered in i) Health Literacy Survey Switzerland (HLS-CH 2015), ii) Health Monitoring of the migrant population in Switzerland (GMM II 2010) and iii) Young Adult Survey Switzerland (YASS 2010/11 and 2014/15) the health literacy levels of the population in Switzerland and specific health literacy inequalities in sub-populations are presented. As people with “migrant background” appear to be such a sub-population this group is further investigated. This is done by answering the question on how the variation in the definition of migrant background affects the observed health literacy level. This allows a differentiated view on the association between “migration background” and health literacy and may help to target public health interventions effectively.</p>

Family members' perspective on adults with intellectual disability and challenging behaviour living in Swiss residential institutions

Natalie Lustenberger, University of Zurich and Hochschule Luzern –
Soziale Arbeit

Monday, 13 May 2019

Speaker	Natalie Lustenberger is a PhD-student in education sciences in the research group of Prof. Ingeborg Hedderich at the department of special education with focus on society, participation, and disability at the University of Zurich. Besides, she works as a research assistant at Hochschule Luzern – Soziale Arbeit, where her focus lies on projects about persons with a disability and their social environment.
Date and time	Monday, 13 May 2019, 14:00 – 15:00h
Room	Room HS 12, University of Lucerne, Frohburgstrasse 3, 6002 Lucerne
Content	<p>Family members were shown to continually being highly involved and being a source of support for adults with intellectual disability even after leaving the family home and transitioning to any form of residential institution. This transmission poses challenges concerning the role of family members and their collaboration with the new institutional caregiver.</p> <p>Being part of a broader Swiss National Science Foundation-funded project about challenging behaviour of adults with intellectual disability, this PhD-project focuses on the family members' perspective on the mentioned topic. Therefore, it pursues two aims: first to collect data on the situation, role and self-perception of family members of adults with intellectual disability living apart from their relatives. Second to describe ways of collaboration between family members and caregiver institutions in Switzerland. The project's mixed methods approach, expected results, and implications will be presented and discussed.</p>

This talk will be held in German.

Knowledge translation: Experiences from an SNF doc.mobility fellowship

Julia Bänziger, University of Lucerne

Monday, 20 May 2019

Speaker	Julia Baenziger is a PhD Candidate in Health Psychology in the research group of Prof. Dr. Gisela Michel at the Department of Health Sciences and Health Policy, University of Lucerne, Switzerland. She is returning from a doc.mobility fellowship from the Swiss National Science Foundation (SNF). Julia was hosted by the University of New South Wales (UNSW) and the Kids Cancer Centre, Sydney Children's Hospital, Australia. Julia is passionate about improving the health-care for childhood cancer survivors and their parents.
Date and time	Monday, 20 May 2019, 14:00 – 15:00h
Room	Room HS 12, University of Lucerne, Frohburgstrasse 3, 6002 Lucerne
Content	<p>Julia will present the online intervention Cascade, which was specifically tailored to foster adaptive coping responses in parents of children who had cancer. Using a randomised controlled trial, parents were assigned to participate in either peer-support or cognitive-behavioural-therapy groups. Julia will outline rationale, essential features as well as challenges of the study design.</p> <p>During the baseline interview of Cascade, parents answered questions of the semi-structured interview "Psychological Adjustment to Illness Scale". The first section addresses parents 'health-care orientation', which assesses parents' adjustment in relation to their child's health-care needs. Using grounded theory, Julia investigated parents' health-care experiences. Parents described interactions with health-care professionals (HCP), their attitudes and trust in HCP and towards treatment, and their engagement in the child's care. We propose a framework illustrating the mechanisms involved in parents' health-care experiences.</p> <p>Julia will conclude her presentation sharing her experiences as an SNF doc.mobility fellowship holder and her networking experiences during her time at the UNSW.</p>