

**Conclusions:** Geographical variation is a cause for concern if people are treated differently depending on area of residence. But it also presents an opportunity to use differences in service provider's preference for using compulsory care as an instrumental variable to estimate the causal effect of compulsory care on multiple short and long-term outcomes. This approach can help resolve controversies that are difficult or even impossible to investigate through RCTs. After presenting the project plan we invite to a discussion of the feasibility of using an instrument variable approach to explore if relatively low versus high rates of compulsory care produce favorable outcomes for patients.

**Disclosure of Interest:** None Declared

O0027

### What influence mothers' mental health and health care seeking behaviors for their malnourished children in Nepal: building evidence for a broader perspective

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**Introduction:** Implementing research projects on community-based health care interventions in low-ressource settings is feasible with specific methods and applications. In order to critically understand all ins and outs of influencing factors involved in health care pathways for children and their mothers, we must consider to implement more than one research in the same context.

**Objectives:** The objective of this presentation is to showcase the continuum of research projects starting from the assessment of the effectiveness of a combined nutrition and psychosocial intervention and its economic evaluation, and how that led to exploring social representations of malnutrition in order to better understand the link with health care seeking behaviours.

**Methods:** The FUSAM cluster randomized control trial included 427 were severe acutely malnourished (SAM) children and their mothers. They were divided in two groups receiving the standard nutrition treatment while the intervention group benefited from five psychosocial sessions. A battery of tests for child development and maternal mental health was administered pre and post intervention. For the economic evaluation, a data collection was conducted with 98 community members and District Public Health Office personnel in Saptari and 17 Action contre la Faim and government personnel in Kathmandu. Finally, a mixed-method study comparing social representations of malnutrition included 376 adults in Saptari and Nuwakot district. Data analysis was performed according to the study design: a multivariate model analysis for the CRCT, a micro-costing methodology to cost data collection and analysis was favored. For the mixed-method analysis, descriptive and inductive analysis were performed.

**Results:** Regarding the child development, children in the intervention group showed higher scores than children in the control group at all time points. And the economic evaluation showed that the costs of adding psychosocial counselling to an existing CMAM program was approximately EUR 28,788 for 6 centers per year.

However, referrals of children through the community-based screening were not optimal. The findings related to health seeking behaviors showed that different meaning categories were simultaneously resorted to by community members leading to different representations of SAM children and that relevant health advises were neither systematically nor uniquely associated to medical categories but are linked to different meaning categories depending on the cultural context.

**Conclusions:** Multiplying research projects is crucial to mitigate the limitations of the studies often facing numerous contextual challenges and ultimately to leverage further opportunities.

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### Prevention of Mental Disorders

O0028

### Does the association between short-chain fatty acids and depressive symptoms vary with age? A large population-based study

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**Introduction:** Fat plays an important role in brain function; 60% of the brain's dry weight is fat. Among fats, omega-3 fatty acids, which are long-chain fatty acids, have been reported to reduce depressive symptoms. On the other hand, there are few studies on short-chain fatty acids (SCFAs), and those that do exist are mostly animal studies, with only a few human studies (about 100 cases). This is the first study to examine the association between fecal short-chain fatty acids and depressive symptoms on a large scale in the general population.

**Objectives:** We examined the association of fecal SCFAs with depressive symptoms. In addition, we analyzed the associations stratified by age and examined differences in the associations.

**Methods:** This study was conducted using data from the Dynamics of Lifestyle and Neighborhood Community on Health Study (DOSANCO Health Study). The target population was all residents of the city of Suttu, Hokkaido, Japan, excluding residents of special nursing homes (n=2638). 579 individuals (22% of the target population) aged 18 years and older who were able to measure fecal SCFA participated in this study with written informed consent. Approval was obtained from the Ethics Committee of Hokkaido University School of Medicine (15-002 and 15-045). Fecal SCFA was measured by high-performance liquid chromatography. We examined the association of fecal concentrations of SCFA subtypes (i.e., acetate, butyrate, and propionate) and total SCFA concentrations (mg/g wet weight as a continuous variable) with total Patient Health Questionnaire-9 (PHQ-9) scores using multiple regression analysis. We adjusted for age, sex, habitual exercise, total energy intake, and total dietary fiber intake. We performed additional

multiple regression analyses with stratification by age group (18-59 years and 60 years or older). Two-tailed tests were used for all analyses with a significance level of  $P < 0.05$ .

