association between acculturation stress and depressive symptomatology, as well as the extent of somatization symptoms and their relation to acculturation stress. In two studies among Turkish and Russian migrants in Germany these relationships were analysed, of which the results will be presented.

S-35-03

Social stress and depression in women in Pakistan

H. Nusrat. *University of Manchetser, Manchester, United Kingdom*

Background: Previous studies have reported a high prevalence of depression in women in Pakistan. This study investigates whether risk factors for chronic depression established in studies performed in Western countries can explain this high prevalence.

Method: A two-phase survey using the self-rating questionnaire (SRQ) and the Psychiatric Assessment Schedule was performed on a population sample in rural Pakistan. Demographic data and results of the Life Events and Difficulties Schedule Interview were analysed in relation to SRQ score and psychiatric disorder.

Results: 145 women were screened. High SRQ score was associated with low educational status, not having a confidant, having 4 or more children, being older, not being married and living in a house with more than 3 people per room. Regression analysis demonstrated that the first three of these independently contributed to SRQ score. In the interviewed sample (74 women) only educational level independently contributed to the presence of depression. The least educated group experienced the greatest number of marked difficulties: 67% of them had experienced both marked housing and financial difficulties compared to 28% and 25% of the other educational groups (p=0.005). Experiencing both housing and financial difficulties was a significant risk factor for depression in women with secondary education, but not for those without secondary education.

Conclusion: This study suggests that high levels of social adversity and low levels of education are strongly associated with depression in women in Pakistan and the other vulnerability factors found in the West may be less important in this population.

S-35-04

Gender differences in factors associated with psychological distress among immigrants from low and middle-income countries: Findings from the Oslo Health Study

S. Thapa, E. Hauff. *Institute of General Practice, Oslo, Norway*

Objective: Despite the high rate of migration from low and middle-income countries to high-income countries, there is still a lack of comprehensive studies of gender specific differences in psychological distress in a diverse group of immigrants. We compared psychological distress between male and female immigrants from low and middle-income countries living in Oslo, and identified factors associated with distress for men and women, separately.

Methods: A cross-sectional survey with self-administered questionnaires was conducted among 1536 immigrants from low and middle-income countries living in Oslo. The Hopkins Symptom Checklist (HSCL-10) was used to measure psychological distress. Data on their sociodemographic characteristics, negative and traumatic life events, and social integration and possible discrimination in the Norwegian society were also collected.

Results: One-fourth of the study population was found psychologically distressed, with almost equal levels among men and women. Lack of salaried job and recent negative life events were independently associated with psychological distress for both genders. Furthermore, experience of denial of job and past traumatic experiences were other associated negative factors among men, while visits made by Norwegians appeared as a protective factor against distress among men. Older age, Middle East background, living without a partner, and experiencing denial of housing were other associated negative factors among women.

Conclusion: Our findings show that except for adverse living conditions, there are gender differences with regards to factors associated with psychological distress among immigrants living in Oslo. Such gender issues are relevant for assisting immigrants in the integration process as well as for future research in migration and health.

Monday, April 4, 2005

S-34. Symposium: Neurobiology of suicidal behaviour

Chairperson(s): Cornelis van Heeringen (Gent, Belgium), Ina Giegling (Munich, Germany)
14.15 - 15.45, Holiday Inn - Room 2

S-34-01

Genetic risk factors as possible causes of the variation in European suicide rates

A. Marusic. *Institute of Public Health of, Ljubljana, Slovenia*

Objective: The current state of knowledge of genetic predisposition towards the suicidal behaviour allows for a question whether genetic risk factors account for the variation in suicide rates through time and space. Accordingly, the lecture will attempt to tackle the genetics behind suicidal behaviour from the perspective of the populational genetics. First, suicide rates variability of suicide rates across Europe is discussed. This is followed by a brief discussion of the J curve (on a map of Europe, the countries with a higher suicide rate form a so-called J curve, which starts in Finland and extends down to Slovenia), which maps on to the second principal component identified for European gene distribution, representing the ancestral adaptation to cold climates and the Uralic language dispersion. Furthermore, we will discuss whether the group of people living within the J-curve could share genes, which may not tolerate well excessive amounts alcohol, the combination of which is more likely to end in suicidal behaviour. Further along we list possible ways in which suicidal behaviour could have been selected for genetically in populations and identify those specific populations in which it may have appeared. Finally, we point at other locations in the world where a similar interplay of genes and environment has probably occurred. Greenland being the best example of the malignant interaction of alcohol consumption and the trait-like characteristics, which might constitute the vulnerability to suicidal behaviour.

