A5_ Oral presentations - ABSTRACTS

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Social inequalities in sleep-related breathing disorders: evidence from the HypnoLaus study

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Background
Obstructive sleep apnea (OSA) is a common sleep-breathing disorder which has been associated with a higher risk of cardiovascular events, metabolic disorders, and autoimmune diseases. The main risk factors for OSA include obesity, craniofacial anatomy, and neck circumference, however, some studies have suggested that socioeconomic status (SES) and unhealthy behaviors play an important role in the aetiology of OSA. Here, we investigated the associations between two indicators of SES and two measures of sleep-breathing disorder, and whether these associations were explained by smoking, sedentary behavior, heavy drinking, and body mass index (BMI).

Methods
We used cross-sectional data from the Swiss CoLaus study, including a total of 2160 participants. SES was measured through occupation and education. Sleep-breathing disorders were assessed using the apnea-hypopnea index (AHI: ≥20; ≥30 episodes/h), which is the number of apnea/hypopnea episodes per hour of sleep, and the oxygen desaturation index (ODI: ≥15; ≥30 episodes/ h), which is the number of oxygen desaturation episodes per hour of sleep. The contribution of BMI to the socioeconomic gradient in AHI/ODI was calculated by using the counterfactual mediation method.

Results
Low occupation and low education were associated with a higher risk of apnea-hypopnea episodes, and a higher risk of oxygen desaturation episodes (occupation–AHI30: odds ratio (OR)=1.88, 95% confidence interval (CI)[1.07;3.31], ODI30: OR=2.29, 95%CI[1.19;4.39]; education-AHI30: OR=1.21, 95%CI[0.85;1.72], ODI30: OR=1.26, 95%CI[0.83;1.91]). BMI was strongly associated with both SES indicators, and AHI/ODI indexes, and contributed to the socioeconomic gradient in AHI/ODI indexes, with mediation estimates ranging between 43% and 78%.

Conclusion
In this Swiss population-based study, we found that low SES is a risk factor for sleep-related breathing disorders and that these associations are partly explained by BMI. These findings provide a better understanding of the mechanisms underlying social differences in sleep breathing disorders, and may help implement policies for identifying high-risk profiles for OSA.

The Role of Knowledge in Preventive Health Actions – A Science Education Perspektive

Arnold, Julia

Health education in science education is to foster health literacy, informed decision-making and to promote health behavior. It seems undisputable, that knowledge plays an important role in this. Here, the potential of science education lies in giving relevant information and showing how to get and evaluate it in order to use it for reflected decision-making.

But yet, the status and explanatory role of knowledge in health related behavior and its motivation is not yet clarified empirically. To date, there are several models explaining health behavior (e.g. TPB or HBM). These models include motivational factors that play a role in decision-making in health contexts but they do not incorporate knowledge systematically. Above that, many studies show no relationship between knowledge and behavior and the impact of interventions based on information transmission on behavior change has been small. This can have theoretical and/or methodological reasons, e.g. in the matching of knowledge and outcome variables or a lack of differentiation in knowledge types in order to specify the interrelation.

To fill this gap, The Integrated Model of Decision-Making in Health Contexts has been proposed. This model includes three types of knowledge (system health knowledge, action-related health knowledge and effectiveness health knowledge) as influencing factors for motivational factors (perceived health threat, attitude towards health action, attitude towards health outcome and subjective norm) that influence decisions. The model is to build a basis for researching the role of knowledge in preventive health actions and informing health education in science education.

At present, the model is being tested empirically in the context of sugar consumption and type 2 diabetes. In a first step, the three knowledge types were operationalized in a test and applied to 115 persons (mean age 29). Multidimensional Rasch analysis was applied to analyze the dimensionality of the test. Model fit statistics indicate, that health knowledge can be treated as three-dimensional. Furthermore, in a quantitative study, students were asked, how important they thought, different information would be for them to decide about reducing their sugar intake. It could be shown, that all three knowledge types are perceived important, with action-related knowledge being the most important.

