Abstract
Multiple psychosocial risk factors and traumatic life events are common in children and adolescents in youth welfare, especially in residential care. Therefore, children and adolescents in youth welfare institutions are a high-risk population with regard to the development of severe mental disorders. This paper gives an overview of the prevalence of behavioural and emotional symptoms and mental disorders in a German residential care population and compares these findings with prevalence rates in other European countries. It also assesses the shortfall between the mental health needs of this high-risk population and the treatment options available to them. The international prevalence rates findings differ, from 44 to 96%. Most studies with larger samples report a prevalence between 60 and 70%. The most frequent diagnoses among children and adolescents in residential care were severe externalising disorders but a high comorbidity with internalising disorders can be observed. The paper also describes the needs of this population from the perspective of child and adolescent psychiatry and psychotherapy and innovative treatment options in this field. Relevant treatment concepts are outlined, and the paper calls for improved psychiatric liaison services within the child welfare system to provide successful diagnostic and therapeutic services, as well as suggestions to assist social services and professional training and management.

Key words
Children, adolescents, mental health needs, residential group homes, youth welfare

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The number of children and adolescents living in German residential group homes remains relatively constant at around 60,000. Multiple risk factors such as poverty, broken homes, neglect, sexual and physical abuse, discontinuous relationships and genetic factors have an impact on the mental health of children and adolescents in residential and foster care, and 50–80% of children in group homes have had traumatic life experiences. A German study that obtained information from counsellors on a representative sample of 80 residential care children and adolescents showed that 75% had suffered at least one traumatic life event.

The upgrading of outpatient social services has indirectly contributed to a worsening of the situation in residential care institutions because only children with the greatest psychosocial burden and severe psychopathological symptoms are given expensive residential care placements. Children and adolescents with adverse family backgrounds are at a very high risk of developing a chronic mental disorder, with subsequent impairment of their psychosocial functioning, for example going on to school failure, unemployment or a criminal career. In follow-up studies, 19% of children had been placed in three or more different foster families or institutions. Moving between placements and the repeated breakdown of youth welfare measures may worsen the prognosis because of the detrimental effects of the loss of attachment figures on psychosocial development. Twenty per cent of children and adolescents in Germany leave their residential placement within the first year.

Research into the Outcome of Residential Group Homes
Research in the field of youth welfare in Germany is limited, and few studies have evaluated the outcome of ambulant and residential youth welfare interventions. The Jugendhilfe-Effekte-Studie (JES) and the Evaluation Erzieherischer Hilfen (EVAS) study are exceptions. Both studies revealed beneficial effects of residential group home placement (i.e. reduction of syndromes and an improvement of scholastic achievements and psychosocial functioning, etc.). The authors showed that a residential placement takes some time to develop positive effects, and that the improvement is greater for children than for their parents.

There are indications that marked psychopathology and severe delinquency have an unfavourable influence on the outcome of group home placements. In the long term, many residential care-leavers have adverse outcomes in adulthood and are more likely to become unemployed or homeless, fall pregnant as teenagers and be convicted of a crime. They are also much less likely to attain a high social class. The first cost–benefit analysis of residential care in group homes (calculated on the basis of the JES) suggested that €1 invested in
residential care saves €2.32 for men and €2.79 for women in future costs arising from unemployment, social welfare, health insurance and the penal system.

Prevalence of Mental Disorders and the Extent of Psychopathological Syndromes

A review of the literature reveals considerable evidence that mental disorders are significantly more common in residential care populations than in the general population. So far, little data about the mental health status of children and adolescents in group homes are available. Surveys of children in group homes are scarce, and findings regarding the prevalence of mental disorders in this population differ widely because of differences in assessment methods and sampling effects related to the use of different diagnostic measures and criteria. Furthermore, there are great differences in the youth welfare systems of different countries.

