of treatment ideology upon this syndrome. Our responders were psychiatrists, psychologists and nurses working in psychiatric facilities with predominant orientation towards traditional biological treatment or towards more complex approach including both psychopharmacological and psychotherapeutic treatment modalities. The results of the study were compared with coordinate data gained in psychiatric facilities and social services in Sweden and USA. Our test battery included the well-known Maslach Burnout Inventory, the Burnout Measure by Pines & Aronson. the Bion's Ward Atmosphere Scale and Treatment Ideology Questionnaire, developed in the Umea University, Sweden. It is established that there certainly are transcultural differences in the intensity of the burnout syndrome across various countries and the dissatisfied score of this syndrome correlate with the highest score of Negative Attitude and a low estimation a Family as a resource in the treatment process (p < 0.01).

# P02.242

DELIVERING INFORMATION TO SCHIZOPHRENIC PATIENTS: A REVIEW OF AVAILABLE STUDIES

D. Gerard<sup>1</sup>\*, N. Bazin<sup>2</sup>, P. Nuss<sup>3</sup>, P. Fremont<sup>2</sup>, M. Ferreri<sup>3</sup>.

<sup>1</sup>Department of Psychiatry, Lagny-Marne-la-Vallée; <sup>2</sup>Hospital, Mignot Hospital, Versailles; <sup>3</sup>Saint Antoine Hospital, Paris, France

**Background:** The effect of social skills training, family intervention and cognitive therapy in schizophrenia, have been widely investigated, but few studies have assessed the specific impact of delivering information to patients.

Method: A search was performed in the following data bases: Current Content, Embase, and Medline, covering a 25 year period.

Results: Five well conducted studies were selected. (a) Patients' level of knowledge: It was improved in two studies. After a 3 week educational program (n = 30) patients' knowledge was increased (p = 0.0001) compared to control (n = 30) (Goldman, 1988). At I month, 3 sessions of information (n = 22) was shown to be more effective (p = 0.0003) than one (n = 22) which was better (p = 0.002) than control (n = 22) in increasing level of knowledge about illness and treatment (Macpherson, 1996). (b) Compliance: Four studies led to negative results: Macpherson; Boczkowski (1985) in which the psycho-education group (n = 12) was not different than the control group (n = 12) on the post Session compliance score, whereas the behavioral therapy group was (n = 12; p < 0.01);Kleinman (1993) for the intra group comparison before and after information; and Atkinson (1996). (c) Quality of life and social functioning: They were improved (p = 0.002 and p = 0.04) at month 9 by a 20 week educational program (n = 57) compared to a waiting list (n = 73), in Atkinson's study. (d) Clinical outcomes: Negative symptoms were improved (p = 0.0068) in Goldman and in MacPherson's studies. Mental state (BPRS and GAS) was not modified in Atkinson's study.

Conclusion: Despite some encouraging results further studies are still required.

#### P02.243

SCHIZOPHRENIA AND PARKINSONISM VS. LATERALIZATION

D. Marinkovic. Institute for Psychiatry, Clinical Center of Serbia, Belgrade, Serbia, Yugoslavia

The possibility that normally lateralized aspects of the brain might be anomalous in schizophrenics and parkinsonics has come from several clinical and experimental studies. The aim of this clinical, ex juvantibus, study was to examine whether the brain-lateralized changes (parkinsonism, extrapyramidal drug-induced syndrome) are characteristic feature of schizophrenia and parkinsonism. Thirty patients were included in this study. The sample was divided as follows: 10 patients suffering from Morbus Parkinson, mean age  $59.6 \pm 5.3$ , 10 schizophrenics, mean age 27  $\pm$  2.3; and control group of 10 Bipolar I (manic phase) patients, mean age 28.5  $\pm$ 3.1. All the patients were right handed. Psychotic patients (schizophrenic and manic) were treated with haloperidol, dose range 10-20 mg/day (without anticholinergic drugs) and parkinsonic patients with 1-dopa dose range 750-1000 mg/day. Extrapyramidal syndrome in psychotic and parkinsonic patients was measured by Abnormal Involuntary Movement Scale (AIMS) adapted for laterality (Marinkovic, 1998, to be presented). Intriguing, obtained results were in favor the fact that all the patients (right-handed), regardless their quite different etiopathogenetic entities, expressed right-sided extrapyramidal syndrome, or bilateral one, but with appearance of more right than left. These results implicate that lateralization in parkinsonism and schizophrenia follows normal brain asymmetry-handedness.