The model as well as the potential role of science education in public health will be discussed in the presentation.

Health Literacy and Health: Decomposing a Statistical Association

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In the last decade several health literacy surveys have been launched to assess health literacy levels, to explore differences between countries, stratification within countries, and to identify the most vulnerable groups. Remarkable rates of 'problematic' and 'insufficient' health literacy have been found as well as stable associations between low health literacy and poor health outcomes. These findings have led to an increasing popularity of health literacy among the scientific community and public health politics and strategies. Also, health literacy has been lifted to a universal remedy for tackling health inequalities – with only subtle critique on missing evidence and conceptual clarity.

Following a European trend, Switzerland's Federal Council dedicated one of twelve fields of health policy action to "equality of opportunity and patient's responsibility" in "Gesundheit 2020" published in 2013. Especially vulnerable people should be enabled to a better manoeuvring within the health care system. Strengthening population's health literacy and individual responsibility is suggested a means to prevent diseases and to successfully manage a disease once it occurs. Since Switzerland performed slightly lower than the European average in a cross-national health literacy assessment, a strategy to enhance population health literacy appears plausible. On the other side, it is far from obvious how to accomplish this and what interventions might be effective. Up to date, intervention studies show mixed results, are often restricted to functional health literacy, and the majority of dependent variables are often heterogeneous, only indirectly connected to health outcomes (e.g. through medication adherence).

Analysing rich census data, our study takes a new approach. A novel conceptual model of health literacy is proposed, well-suited for the public health context. It allows more robust estimations of the effects of health literacy on different health outcomes. Results will be presented from the Young Adults Social Survey of Switzerland (YASS) decomposing statistical associations between health literacy and health status. They show that health literacy's effects are largely attributable to socio-economic, material, and psychosocial determinants of health. Implications for health promotion policies will round off the presentation.

Institutionalising equity and inclusion in health programming

Placella, Erika

Inequity is widely recognised as a major obstacle to development and the reduction of inequalities within and among countries is central to the SDGs of the 2030 Agenda.

Equity and inclusion, intrinsic to a rights-based approach, are core principles of the general mandate of the Swiss Agency for Development and Cooperation (SDC) and constitute one of the five implementation principles of the SDC Health Policy, which governs health programmes. Almost all country cooperation strategies and corresponding health programmes target the poorest and most marginalised people and aim at ensuring their access to high-quality and affordable promotive, preventive and curative services and resources for their health and well-being, thus securing universal health coverage.

In 2016, SDC with the support of IDS launched a learning trajectory in order to raise awareness, to provide a common and practical understanding of equity and inclusion, and to build up SDC expertise on equity and inclusion in health, allowing it to shape a general framework on the issue.

Parallel processes aiming at more strategically positioning SDC, better mainstreaming social protection in programming, and translating the leave no one behind principle into concrete action are also ongoing.

Based on the findings emerging from these processes, institutional guiding principles for inclusive approaches to health which are to be applied in the implementation of SDC programmes, as well as a common set of minimum equity- and inclusion-related standards and indicators, have been identified and introduced.

The objective of the presentation is to provide an overview of SDC's approach to equity and inclusion in health and to share key findings and lessons emerging from the above mentioned processes. Additionally, related good practices will be showcased. A specific focus will be put on the following aspects: ways to identify drivers and patterns of exclusion, as well as cross-sectoral determinants of inequity and exclusion; understanding and addressing intersecting forms of inequality; fostering political will and commitment of health authorities to equity and inclusion; conducting a "Pro-inclusion Policy dialogue" at country and global level; developing a comprehensive monitoring framework to identify and measure inequity and exclusion; defining regulatory frameworks and creating enabling environments for tackling inequities in accessing health care; designing and implementing sustainable social protection mechanisms.