Table 1 gives an overview of prevalence rates found in various studies, most of them conducted in North America and the UK. Only a few surveys of mental health using specific diagnostic criteria have been performed on German residential care populations. Graf et al. reported an 80% prevalence of mental disorders in a study of 103 children and adolescents in German group homes, but this was based on only general clinical judgement. A recently published German study analysed the mental health status of 689 children and adolescents (mean age 14.4 years, standard deviation [SD]=3, range 4–19 years, median 15 years) from 20 German group homes using dimensional and categorical measures of psychopathology. Of these children and adolescents, 59.9% fulfilled the criteria for an International Statistical Classification of Diseases and Related Health Problems, 10th Revision (ICD-10) diagnosis as revealed by the Diagnostic System for Mental Disorders for Children and Adolescents (DISYPS-KI); this is a battery of diagnostic checklists and symptom-specific questionnaires applying the criteria of the Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition, Text Revision (DSM-IV) and the ICD-10, thus allowing a standardised diagnosis of psychopathology. Of those studied, 452 (81.2%) scored above the clinical range in the Child Behavior Checklist (CBCL), rated by the residential care worker, and/or the Youth Self Report (YSR), which is self-rated.

The most frequent diagnoses among children and adolescents in residential care were conduct disorder (26%), combined attention-deficit hyperactivity disorder (ADHD) and conduct disorder (22%), dysthymia/depression (10%), drug and alcohol abuse (9%) and enuresis nocturna (6%). Co-morbidity was found in over one-third of children. The findings in the German youth welfare institutions are comparable to results from the UK, where a prevalence of mental disorders of 68% was found. Other British studies with smaller sample sizes that employed other diagnostic procedures found a lower prevalence (44%) or a much higher prevalence (96%). A Finnish study showed a nearly identical prevalence of severe mental disorders (59%) among the children and adolescents evaluated. The great majority of studies of children in residential group homes describe a high prevalence of complex and co-morbid disorders, with symptoms in both the internalising and externalising symptom scales of clinical questionnaires. Such complex symptoms are typical in traumatised children and adolescents.

Table 1: Overview of Prevalence Rates in Different Studies

<table>
<thead>
<tr>
<th>Study</th>
<th>Sample Countries</th>
<th>Sample Size (n)</th>
<th>Prevalence (%)</th>
<th>ICD-10 Diagnoses</th>
</tr>
</thead>
<tbody>
<tr>
<td>McCann et al.</td>
<td>Foster and residential in the UK</td>
<td>n=103</td>
<td>96 in residential care</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(n=38 in residential care)</td>
<td>57 in foster care</td>
<td></td>
</tr>
<tr>
<td>sukkanen et al.</td>
<td>Residential care in Finland</td>
<td>n=91</td>
<td>59</td>
<td>No</td>
</tr>
<tr>
<td>Dimigen et al.</td>
<td>Residential and foster care in the UK</td>
<td>n=70</td>
<td>30–50 in the different subscales</td>
<td>No</td>
</tr>
<tr>
<td>Graf et al.</td>
<td>Residential care in Germany</td>
<td>n=103</td>
<td>80</td>
<td>Yes</td>
</tr>
<tr>
<td>Meltzer et al.</td>
<td>Foster and residential care in the UK</td>
<td>n=1,039</td>
<td>Total 45–49</td>
<td>Yes</td>
</tr>
<tr>
<td>Ford et al.</td>
<td>(n=168 in residential care)</td>
<td>68 in residential care</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Burns et al.</td>
<td>Foster and residential care in the US</td>
<td>n=3,803</td>
<td>88.6 in residential care</td>
<td>No</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(n=38 in residential care)</td>
<td>63.1 in foster care</td>
<td></td>
</tr>
<tr>
<td>Blower et al.</td>
<td>Foster and residential care in the UK</td>
<td>n=48</td>
<td>44 in residential care</td>
<td>Yes</td>
</tr>
<tr>
<td>Mount et al.</td>
<td>Foster and residential care in the UK</td>
<td>n=50</td>
<td>70</td>
<td>No</td>
</tr>
<tr>
<td>Schmid et al.</td>
<td>Residential care in Germany</td>
<td>n=689</td>
<td>60</td>
<td>Yes</td>
</tr>
</tbody>
</table>

ICD-10 = the International Statistical Classification of Diseases and Related Health Problems, 10th Revision.

