

## **The prevalence of mental disorders among children and youth staying in residential institutions, children's homes – a review of epidemiological studies**

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### **Summary**

Emergence of mental health problems in childhood can seriously affect further development of a man and thus hamper his adaptation to adult life. Children in residential institutions may be particularly vulnerable at risk of abnormal mental development, this includes so-called 'children's homes'. In the article we present an overview of the few studies carried out so far in the European residential institutions, including children's homes, over the years 1940–2011 in the UK, Germany, Romania, and Poland. Firstly, we briefly describe a classic research carried out in the world in the 1940s among children from children's homes. Secondly, we present a study conducted in the UK among children and youth from different age groups staying in residential institutions, including children's homes. Then we focus on studies carried out among children and adolescents from German residential institutions and on a group of preschool children from Romanian children's homes. At the end of the article we describe the first epidemiological study carried out in Poland on the population of children and young people staying in children's homes in Warsaw. The review of researches shows that children from day-care facilities are a population with a high prevalence of psychiatric disorder. Children and youth staying in residential institutions probably require specialized psychiatric, psychological and psychotherapeutic care.

**Key words:** children's home, mental disorders of children and adolescents, prevalence of mental disorders

### **Introduction**

In the 21<sup>st</sup> century, mental disorders have become a serious social problem, very important also among children and adolescents. According to Wolańczyk's study [1] conducted in Polish primary and secondary schools, in the school year 1999/2000, 9.1% of children and adolescents aged 12–19 had severe mental problems to the extent that

they could be suspected to have mental disorders. Further 17% manifested behaviors deviating from the behavior of peers. It can be suspected that the risk of abnormal mental development is particularly high among children in residential institutions, including so-called 'children's homes'. They are affected by difficult social and living conditions before admission to an institution, poor parental competences of biological parents and often by exposure to traumatic situations [2]. Moreover, the conditions of stay in residential institutions differ from those in a family environment. Despite this, epidemiological studies concerning the prevalence of mental disorders among children and adolescents residing in these facilities in Poland has not been conducted so far, and research in other countries are few.

This article presents an overview of the study on the prevalence of mental disorders among children and adolescents in institutional care in Europe. Because of the limited length and epidemiological nature of the article, only a percentage of mental disorders identified in a study was quoted. Apart from two exceptions, reasons for the research and their detailed descriptions (including the research hypotheses) were omitted.

### **Research in residential facilities – historical view**

The world's first surveys among children in day-care facilities started in the 1940s. Attention was then drawn to the fact that leaving a young child without care and emotional support of a mother may result in inhibition or regression of development, serious mental health problems or even death. Similar consequences appeared no matter if nursing of a child placed in an institution was correct [3]. Also other studies conducted at the time showed that raising a small child in a facility affects his/her behavior [4], and in further consequence – his/her personality [5].

### **British studies**

In the 1970s in the UK, Tizard and Rees [6] conducted a study on a group of 65 children aged 4.5 years who had been taken into a residential institution up to 4 months of age and had remained there continuously for at least 2 years. This group was divided into three subgroups, children adopted after 2 years (24 children), children taken by their biological mothers after 2 years (15 children) and those who remained in an institution (26 children). The results were compared with those obtained in a group of 30 children living in London working-class families, who had not been staying in an institution. The study was performed using the child behavior observation scale by Rheingold and Bayley [7] and an interview with a parent/caretaker. An important

conclusion from the study was that children from institutions had different problems than children from the control group. According to their tutors, they often presented problems with: peer contacts, anger attacks, high clinging, and poor concentration. In the control group discipline problems were more severe. The researchers sought causes of the changes in children's behavior (attention seeking, clinging, difficulties in establishing deep relationships, etc.) in accumulating stress related to repeated separations from parents after their visits, as well as in patterns provided by a dysfunctional family in case of return to it.