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S-34-02

In vivo functional neuro-imaging provides new insights into the suicidal brain

C. van Heeringen, K. Bernagie, M. Vervaet, K. Audenaert. *University Hospital Gent, Dept, Gent, Belgium*

Objective: This review of neuro-imaging findings in attempted suicide patients, depressed non-suicidal patients, and healthy controls will show that, from a neuro-anatomical point of view, there is now increasing insight in the role of prefrontal-subcortical circuits in the development of suicidal behaviour through their involvement in the modulation of trait-dependent cognitive and/or emotional characteristics

Results: From a neurobiological point of view, the role of serotonin in particular is elucidated through receptor binding studies and through the study of correlations between receptor binding indices and psychopathological characteristics.

Conclusion: Taken together with the results of biological, neuropsychological and cognitive psychological challenge studies, these findings provide new insights in the suicidal brain.

S-34-03

Serotonergic genes influence suicidal behaviour

A. Malafosse. *Division de Neuropsychiatrie, Chêne-Bourg, Switzerland*

Objective: The involvement of genetic risk factors and of interaction between genes and environment in suicidal behaviour is supported by family, twin, and adoption studies. Several lines of evidence indicate that disturbances of the central serotonin system are involved in the neurobiology of suicide, possibly by modulating a restraint function in which the ventromedial prefrontal cortex seems to play an important role. Accordingly, several molecular genetic studies of serotonin-related genes have been published. Promising results have been obtained with the serotonin transporter (5-HTT) gene. The 5-HTT plays a crucial role in maintaining presynaptic homeostasis in several ways. A recent meta-analysis provides significant evidence supporting the association between the S allele of a functional 5-HTT promoter polymorphism and suicidal behaviour, also with violent suicide. Interestingly, it has recently been shown that the 5-HTT gene interacts with life events to predict suicidality: the effect of life events on subjects reports of suicide behaviour was stronger among individuals carrying an S allele than among L/L homozygotes. The other widely studied gene is that coding for tryptophan hydroxylase (TPH). TPH is the rate-limiting enzyme in the synthesis of serotonin. Two different genes code for TPH: TPH1 and TPH2. Two meta-analyses of association studies between the TPH1 A218C polymorphism and suicidal behaviour in Caucasian populations clearly suggest an association between the A allele and suicidal behaviour. TPH2 gene has recently been associated with suicide but this result is not confirmed by recent studies. Studies of other serotonin-related genes are so far inconclusive.

S-34-04

Aggression-related genes in suicidal behavior: An intermediate phenotype strategy in the search for genetic susceptibility factors

I. Giegling, I. Dietrich, A. M. Hartmann, H. J. Möller, D. Rujescu. *University of Munich Dept. of Psychiatry, Munich, Germany*

Risk of suicide-related behavior is supposed to be determined by a complex interplay of sociocultural factors, traumatic life experiences, psychiatric history, personality traits, and genetic vulnerability. This view is supported by adoption and family studies indicating that suicidal acts have a genetic contribution that is independent of the heritability of Axis I and II psychopathology. The heritability for serious suicide attempts was estimated to be 55%. Neurobiological studies have shown that serotonergic dysfunction is implicated in suicidal behaviors. These findings stimulated the investigation of variations in serotonergic genes in this context. We have initiated a large scale case control genetic association study which comprises of 250 suicide attempters and 600 healthy volunteers and investigated the role of a comprehensive set of serotonergic candidate genes in this behavior. We will present new data on a comprehensive set of serotonergic candidate genes. Since both, aggression related traits and serotonergic activity are partially heritable and correlate inversely, variations in genes of the serotonergic system might then, to some extent, account for variations in aggression-related behavior. Thus, we also investigated the relationship between serotonergic genes and anger, as a subtype of aggression-related behavior.

Monday, April 4, 2005

S-36. Symposium: German depression research network: Results from naturalistic and intervention studies

Chairperson(s): Hans-Jürgen Möller (München, Germany), Ulrich Hegerl (München, Germany)
16.15 - 17.45, Gasteig - Philharmonie

S-36-01

Diagnostic and treatment issues in primary care

U. Hegerl. *Psychiatrische Klinik der Ludw, München, Germany*

Objective: Under-diagnoses and under-treatment of depression has been recognized as a considerable problem at the primary care level. Only multifaceted interventions appear to be a promising strategy to reduce these deficits. Such an intervention has been implemented and evaluated within the "Nuremberg Alliance against Depression". Some of the elements of this intervention in Nuremberg will be presented.

Methods: Comparing several screening instruments for depression, the WHO-5 turned out to be the most promising tool at the primary care level and is recommended in the CME-activities with GPs. Two videos have been produced, which can bee handed out by the GPs to their patients in order to transmit information and a disease concept concerning depression. These activities are integrated in a professional public relation campaign, in a cooperation with community facilitators (teachers, priests, media, geriatric care givers) and in support of self help activities in Nuremberg.

Results: During the two-year-intervention a clear and significant reduction of suicidal acts has been observed in Nuremberg as compared to a one-year -baseline and a control region. Changes in prescription of antidepressants and other psychotropics are documented.

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