## P02.244

NEUROPSYCHOLOGICAL IMPAIRMENTS AND SYMPTOMS OF SCHIZOPHRENIA

S. Klingberg\*, R. Gutjahr, A. Wittorf, G. Wiedemann. Department of Psychiatry and Psychotherapy, University of Tuebingen, Germany

The relationship of schizophrenic symptoms and measures of neurocognition is unclear. Recently some authors have conceptualized cognitive symptoms as core symptoms of schizophrenia. On the other hand there are schizophrenic patients without functional cognitive impairments. In this ongoing study we look into the relationship of three cognitive and three symptom dimensions. The cognitive dimensions are attention, executive function and verbal memory as assessed with Wisconsin Card Sorting Test, Trail-making Test, Continuous Performance Test, Auditory Verbal Learning Test, Digit-Span, and Digit-Symbol. Schizophrenic symptoms are assessed with the Positive and Negative Syndrome Scale. As earlier studies have shown that the positive/negative distinction is not satisfactory we include the disorganization dimension in the analysis. The sample currently consists of 95 schizophrenic patients (DSM IV/SCID). At the time of assessment patients are in the stabilization phase on stable medication after an acute episode of schizophrenia. The main issue of this analysis is the question whether there are differential profiles of cognitive functioning with respect to symptom dimensions. We will report the results of respective correlation and regression analysis. In addition, we look into the influence of illness stage, diagnostic subcategory (e.g. paranoid vs. undifferentiated schizophrenia) and education. The results will be interpreted with respect to the question whether or not schizophrenia is a single disease entity.

## P02.245

EXTERNAL VALIDITY OF RANDOMISED CLINICAL TRIALS (RCT'S): IS THERE A SELECTION BIAS IN PSYCHOTHERAPY TREATMENT STUDIES OF SCHIZOPHRENIA?

G. Wiedemann\*, S. Klingberg, A. Wittorf, A. Fischer, G. Buchkremer. Department of Psychiatry and Psychotherapy, University of Tuebingen, Germany

The randomised clinical trial is generally regarded as state-of-theart for showing the efficacy of medical and/or psychotherapeutic treatments. But some proponents of psychotherapeutic medicine claim that the methodology of controlled clinical trials is generally inadequate for their subject. Moreover, such trials seem to create a selection bias, i.e., the resulting sample of patients will differ profoundly from the population of patients in the community. The central question is that of generalizability or external validity. Therefore, a precise analysis of the selection process is warranted. In a study of cognitive-behavioural treatment of people with schizophrenia (funded by the German Society of Research, DFG) we recruited patients according to the following criteria. Inclusion criteria: diagnosis of schizophrenic or schizo-affective psychosis; exclusion criteria: substance dependence or abuse, intellectual deficit, not German speaking. The most critical stage of selection represents the possible rejection of the study by patients and/or relatives. The reasons for rejection were documented. Treatment takers and non-treatment takers were compared according to their socio-demographic and psychopathological characteristics. Preliminary findings show that a great proportion of patients without any insight in psychosis reject their inclusion into the study. Men with little drug compliance are under-represented as compared to women. There is no difference according to psychopathology. These and further results will be discussed. There seem to be some limitations of the study concerning its generalizability, but these are only of minor relevance and have to be taken into consideration when interpreting the final results. Thus, there is no. justification for any further generalizability problem in this study. The results of this study will be compared to the generalizability results of other studies in schizophrenia research (Schooler et al., Pietzcker et al., Wiedemann et al.).

## P02.246

THE EFFECTS OF RESTRICTIVE DIET IN GLUTEN KASEIN SENSITIVE AUTISTIC PERSONS – (PILOT STUDY)

L. Aneta\*, S. Milijana, L. Dragan, M. Ivona. Veljka Lukića Kurjaka lo, Beograd, Beograd 11 000, Yugoslavia

A starting base for this research is found in the results of the research of Reichelt et al. (1997, i998, 1999) which showed that a great number of autistic persons suffer hyperpeptitudia (casomorphic, glutomorphic and glyadinic peptidfraction) which is a reflection of hyperpeptidemy displaying exorphine activity affecting clinical expression in autism. This actually formed a theoretical frame for the existance of gluten-kasein sensitive autism. Consequently, the "appropriate" therapeutical approach (regardless of the the mechanisms of the origin of hyperpeptidemy) would be a restrictive diet.