Another British survey was carried out among children aged 10–11 years, students in schools on the Isle of Wight and in one of London districts (Inner London Borough)\*. Among them were children who had stayed at least a week under institutional care (in children's homes or foster care). In the first stage, using a teacher questionnaire (Children's behavior questionnaire for completion by teachers), a group of "problem children" was identified and compared with a randomized control group of children "without problems". In the second stage interviews with parents of the "problem children" were carried out. On the basis of the interviews the children were psychiatrically diagnosed. Studies conducted on the Isle of Wight showed that only 2% of children from the control group experienced institutional care, compared to 17% of children from the "problem" group who were diagnosed with mental disorders. Similarly, in the London group (London Inner Borough), 20% of "problem" children diagnosed with mental disorders experienced institutional care for at least a week compared to 1% of children in the control group. The differences were statistically significant [8]. Similarly, Yule and Raynes [9] reported that children from institutions more often have emotional and behavioral disorders compared with children living with their families of origin.

In the 1990s, McCann et al. [10] completed a study on a group of 134 teenagers aged 13–17 years (69 boys and 65 girls) from Oxfordshire in the UK who were under institutional care. 38 children from the study group stayed in residential care and the remaining 96 children were in foster care. The results were compared with a control group of teenagers who have never experienced institutional care. Selection of the control group was carried out on the basis of pairings in terms of gender, age and school. If a respondent had not attend school a patient of the same family doctor was included into the control group.

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\* The epidemiological studies carried out on the Isle of Wight and in one of London suburbs – in addition to identifying the prevalence and specificities of mental disorders among children and adolescents in urban and rural environment – have also enabled the search for environmental risk factors for mental disorders in children and adolescents.

The study consisted of two stages. In the first stage, the respondents completed the Youth Self-Report Questionnaire (YSR) and their caretakers completed the Child Behavior Checklist (CBCL) from the Achenbach battery of questionnaires [11]. In the second stage, the respondents who were in the clinical range of the questionnaires were tested using a semi-structured psychiatric interview for diagnostic evaluation of mental disorders symptoms in children occurring today and over the life (the Schedule for Affective Disorders and Schizophrenia for School-Age Children-Present and Lifetime Version – K-SADS-PL) [12]. In the first stage, 88 respondents (53%) obtained high scores which qualified them to the second stage. In the control group it was only 12%. In the second stage, the percentage of children with diagnoses of mental disorders was determined.

The prevalence of mental disorders in the research group was 67% versus 15% in the control group. 96% of adolescents living in institutions suffered from mental disorder, compared with 57% of young people from foster care. The most common diagnoses in the research group were:

- conduct disorder (CD) – 28%;
- overanxious disorder – 26%;
- major depression – 23%;
- ADHD – 14%;
- other depressive disorders – 12%;
- avoidant disorder – 8%;
- non-specific psychotic disorders – 8%;
- oppositional defiant disorder (ODD) – 7%;
- panic disorder – 4%;
- BD – bipolar depressive disorder – 4%;
- psychoactive substance dependence – 3%;
- bulimia – 1%;
- anorexia – 1%;
- obsessive-compulsive disorder – 1%;
- Phobic state – 1%.

Ford et al. [13] examined 279 children aged 11–15 years from British residential institutions. They used the Development and Well-Being Assessment (DAWBA) [14] as a diagnostic procedure for the assessment of mental disorders in children. The parents, the teachers and the children themselves also filled the Strengths and

Difficulties Questionnaire (SDQ) [15] to assess emotional and behavioral problems of the children. The study have shown that 71% of children from residential care suffer from mental disorders, compared with 48.1% of children living in their family homes. Emotional disorders concerned 18.6% of the institutions residents compared with 18% of children living with their parents. The percentage of children from institutions with behavioral disorders was 61.3% compared with 35.9% of those living in a family home (statistically significant difference), and the diagnosis of “hyperkinetic disorder” concerned 10% compared with 9.2% of children living in a family home (not statistically significant).