Evidence for Action: A Practical Application of Health Systems Analysis Tools to Spur Effective Policy-Making

Karim, Aliya

Effective health policy is contingent not only upon quality data, but holistic systems thinking that harmonizes a global concept of a health system with a practical means of analysis. Health Systems Analysis goes beyond studying inputs and outputs, exploring whole systems and their complexity to produce analyses rich in context and meaning. Such studies are often large in scope and require methods that may lack definition in design and breadth. In this talk, we break down theory, methods, tools, and software for analyzing and visualizing health systems for analysis and presentation.

A primary framework in monitoring health systems performance to disaggregate complex systems is the Building Blocks of Health Systems. This framework breaks down health systems into six parts: governance, financing, HMIS, drugs, HR, and service delivery. To further understand how these interact, we use the Mechanisms of Effect Framework, which examines how system hardware, its structures, processes, and inputs interact with its software, or the context, relationships, and power dynamics inherent to the system. We use the mind-mapping tool Xmind to map these visually.

Moving from theory to practice, mapping effectiveness loss is one of the most striking ways to assess where bottlenecks occur across the trajectory of care. For example, from the alert of an illness case, to diagnosis, notification, testing and treatment, there are many steps in a careseeking trajectory where economic or patient losses can occur. We use Sankey Diagramming and Tableau to visualize effectiveness diagramming as a complement to statistical analysis.

Process Mapping is a tool used to understand system processes by visualizing their underlying flows and mechanisms. This is useful in parsing apart complicated problems to identify bottlenecks and actors that may be affecting an ultimate outcome. We use the process mapping software Bizagi to map a health system process.

Causal Loop Diagramming (CLD) is a technique which helps explain the complex phenomena underlying processes, and illustrates how specific inputs and feedback loops affect these processes. We use the software Vensim to illustrate CLD in action as a complement to qualitative analysis.

The purpose of this talk is to provide audience members with a "toolbox" of health systems techniques to practically look at their work using a health systems lens, better understand complexity, and produce more actionable evidence for health systems strengthening.

The effectiveness of «Modelle guter Praxis» - a methodical discussion

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Introduction

The Federal Office of Public Health FOPH is supporting methodical developments in various public health related fields. «Modelle guter Praxis» (MgP) - a methodical approach - is used in several projects of the FOPH to promote the implementation of effective activities pursuing a common goal. MgP are measures or tools that have been applied successfully already in practice and can be characterized as effective, feasible, creative, and even inspiring.

The topic of the presentation and the subsequent discussion will be the effectiveness of the intended MgP-mainstreaming.

Methods

The MgP-approach consists of the four following steps: search for, selection, documentation, and distribution of MgP.

The process of searching for MgP contains public announcement, direct request, and the «snowball effect». In order to achieve transparency, the selection process and criteria need to be precisely regulated and defined. To be «evidence-based» is an important characteristic of MgP. In this context, the expression «evidence-based» must be clearly distinguished from the same term used regarding science-based knowledge. MgP represent knowledge, which is generated in practice, in other words «bottom-up». Evidence testing of this bottom-up knowledge does not follow study-based test processes, which are commonly used in science. Established practice following quality standards can be classified as plausibly effective. Externally evaluated practice with proven effectiveness or benchmarked practice are considered evidence-based, whereby those two methods can be regarded as the «evidence testing gold standards» of practice-based knowledge. In order to achieve user-friendly MgP documentations and a successful distribution, the target group has to be always kept in mind and a close collaboration with stakeholders should be sought.

Establish MgP for better support informal caregivers – first steps

The "support program informal caregivers" of the FOPH uses the MgP-approach in order to propagate the development and advancement of measures, tools and offers for supporting informal caregivers. In 2018, the publication of a wide range of MgP on the website of the support program is ongoing. The evaluation of the MgP-method will be completed by 2020. By shedding light on the effectiveness of MgP, the FOPH contributes to methodological improvements in public health and shares its experiences with stakeholders and public health institutions in order to drive improvements forward.