

**Background and Aims:** While a substantial body of research on caregiver burden is available by now, studies on time effects on burden and predictors of burden are still lacking. The lecture will give insight into dimensions of caregivers' burden and factors moderating the experience of burden by referring to a multivariate stress model which has been adopted in the Munich 5-year follow-up study on relatives of first hospitalized patients with schizophrenia or depression. 2-year follow up results are presented.

**Methods:** Of the relatives who had participated in the baseline assessment (n=83), 76 % could be reassessed at 2-year follow-up with respect to different dimensions of burden as well as different personal dispositions and resources. The effects of time-invariant variables (caregivers' gender, patients' diagnosis), interpersonal differences as well as intrapersonal changes in patients' symptoms and caregivers' dispositions and resources over time on their reported burden were calculated by the General Linear Model Repeated Measures procedure.

**Results:** Although caregivers' burden decreased significantly in the course of the 2-year period after the patients' first admission, their well-being and self-rated symptoms remain worse when compared to norm values. Burden at 2-year follow up was mainly predicted by interpersonal differences in caregivers' perceived social support, expressed emotion and personality factors. With regard to individual changes over time expressed emotion was the most relevant predictor of burden.

**Conclusions:** The results have important implications for family intervention strategies which should focus not only on the patients' outcome, but as early as possible on the caregivers' individual psychological needs.

## S50.02

Determinants of the caregiving appraisal

M. Östman. *Faculty of Health and Society, Malmö University, Malmö, Sweden*

Symposium "Family burden: dimensions, determinants and intervention"

Title of presentation: Determinants of the caregiving appraisal

Appraisal of caregiving and its relationship to family burden and experienced mental health problems in the relatives were investigated as part of a multi-centre study of the quality of mental health services in Sweden. The sample was drawn from relatives of involuntarily and voluntarily admitted patients to acute psychiatric wards. The instrument used was a semi-structured questionnaire, interviewing relatives about the burden, experience of mental health problems and appraisal of the caregiving situation.

The results showed a high proportion of relatives engaged in caregiving activities on a daily basis the month before the patient's admission to hospital and a high proportion of relatives appraising the caregiving activities negatively. The burden was more extensive if the relative and the patient were living together, had a longer duration of their relationship, if the relative was rendering caregiving on a daily basis and if the relative appraised caregiving negatively.

The relatives' psychological distress was not related to their negative appraisal of caregiving, nor was patient characteristics, such as diagnosis and level of psychosocial functioning. The only factor found to influence the relatives' psychological distress was the duration of relationship to the patient.

Interventions reducing psychological distress for relatives who have known the patients for more than 20 years, who live with the

patient, who give care on a daily basis and who appraise their caregiving negatively are suggested.

## S50.03

Psychoeducational family interventions for schizophrenia: From RCT to routine clinical settings

L. Magliano, A. Fiorillo. *Department of Psychiatry, University of Naples SUN, Naples, Italy*

In the past 30 years, research on Expressed Emotions and family burden, and the adoption of the stress-vulnerability model of schizophrenia, have led to the development of integrated treatments for this mental disorder combining pharmacological and family cognitive-behavioural interventions. The latter, called Psychoeducational Family Interventions (PFI), aim to: a) provide the family with information about the patient's disorder and its treatments; b) improve family communication patterns; c) enhance family's problem solving skills; d) encourage relatives' involvement in social activities.

Since the 1980s, a number of RCT and several meta-analyses have demonstrated the efficacy of PFI on relapse and hospitalisation rates in schizophrenia.

In recent years, there has been a shift from efficacy to effectiveness studies and great attention by the researchers in developing training programmes in PFI for ordinary staff.

In this presentation, we will provide an overview of the studies on PFI for schizophrenia which have been carried out in the last decade in routine clinical settings or with at least partial involvement of ordinary staff. These studies have been grouped into: a) studies comparing PFI with standard care; b) studies comparing PFI with individual integrated interventions; c) studies comparing different PFI strategies; d) implementation studies.