### German studies

Also in Germany a research was carried out among children from residential institutions to determine the prevalence of mental disorders in this population. Graf et al. [16] indicated the prevalence of mental disorders at the level of 80% in a sample of 103 children from children’s homes. This result was obtained on the basis of an overall clinical evaluation and it was not related to the criteria of specific mental disorders.

Schmid [17, 18] conducted a survey among 689 children’s homes residents aged 4 to 18 years using the CBCL and the YSR questionnaires [11] (as a screening tool) as well as a diagnostic system for the assessment of mental disorders in children and adolescents *Diagnostik-System für psychisch Störungen im Kindes – und Jugendalter nach ICD-10 und DSM-IV* (DISYPS-KJ) [19]. Finally, both the YSR questionnaires and the CBCL questionnaires, filled in by the tutors, were collected for 557 children. The diagnostic evaluation system (DISYPS-KJ) could be applied only to 359 children for which all the required questionnaires were collected. In this study Schmid indicated the prevalence of mental disorders at the level of 59.9%. The most common disorders in the study group were as follows: sever conduct disorder ( $n = 115$ ), combined ADHD and CD ( $n = 95$ ), simple ADHD ( $n = 9$ ), dysthymia/depression ( $n = 40$ ), addiction to alcohol and drugs ( $n = 39$ ), and nocturnal enuresis ( $n = 26$ ). The comorbidity was diagnosed in 37% of the respondents.

### Romanian studies

The interest in children from Romanian children’s homes has been initiated by the well-known longitudinal study of the ERA team (The English and Romanian Adoptee Study Team) conducted by Rutter et al. [20]. The research was based on a natural experiment, which was the social action of adoption of young children from Romanian children’s homes by British families. This enabled to capture the extent

to which changing social and living conditions could influence human development. An important element of this study was the assumption of the huge differences between the psychosocial conditions in which the children experienced in Romanian institutions (conditions were defined as depriving), and the nondepriving conditions they were to experience in the British adoptive families.

Similarly, Zeanah et al. [21] conducted a randomized, epidemiological study involving Romanian children under the age of 31 months who spent at least half of their life in residential institutions. After pediatric and neurological examination, the children who were diagnosed with medical problems, such as genetic syndromes, fetal alcohol syndrome, or microcephaly, were excluded from the group. The remaining children were randomly assigned to two research groups. Children from the first group were to stay in institutions ( $N = 68$ ). Children from the second group were to be moved to specially trained and supervised foster families ( $N = 68$ ). Altogether, the study included 136 children. The group decreased because of various reasons (adoption, loss of contact, return of a child to his/her family of origin, disclosure of problems which exclude the child from the project, etc). Finally, 52 children from institutions and 59 children from foster families were qualified to analyses. The results were compared with a control group of children from pediatric clinic who had never experienced institutional care ( $N = 59$ ). When the studied children were 54 months old the parental interviews PAPA (Preschool Age Psychiatric Assessment) were conducted [22] to identify and assess mental disorders according to the diagnostic criteria of DSM-IV-TR.

In this study the prevalence of disorders among children from institutions was as follows:

- any mental disorder – 61.5%;
- externalizing disorders – 28.8%;
- internalizing disorders – 44.2%;
- ADHD – 5.8%;
- ODD – 7.7%;
- CD – 11.5%;
- CD + ODD – 3.8%;
- depression – 3.8%;
- anxiety disorders – 42.3%.

In addition, the study showed that, compared to the control group, children who spent at least some time in an institution are significantly more likely to meet the criteria

of both internalizing and externalizing disorders as well as other disorders (53.2% vs. 22%). The prevalence of mental disorders among children in institutional care was higher than among children from foster families, although these differences were not significant. The children from children's homes suffered from internalizing disorders (44.2%) significantly more often than the children from foster families (22%) while there were no significant differences between the two groups in the prevalence of externalizing disorders (ADHD, ODD, CD). However, the children from foster families often suffered from "pure" externalizing disorders and the children from institutions – from mixed internalizing and externalizing disorders.