The authors present the results of the prospective (six months) pilot study, of following the effects of the restrictive diet in the group of 15 verified (Prof. Reichelt) gluten-kasein sensitive autistic patients. The follow (monitoring) was carried out by (especially devised scale for this research) scales for estimation of the behaviour communication of sociability, together with the standard clinical-standard research. The authors discuss the results obtained in the context of their efficiency (as regards the age, the duration of the diet, the autistic profile).

## P02.247

QUALITY OF LIFE IN A DANISH SAMPLE OF SCHIZOPHRENIC INPATIENTS

V. Noerholm. Psychiatric Research Institute, Frederiksborg General Hospital, Hilleroed, Denmark

Background: We translated Lehman's Quality of Life Interview (QoLI) and the questionnaire TL-30 into Danish, and tested the

two instruments in a pilot study. Then we carried out the present study, in which the objectives were to measure quality of life in schizophrenic patients by different instruments.

**Design:** Schizophrenic inpatients (ICD-10 F20) were invited to participate. All patients were interviewed with Lehman QoLI and rated with BPRS. All patients were asked to complete quality of life questionnaires, namely the TL-30, the SF-36, and the WHOQOL-BREF, futhermore the Major Depression Inventory, MDI was used.

Results: In total 56 patients (23 females, mean age 39.8 (11.7) & 33 males, mean age 38.5 (10.4)) were included; 29 patients (13 females) refused to participate; 40 patients (18 females) were able to complete questionnaires. Significant correlation (p < 0.001) were found between interview (QoLI) and questionnaire (TL-30) mean score for satisfaction with certain life domains. Mean score showed no differences between males and females in those life domains. Mean score in the SF-36 subscales showed no differences between males and females. Mean score were below the population norm in all subscales except 'physical function'. Quality of life BREF total score were low compared to the Danish population. Female patients 44 (15) (norm 72 (14)) and male patients 54 (21) (norm 74 (13).

Conclusion: Schizophrenic patients reports relatively high satisfaction with subjective life domains. They reported fairly high health status except for vitality and role emotion. Compared to the Danish population these patients have low quality of life.

#### P02.248

MAJOR DEPRESSION AND PSYCHOLOGICAL WELL-BEING IN THE GENERAL DANISH POPULATION

L. Raabæk Olsen\*, V. Nørholm, N.-A. Rasmussen, T. Watt, M. Grønvold, J. Bjørner, P. Bech. *Psychiatric Research Unit, Frederiksborg General Hospital, Hillerød, Denmark* 

**Background:** The newly developed questionnaire Major Depression Inventory (MDI) based on both DSM-IV and ICD-10 criteria was used. MDI has shown acceptable validity using SCAN-interview as golden standard. The questionnaire Psychological General Well-Being (PGWB) was used to measure negative versus positive well-being.

Methods: Questionnaires were distributed to an age- and genderstratified sample of 3,200 persons randomly selected from The Civil Register System. All participants received MDI, 1600 of the participants received PGWB.

Results: 2,139 completed MDI, i.e. a responding rate of 66.8%. Of these subjects 3.7% (males: 3.1%, females: 4.3%) fulfilled the criteria for major depression (DSM-IV), 2.9% (males: 2.3%, females 3.4%) fulfilled the criteria for moderate to severe depression (ICD-10). In total 1040 subjects completed both MDI and PGWB, i.e. a responding rate of 65.0%. Concerning positive well-being the five items WHO subscale was used, those having major depression had a mean score of 28.0 while people without major depression had a mean score of 69.6. This difference was significant (p < 0.0001). Concerning negative well-being we focused on generalised anxiety, a high score meaning high degree of symptomatology. Those having major depression had a mean anxiety score of 58.4 while those without major depression had a mean anxiety score of 17.4, a significant difference (p < 0.0001).

Conclusion: The prevalence of major depression is comparable to other studies, though the gender difference was not statistically significant. Major depression markedly influence on positive as well as negative well-being. The comorbidity between depression and generalised anxiety was demonstrated.