The results of these studies reveal that, when provided in clinical settings, PFI have positive middle-term effects on patients' clinical status and disability, and limited impact on family burden.

Future studies are needed to identify the "best dose" at which PFI can be provided in routine conditions at the most convenient cost-benefit ratio.

## S50.04

Caregivers in the process of treatment management

J. Bäuml, G. Pitschel-Walz. *Hospital of Psychiatry and Psychotherapy, Technical University of Munich, Munich, Germany*

Sixty years ago, the concept of custodial inpatient treatment began to gradually change into that of an activating outpatient concept. Through this process, the number of in-patient beds today in all psychiatric hospitals in the western part of the world has been reduced to 10-20% of those at the beginning of the 20th century. Though outpatient services had expanded to a high degree, the main burden of the psychosocial treatment still fell upon relatives. Most of these nursing families were poorly informed regarding their new duties. Thus many families were overstrained and not able to fulfill their function as "co-therapists". Because of the prevalence of overstrained families with dysfunctional behaviour, the EE-concept was developed in the sixties (Brown et al 1964). With the introduction of family therapy and the emergence of self help groups for relatives, families obtained substantial support. Through family therapeutic interventions, relatives were systematically integrated into long term rehabilitation concepts. In this way, the stigma of the "HEE"-relatives was changed (Bebbington et al 1994; Schulze-Mönking 1994; Möller-Leimkühler 2008). In the meantime, the engagement of family members can be viewed as an

important resource and not merely as a stress factor which is to be reduced (Pitschel-Walz, Bäuml et al 2001). According to the therapeutic guidelines it is now part of standard therapy to integrate relatives already in the beginning of the treatment. In this context, psychoeducation is a very effective measure to inform family members of the background of the illness and the most important treatment elements. During the course of time, many concepts have been developed, particularly concerning schizophrenic psychosis, to train relatives and their patients to have better communication with less stress and more helpful interactions. Through the establishment of a worldwide network, relatives are encouraged to use their knowhow not only alone at home but also in their interaction with professionals and politicians to improve the living conditions of their patients. In this lecture, the historical background and actual findings concerning the empowerment of the relatives will be presented.

---

## Symposium: Postnatal depression and effects of depression on breast milk

---

### S56.01

Service establishment for early diagnosis and prompt treatment of women with postnatal depression in tertiary care facility of Rawalpindi, Pakistan

F.A. Minhas, A.T. Nizami, F.A. Khan. *The Institute of Psychiatry, Rawalpindi Medical College, Rawalpindi General Hospital, Rawalpindi, Pakistan*

The study was conducted in a tertiary care facility in Rawalpindi, Pakistan. The objective was establishment of a service delivery system in a tertiary care facility of Rawalpindi for screening, early diagnosis and prompt management of women with post natal depression. It also evaluated the effectiveness of the service and determined the frequency of Postnatal Depression cases presenting in the postnatal clinic of Rawalpindi General Hospital. This interventional study involved screening and confirmation of diagnosis for Postnatal depression of 908 mothers presenting in the postnatal clinic. The scales used were Edinburgh Postnatal Depression Scale (EPDS) and Hamilton Rating Scale. EPDS showed scores above cutoff of 10 for 318 (35%) mothers. When Hamilton scale was applied, 05 (1.57%) mothers had no confirmed diagnosis of Depression, however, all the remaining 313 mothers (98.42%) had Depression. The prevalence of the post natal depression was found to be 313 per 1000 or 31%. Statistically significant associations were observed on Chi Squared test, between PND and variables like mothers educational status, their working status, number of previous children, mode of last delivery, obstetrical complications during last pregnancy, age group, monthly family income, Effectiveness of the services rendered were evaluated by applying t-test by comparing the mean weekly turn over of PND patients over 35 wks study period and showed statistically significant difference in favor of interventional services with t-statistic of 16.263, p-value of 0.000.