The researchers summed the symptoms of all disorders to see whether there are differences between the groups. The girls from foster care showed fewer symptoms than the girls from institutions, while there were no such difference among boys. The study found no relationship between the length of stay in an institution prior to randomization and the length of stay in a children's home or foster family after randomization and development of mental disorders as well as the number of symptoms. There was also no relationship between IQ and mental disorders or IQ and the overall number of symptoms in the studied groups. In terms of the level of social functioning, measured by the PAPA interview, the girls in both groups functioned better than the boys and the girls staying in foster care functioned better than the girls remaining in children's homes. There was no such difference between the boys from institutions and foster families. The obtained data may indicate that removal of a child from a children's home and placement in foster care significantly reduces the risk of internalizing disorders but does not affect the level of externalizing disorders. Such intervention is more effective for girls than for boys.

### **Polish studies**

As mentioned before, the epidemiology of mental disorders among children and adolescents living in residential institutions has not been studied in Poland so far. In the years 2007–2011, Pawliczuk [23] and his team completed a study in Warsaw socialization institutions (children's homes). The aim of the study was to determine the prevalence of mental disorders among children and young people staying in such institutions in Warsaw. The study consisted of two stages and 141 children from 11 institutions took part in it. In the first stage, a screening examination using the Youth Self-Report (YSR) was carried out [11]. In the second stage, children whose results in the separate scales of the YSR were in the clinical range were tested individually and directly using a semi-structured diagnostic interview K-SADS-PL in order to make a final psychiatric diagnosis [12].

The prevalence of mental disorders among residents of children's homes obtained in the study was 52.4% (CI = 38.36–55.38) at present and 53.5% (CI = 42.72–59.78) in lifetime.

The most common diagnoses in the research group at the time of the study were as follows:

- nicotine dependence 32.3% (CI = 24.68–40.69);
- oppositional defiant disorder (ODD) 13.4% (CI = 8.25–20.15);
- conduct disorder 12.2% (CI = 7.30–18.77);
- specific phobia 16.7% (CI = 10.95–23.90);
- ADHD 10% (CI = 5.59–16.18);
- social phobia 5.7% (CI = 2.50–10.91);
- adaptive disorders with depressed mood 5.6% (CI = 2.43–10.78);
- post-traumatic stress disorder PTSD 5.6% (CI = 2.43–10.78).

### Conclusions

This research review shows that mental disorders can often be diagnosed in children and youth in residential institutions. Therefore they may need psychological support and psychiatric treatment that takes into account not only their past experiences but also the specificity of their functioning in such institutions.

### References

1. Wolańczyk T. *Zaburzenia emocjonalne i behawioralne u dzieci i młodzieży szkolnej w Polsce*. Warsaw: Medical University Press; 2002.
2. Kisiel C, Fehrenbach T, Small L. *Assessment of complex trauma exposure, responses, and service needs among children and adolescent in child welfare*. Journal of Child and Adolescent Trauma 2009; 2(3): 143–160.
3. Spitz RA. *The role of ecological factors in emotional development in infancy*. Child Development 1949; 20: 145–156.
4. Fischer LK. *Hospitalism in six-month-old infants*. American Journal of Orthopsychiatry 1952; 22(3): 522–533.
5. Goldfarb W. *The effects of early institutional care on adolescent personality (graphic Rorschach data)*. Child Development 1943; 14: 213–223.
6. Tizard B, Rees J. *The effect of early institutional rearing on the development of four-year-old children*. Journal of Child Psychology and Psychiatry 1975; 16(1): 61–73.