**Results:** The mean age (standard deviation) of the study participants ( $n=534$ ) was 58.3 (16.0) years. Among them, 48% were 18-59 years old and 54% were female. Fecal propionate concentration was significantly associated with total PHQ-9 score ( $\beta=0.62$ ,  $p<0.01$ ). Other SCFAs and total SCFA were not significantly associated with total PHQ-9 score. In addition, using stratification analyses by age group, the associations between fecal propionate concentration and total PHQ-9 score showed a different trend by age group ( $\beta=0.18$ ,  $p=0.62$  for 18-59 years;  $\beta=0.80$ ,  $p<0.01$  for 60 years or older).

**Conclusions:** The study showed an association between higher concentrations of fecal propionic acid and higher levels of depressive symptoms. The association was particularly pronounced in older people, those aged 60 years and older. The results suggest that improving dietary habits to reduce fecal propionic acid may be effective in preventing depression in the elderly.

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## O0029

### Physical activity reduces cardiovascular risk and mortality in people with severe mental illness: a cohort study using accelerometry

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**Introduction:** Cardiovascular disease (CVD) is a leading cause of excess mortality in people with severe mental illness (SMI). Physical activity (PA) is widely acknowledged with multiple health benefits, but associations of PA with incident CVD, all-cause and CVD mortality in people with SMI remain unclear.

**Objectives:** To determine dose-response and intensity-specific associations of PA with incident CVD, all-cause and CVD mortality in people with SMI.

**Methods:** This prospective cohort study was conducted on 6313 SMI participants with accelerometry data from UK Biobank (mean age 61.05 years) from February 2013 to November 2021 (median 7-year follow-up). Moderate-to-vigorous PA (MVPA) was categorized by meeting the guideline level or not, while total PA and light-intensity PA (LPA) were grouped by tertiles. Incident CVD, all-cause and CVD mortality ascertained by hospital and death registries were main outcomes.

**Results:** PA was inversely associated with the risk for incident CVD ( $P_{\text{overall}} < 0.05$  for total PA and MVPA,  $P_{\text{nonlinearity}} > 0.05$  for all PA), all-cause mortality ( $P_{\text{overall}} < 0.05$  for all PA,  $P_{\text{nonlinearity}} < 0.05$  for total PA and LPA), and CVD mortality ( $P_{\text{overall}} < 0.001$  for total PA

and LPA,  $P_{\text{nonlinearity}} < 0.05$  for all PA). Performing guideline-recommended volume of MVPA was associated with a reduced risk of 19% for incident CVD (95% CI, 0.67-0.98), 42% for all-cause mortality (95% CI, 0.43-0.79), and 50% for CVD mortality (95% CI, 0.31-0.82). A combination of recommended MVPA and a moderate volume of LPA was associated with the lowest risk, mitigating 21% risk for incident CVD, 59% for all-cause mortality, and 78% for CVD mortality.

**Conclusions:** Primary engagement of guideline-recommended MVPA, supplemented with moderate amount of LPA, was associated with lower risks for incident CVD, all-cause and CVD mortality among people with SMI.

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## Promotion of Mental Health

### O0030

#### Stigma and its impact on Quality of Life among Early Career Mental Health Professionals

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**Introduction:** Stigma towards mental health has been described as a major obstacle to seek help and access to mental health services. This could result in a worsened Quality of Life (QoL). There is a little evidence of stigma in Mental Health Professionals and its consequences, especially in Early Career ones (ECMPH), who can be a more vulnerable group. There is even more lack of studies with multicultural approaches. Exploring stigma, support systems and access to these, and the link of these factors with QoL is essential to develop effective strategies to support ECMHP, for both their own mental health and providing care to patients.