### S56.02

Maternal depression and infant growth – A crucial link

A. Rehman<sup>1</sup>, Z. Iqbal<sup>2</sup>, J. Bunn<sup>2</sup>, H. Lovel<sup>2</sup>, R. Harrington<sup>2</sup>, F.A. Minhas<sup>1</sup>. <sup>1</sup>*The Institute of Psychiatry, Rawalpindi, Pakistan*

<sup>2</sup>*Department of Psychological Medicine, Division of Psychiatry, University of Manchester, Manchester, UK*

Risk for emotional and behavioural problems are known to be high among children of depressed mothers, but little is known about the impact of antenatal and postnatal depression on the physical health of the infant. Our one-year prospective follow-up study of 320 mothers and their infants in rural Rawalpindi, Pakistan, shows that infants of antenatally depressed mothers have poorer growth than controls. The relative risk for being underweight (weight-for-age z-score < -2SD) is 4.0 (95%CI 2.1-7.7) at 6 months and 2.6 (95% CI 1.7-4.1) at 12 months, while the risks for stunting (length-for-age z-score < -2SD) is 4.4 (95%CI 1.7-11.4) at 6 months and 2.5 (95% CI 1.6-4.0) at 12 months. Relative risk for ≥5 diarrhoeal episodes per year is 2.4 (95% CI 1.7-3.3). Chronic depression carries a greater risk for poor outcome than episodic depression. The associations remain significant after adjustment for confounders by multivariate analyses. It is concluded that preventive and treatment strategies for maternal depression could benefit not only the mother's well-being but also the infant's physical health and development.

### S56.03

Effect of maternal depression on intake of breastmilk in infants

F.A. Minhas<sup>1</sup>, A. Hafeez<sup>2</sup>, A. Rehman<sup>1</sup>. <sup>1</sup>*The Institute of Psychiatry, Rawalpindi, Pakistan* <sup>2</sup>*Ministry of Health, Primary Health Care and Family Planning Division, Islamabad, Pakistan*

Previous studies have found maternal depression to be a major risk factor for poor growth in infants in Pakistan and south Asia. The mediating mechanisms between maternal depression and infant malnutrition are an important area for research. Studies have shown that maternal depression maybe associated with shorter duration of feeding however the evidence is equivocal. The quantity of breast milk could be another factor which has only been tested with relatively inaccurate methods of clinical scoring and test weighing till date. We aim to study the relationship of maternal depression with duration of breastfeeding and infant feeding practices. Moreover, we would also estimate the breast milk production and intake by the infant in depressed versus normal mothers, using the new technology of isotope dilution, in a rural community in Rawalpindi, Pakistan.

A random sample of 100 depressed and 100 non-depressed women will be recruited for the proposed prospective cohort study. The depressive disorder will be diagnosed antenatally and 6 months postnatally using validated instruments. The duration of exclusive breastfeeding will be assessed prospectively and infant feeding practices will be assessed at 6 months with appropriate tools. Breast-milk intake will be measured in 30 mothers from each group, using the dose-to-the-mother deuterium oxide method also validated in Pakistan by the investigators. Differences in the two groups of mothers will be estimated using appropriate statistical techniques, while controlling for possible confounders.

### S56.04

Comparative study of effect of Lactogouges (Metoclopramide) and counselling on breastmilk production in mothers

F.A. Minhas<sup>1</sup>, A. Rehman<sup>1</sup>, A. Hafeez<sup>3</sup>, R. Bilal<sup>2</sup>. <sup>1</sup>*The Institute of Psychiatry, Rawalpindi, Pakistan* <sup>2</sup>*Pinstech, Islamabad, Pakistan* <sup>3</sup>*Ministry of Health, Islamabad, Pakistan*

The aim of study is to determine the maternal perception of inadequate breast feed and compare possible augmentation of breast