7. Rheingold HL, Bayley N. *The later effects of an experimental modification of mothering*. Child Development 1959; 30(3): 363–372.
8. Wolkind S, Rutter M. *Children who have been in care – an epidemiological study*. Journal of Child Psychology and Psychiatry 1973; 14(2): 97–105.
9. Yule W, Raynes NV. *Behavioral characteristic of children in residential care. In relation to indices of separation*. Journal of Child Psychology and Psychiatry, and Allied Disciplines 1972; 13(4): 249–258.
10. McCann JB, James A, Wilson S, Dunn G. *Prevalence of psychiatric disorder in young people in the system care*. BMJ 1996; 313(7071): 1529–1530.
11. Achenbach TM. *Manual for the Youth Self-Report and 1991 Profile*. University of Vermont Department of Psychiatry; 1991.
12. Kaufman J, Birmaher B, Brent D, Flynn C, Moreci P, Williamson D et al. *Schedule for Affective Disorders and Schizophrenia for School-Age Children-Present and Lifetime Version (K-SADS-PL): Initial reliability and validity data*. J. Am. Acad. Child Adolesc. Psychiatry 1997; 36(7): 980–988.
13. Ford T, Vostanis P, Meltzer H, Goodman R. *Psychiatric disorder among British children looked after by local authorities: Comparison with children living in private households*. British Journal of Psychiatry 2007; 190(4): 319–325.
14. Goodman R, Ford T, Richards H, Gatward R, Meltzer H. *The Development and Well-Being Assessment: Description and initial validation of an integrated assessment of child and adolescent psychopathology*. Journal of Child Psychology and Psychiatry 2000; 41: 645–657.
15. Goodman R. *Psychometric properties of the Strengths and Difficulties Questionnaire (SDQ)*. Journal of the American Academy of Child and Adolescent Psychiatry 2001; 40(11): 1337–1345.
16. Graf E, Bitzer M, Zimmermann-Wagner M. *Herausforderung Kinderdorf – Ergebnisse der Kinderdorf-Effekte-Studie (KES)*. Unsere Jugend. 2002; 12: 527–539. As cited in: Schmid M, Goldbeck L, Nuetzel J, Fegert JM. *Prevalence of mental disorders among adolescents in German youth welfare institutions*. Child Adolesc. Psychiatry Ment. Health. 2008; 2: 1–8 (<http://www.capmh.com/content/2/1/2,Child and Mental>).
17. Schmid M. *Children and Adolescents in German Youth Welfare Institutions*. European Psychiatric Review 2008; 1: 10–12.
18. Schmid M, Goldbeck L, Nuetzel J, Fegert JM. *Prevalence of mental disorders among adolescents in German youth welfare institutions*. Child Adolesc. Psychiatry Ment. Health 2008; 2: 1–8 (<http://www.capmh.com/content/2/1/2,Child and Mental>).
19. Döpfner M, Lehmkuhl G. *Manual DISYPS-KJ Diagnostik-System für psychische Störungen im Kindes – und Jugendalter nach ICD-10/DSM-IV*. Bern: Huber; 2000.
20. Rutter M, O'Connor TG, English and Romanian Adoptees (ERA) Study Team. *Are there biological programming effects for psychological development? Findings from study of Romanian adoptees*. Dev. Psychol. 2004; 40(1): 81–94.
21. Zeanah CH, Egger HL, Smyke AT, Nelson CA, Fox NA, Marshall PJ et al. *Institutional rearing and psychiatric disorders in Romanian preschool children*. Am. J. Psychiatry 2009; 166(7): 777–785.

22. Egger HL, Erkanli A, Keeler G, Potts E, Walter BK, Angold A. *Test-Retest Reliability of the Preschool Age Psychiatric Assessment (PAPA)*. *Journal of the American Academy of Child and Adolescent Psychiatry* 2006; 45(5): 538–549.
23. Pawliczuk W. *Rozpowszechnienie zaburzeń psychicznych wśród dzieci i młodzieży przebywających w placówkach opiekuńczo-wychowawczych*. Unpublished doctoral thesis, Medical University of Warsaw, Warsaw; 2011.

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