Children and Adolescents in German Youth Welfare Institutions

Mental Health Needs

There is a shortfall between the mental health needs of this high-risk population and the treatment options made available to them. Fifty per cent of the children suffering from mental disorders receive no treatment in the areas of child and adolescent psychiatry or psychotherapy. Unlike the situation in the US, psychopharmacological agents are used particularly rarely compared with the high degree of psychopathology, probably because of the prejudice of care-givers against medication.

A survey of the views of British social workers revealed that 80% of children were considered by the social workers to require treatment, but only 27% had received help from mental health professionals. Furthermore, not only is there a lack of mental health services, but also the somatic health status of ‘looked-after children’ does not reach the level of that of their counterparts in regular households.

In Germany, 11–25% of all patients receiving inpatient child and adolescent psychiatric treatment are discharged from psychiatric wards into residential care group homes. Thirty per cent of all children in residential group homes receive inpatient treatment at some stage during their life. Under the German Youth Welfare Act, youth welfare institutions must provide specific rehabilitation options for mentally handicapped children and adolescents.

Beyond the improvement of co-operation between social services, youth welfare institutions and mental health services, it is important to develop pedagogic options for these children.
Specific Treatment Concepts

Vostanis\textsuperscript{a} pleaded for prompt and continuous community-based mental health services. The multimodal intervention concept recommended includes the following elements:\textsuperscript{b-c} child and adolescent diagnostic procedures, medication, weekly case conferences, family therapy and behavioural therapy and counselling for schoolworkers, residential care staff and social workers. Callaghan et al.\textsuperscript{a} evaluated a treatment model of this kind. The residential staff and community social workers attested to the model’s effectiveness. Besier et al.\textsuperscript{a} showed that outpatient child and adolescent psychiatric liaison services including consultation hours, child and adolescent treatment in residential care facilities and advanced training courses on mental health topics for the staff could reduce child and adolescent psychiatric hospitalisations and stabilise the developmental course of children in residential care groups. Teaching on the subject of mental health in the training of residential care staff should be improved. It is important to give these children a secure therapeutic milieu and to help the residential care staff to interpret misbehaviour in terms of child and adolescent psychiatric symptoms and, from this, to develop concrete solutions with residential care teams to handle these symptoms.

Conclusions and Forecast

It is important to note that various studies have demonstrated a marked and complex psycho-pathological burden in children and adolescents in residential group homes. There is a need for psychiatric liaison services within the child welfare system in order to provide sufficient diagnostic and therapeutic services.

Studies have shown that outpatient liaison services might be a successful option, and could help to support residential care staff. Moreover, they can prevent or shorten admissions to psychiatric wards. The reduction of inpatient treatment would probably save costs in the healthcare system. Furthermore, these child and adolescent psychiatric liaison services can improve the ‘holding capacity’ of youth welfare institutions, such that in the long run these liaison services may be able to reduce the number of children and adolescents moved between institutions, thus avoiding the detrimental effects caused by the repeated loss of attachment figures for these cases.

Professionals within the child welfare system should be trained in the care of mentally disturbed children and adolescents. Co-operation between child and adolescent psychiatrists, psychotherapists, social workers and care-givers within residential care institutions should improve continuity of care and help to prevent repeated breakdowns in the chain of care. It seems to be very important to develop diagnostic criteria that can identify early indications for residential placement by social services, so that moving placements and placement breakdowns can be avoided. The necessity for residential care frequently becomes evident too late, for example when symptoms are manifested or the adolescents are in a difficult developmental stage and unmotivated to enter into pedagogic or therapeutic relationships.

As a consequence of the severe social problems that care-leavers can have, there is a need to bridge the gap between child and adolescent services and services for mentally ill adults. Social services for adults caters mainly for patients suffering from psychosis,\textsuperscript{95} but young care-leavers with severe complex disorders also need ongoing support for important developmental tasks, i.e. establishing a professional career, their own household and partnerships and organising their finances.\textsuperscript{112}